REÇBER

www.recber.com.tr

About Us

Reçber Cable Company made its debut as a power cable manufacturer in 1984. The Company began to manufacture coaxial cables in 1999 and soon ranked among paramount actors of the low voltage market.

Besides the coaxial range, the Company also manufactures Data & LAN cables, Audio & Video cables, Camera cables, Communication (Telephone) cables, Alarm cables, Fire Alarm cables, Signal & Control cables and customised cables.

Thanks to the pioneering investment in the Data & Lan range in 2008, the company began to manufacture high-frequency LAN cables in 2016, and achieved a top rank among distinguished European manufacturers.

Since 2015, the Company has been operating a production plant on an outdoor area of 30,000 m² and an indoor area of 20,300 m² at Çorlu-Türkgücü Industrial Zone.

The Company offers 59% of its production to the domestic market and exports the rest (41%) to a total of 25 countries throughout Europe, Middle East and Eastern Bloc.

The ISO 9001 system certificate as well as the GOST-R (Russia), CAI (U.K.),EN-50117, TSE, VDE (DE), GHMT (DE) and TSEK product certificates are the hallmarks of Reçber's product quality.

Relying upon an experience of 33 years, Reçber never compromises its supreme quality offered to customers and consistently creates a distinction and superior prestige in overseas markets thanks to its pioneering investments.


RECBER
RECBER

Vision

Keeping up with cutting-edge technology, targeting constant improvement, turning our high-quality production into customer satisfaction, fulfilling customer demands on time and ultimately, being the leading actor in the market with a workforce committed to customer satisfaction.

Mission

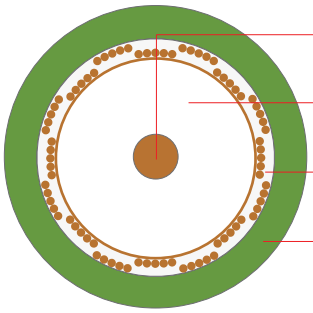
Respecting, implementing and encouraging commercial, ethical and legal principles, pursuing the objective of improving customers, workforce and all other stakeholders involved, and standing out as a dynamic organisation adopting the Total Quality Management approach.

Coaxial Cables

Physical foam insulation technology for all industries ranging from defence to telecommunication...

Mini U/6 PHY-PVC
Cu/Cu

Cable structure



Electrolytic copper wire, Ø 0.64 mm (AWG22)

Physical foam PE, Ø 2.90 mm
70°C, EN 50290-2-23

Cu-Pet foil min. 100% coverage
Electrolytic braided copper wire

PVC - RAL 6018 Green, Ø 4.30 mm
TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Thanks to the small-diameter design, the cables are suitable for flush-mount electrical installation in walls and ceilings of the renovated buildings.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	40 m
VHF/UHF distribution[3]	860 MHz	100 m
S-band Cable TV distribution[3]	470 MHz	140 m

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		54 ± 2 pF/m	
Velocity of propagation		(83 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1000 V	
Test voltage		2500 V	
Attenuation @20°C	max.	50 MHz	7.26 dB/100 m
		200 MHz	14.23 dB/100 m
		470 MHz	21.91 dB/100 m
		860 MHz	29.96 dB/100 m
		1000 MHz	32.43 dB/100 m
		2150 MHz	48.82 dB/100 m
		2400 MHz	51.83 dB/100 m
		3000 MHz	58.59 dB/100 m
Return loss[1]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Segregation class		"c" EN 50174-2	

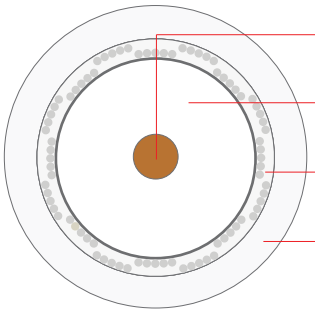
[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307052	Mini U/6 PHY-PVC Cu/Cu	4.30	11	23	Green (RAL 6018)	100/250/500/1000
307109	Mini U/6 PHY-PVC Cu/Cu	4.30	11	23	White (RAL 9003)	100/250/500/1000

Specifications may vary depending on technical modifications.

Mini U/4 PHY-PVC
Cu/Al

Cable structure



Electrolytic copper wire, Ø 0.64 mm (AWG22)

Physical foam PE, Ø 2.90 mm
70°C, EN 50290-2-23

Al-Pet foil min. 100% coverage
Aluminium braided wire

PVC - RAL 9003 White, Ø 4.30 mm
TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Thanks to the small-diameter design, the cables are suitable for flush-mount electrical installation in walls and ceilings of the renovated buildings.

Standards

EN 50117, IEC 61196

Fire performance

Vertical flame propagation: EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	40 m
VHF/UHF distribution[3]	860 MHz	100 m
S-band Cable TV distribution[3]	470 MHz	140 m

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		54 ± 2 pF/m	
Velocity of propagation		(83 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1000 V	
Test voltage		2500 V	
Attenuation @20°C	max.	50 MHz	7.26 dB/100 m
		200 MHz	14.23 dB/100 m
		470 MHz	21.91 dB/100 m
		860 MHz	29.96 dB/100 m
		1000 MHz	32.43 dB/100 m
		2150 MHz	48.82 dB/100 m
		2400 MHz	51.83 dB/100 m
		3000 MHz	58.59 dB/100 m
Return loss[1]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Segregation class		"c" EN 50174-2	

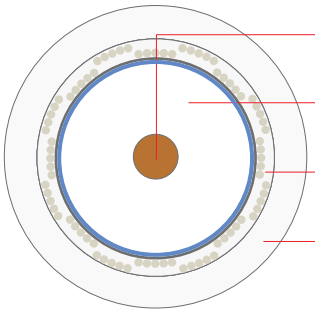
[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307051	Mini U/4 PHY-PVC Cu/Al	4.30	3.0	17	☐ White (RAL 9003)	100/250/500/1000

Specifications may vary depending on technical modifications.

RG 6 U/4 PHY-PVC
Cu/CuSn

Cable structure



Electrolytic copper wire, Ø 1.02 mm (AWG18)

Physical foam PE, Ø 4.60 mm
70°C, EN 50290-2-23

Al-Pet foil min. 100% coverage
Tinned braided copper wire

PVC - RAL 9003 White, Ø 6.80 mm
TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2)]	2150 MHz	60 m
VHF/UHF distribution[3)]	860 MHz	150 m
S-band Cable TV distribution[3)]	470 MHz	210 m

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
		2150 MHz	32.52 dB/100 m
		2400 MHz	34.59 dB/100 m
		3000 MHz	39.26 dB/100 m
Return loss[1)]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Segregation class		"c" EN 50174-2	

[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2)] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

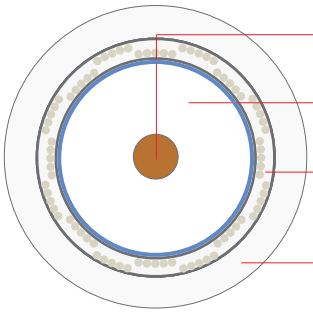
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307058	RG 6 U/4 PHY-PVC Cu/CuSn	6.80	16	47	☐ White (RAL 9003)	100/500/1000

Specifications may vary depending on technical modifications.

RG 6 U/4 PHY-PVC
Cu/CuSn Trishield

Class A+
EN 50117-2-4

Cable structure



Electrolytic copper wire, Ø 1.02 mm (AWG18)
Class 1.IEC60228

Blue, physical foam PE, Ø 4.60 mm
70°C, EN 50290-2-23

Al-Pet-Sy foil min. 100% coverage
Tinned braided copper wire
Al-Pet foil min. 100% coverage

PVC - RAL 9003 White, Ø 6.80 mm
TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	60 m
VHF/UHF distribution[3]	860 MHz	150 m
S-band Cable TV distribution[3]	470 MHz	210 m

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
		2150 MHz	32.52 dB/100 m
		2400 MHz	34.59 dB/100 m
		3000 MHz	39.26 dB/100 m
Return loss[1]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Screening Class		Class A+	
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 95 dB
		1000-2000 MHz	≥ 85 dB
		2000-3000 MHz	≥ 75 dB
Transfer Impedance		5-30 MHz	≤ 2.5 mΩ/m

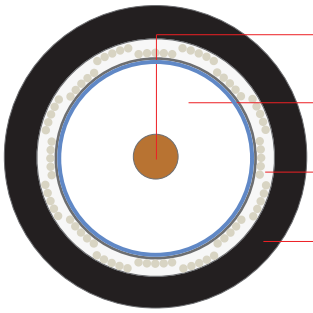
[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307064	RG 6 U/4 PHY-PVC Cu/CuSn Trishield	6.80	16	47	☐ White (RAL 9003)	100/500/1000

Specifications may vary depending on technical modifications.

RG 6 U/4 PHY-HF
Cu/CuSn

Cable structure



Conductor	Electrolytic copper wire, Ø 1.02 mm (AWG18)
Insulation	Physical foam PE, Ø 4.60 mm 70°C, EN 50290-2-23
Screen	Al-Pet foil min. 100% coverage Tinned braided copper wire
Sheath	HFFR - RAL 9011 Black, Ø 6.80 mm 70°C, EN 50290-2-27

Application
Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Standards EN 50117, IEC 61196

Fire performance
Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity
LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length
Satellite distribution[2)]	2150 MHz	60 m
VHF/UHF distribution[3)]	860 MHz	150 m
S-band Cable TV distribution[3)]	470 MHz	210 m

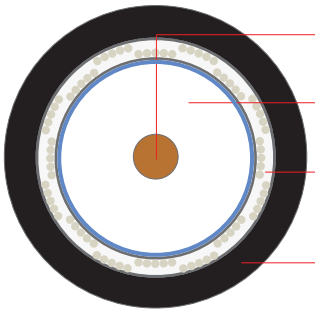
Specifications
Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
		2150 MHz	32.52 dB/100 m
		2400 MHz	34.59 dB/100 m
		3000 MHz	39.26 dB/100 m
Return loss[1)]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Segregation class		"c" EN 50174-2	

[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2)] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307085	RG 6 U/4 PHY-HF Cu/CuSn	6.80	16	47	Black (RAL 9011)	100/500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 1.02 mm (AWG18)

Physical foam PE, Ø 4.60 mm
70°C, EN 50290-2-23

Al-Pet-Sy foil min. 100% coverage
Tinned braided copper wire
Al-Pet foil min. 100% coverage

HFFR - RAL 9011 Black, Ø 6.80 mm
70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Standards

EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	60 m
VHF/UHF distribution[3]	860 MHz	150 m
S-band Cable TV distribution[3]	470 MHz	210 m

Specifications

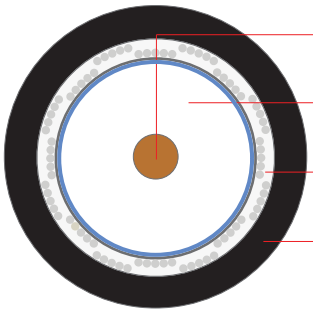
Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
		2150 MHz	32.52 dB/100 m
		2400 MHz	34.59 dB/100 m
		3000 MHz	39.26 dB/100 m
Return loss[1]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Screening Class		Class A+	
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 95 dB
		1000-2000 MHz	≥ 85 dB
		2000-3000 MHz	≥ 75 dB
Transfer Impedance		5-30 MHz	≤ 2.5 mΩ/m

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307114	RG 6 U/4 PHY-HF Cu/CuSn Trishield	6.80	16	47	■ Black (RAL 9011)	100/500/1000
307091	RG 6 U/4 PHY-HF Cu/CuSn Trishield	6.80	16	47	□ White (RAL 9003)	100/500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 1.02 mm (AWG18)
Insulation	Physical foam PE, Ø 4.60 mm 70°C, EN 50290-2-23
Screen	Al-Pet foil min. 100% coverage Aluminium braided wire
Sheath	HFFR - RAL 9011 Black, Ø 6.80 mm 70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2
Corrosive gas EN 60754-1/2
Smoke density EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	60 m
VHF/UHF distribution[3]	860 MHz	150 m
S-band Cable TV distribution[3]	470 MHz	210 m

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
		2150 MHz	32.52 dB/100 m
		2400 MHz	34.59 dB/100 m
		3000 MHz	39.26 dB/100 m
Return loss[1]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Screening Class		Class C	
Segregation class		"c" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 75 dB
		1000-2000 MHz	≥ 65 dB
		2000-3000 MHz	≥ 55 dB
Transfer Impedance		5-30 MHz	≤ 50 mΩ/m

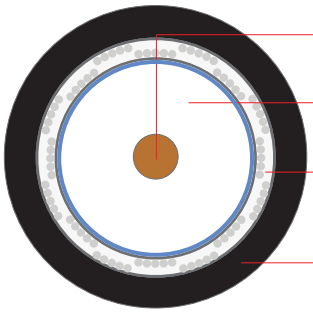
[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307148	RG 6 U/4 PHY-HF Cu/Al	6.80	7.3	40	Black (RAL 9011)	100/500/1000
307084	RG 6 U/4 PHY-HF Cu/Al	6.80	7.3	40	White (RAL 9003)	100/500/1000
307164	RG 6 U/4 PHY-HF Cu/Al	6.80	7.3	40	Grey (RAL 7001)	100/500/1000

Specifications may vary depending on technical modifications.

RG 6 U/4 PHY-HF
Cu/Al Trishield

Cable structure



Conductor	Electrolytic copper wire, Ø 1.02 mm (AWG18)
Insulation	Physical foam PE, Ø 4.60 mm 70°C, EN 50290-2-23
Screen	Al-Pet-Sy foil min. 100% coverage Aluminium braided wire Al-Pet foil min. 100% coverage
Sheath	HFFR - RAL 9011 Black, Ø 6.80 mm 70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2)]	2150 MHz	60 m
VHF/UHF distribution[3)]	860 MHz	150 m
S-band Cable TV distribution[3)]	470 MHz	210 m

Specifications

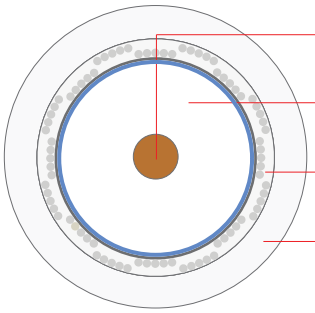
Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		52 ± 2 pF/m
Velocity of propagation		(84 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1300 V
Test voltage		3000 V
Attenuation @20°C	max.	50 MHz — 4.74 dB/100 m
		200 MHz — 9.29 dB/100 m
		470 MHz — 14.35 dB/100 m
		860 MHz — 19.72 dB/100 m
		1000 MHz — 21.37 dB/100 m
		2150 MHz — 32.52 dB/100 m
		2400 MHz — 34.59 dB/100 m
		3000 MHz — 39.26 dB/100 m
Return loss[1)]		5-470 MHz — > 20 dB
		470-1000 MHz — > 18 dB
		1000-2000 MHz — > 16 dB
		2000-3000 MHz — > 15 dB
Segregation class		"c" EN 50174-2

[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2)] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307090	RG 6 U/4 PHY-HF Cu/Al Trishield	6.80	7.3	40	Black (RAL 9011)	100/500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 1.02 mm (AWG18)

Physical foam PE, Ø 4.60 mm
70°C, EN 50290-2-23

Al-Pet foil min. 100% coverage
Aluminium braided wire

PVC - RAL 9003 White, Ø 6.80 mm
TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2)]	2150 MHz	60 m
VHF/UHF distribution[3)]	860 MHz	150 m
S-band Cable TV distribution[3)]	470 MHz	210 m

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
		2150 MHz	32.52 dB/100 m
		2400 MHz	34.59 dB/100 m
		3000 MHz	39.26 dB/100 m
Return loss[1)]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Screening Class		Class C	
Segregation class		"c" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 75 dB
		1000-2000 MHz	≥ 65 dB
		2000-3000 MHz	≥ 55 dB
Transfer Impedance		5-30 MHz	≤ 50 mΩ/m

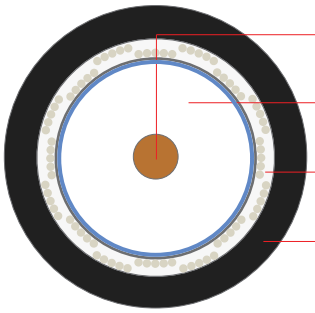
[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2)] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307057	RG 6 U/4 PHY-PVC Cu/Al	6.80	7.3	40	White (RAL 9003)	100/500/1000
307149	RG 6 U/4 PHY-PVC Cu/Al	6.80	7.3	40	Black (RAL 9011)	100/500/1000
307151	RG 6 U/4 PHY-PVC Cu/Al	6.80	7.3	40	Black/Orange (RAL 9011)	100/500/1000

Specifications may vary depending on technical modifications.

RG 6 U/4 PHY-PE
Cu/CuSn

Cable structure



Conductor	Electrolytic copper wire, Ø 1.02 mm (AWG18)
Insulation	Physical foam PE, Ø 4.60 mm 70°C, EN 50290-2-23
Screen	l-Pet foil min. 100% coverage Tinned braided copper wire
Sheath	PE - RAL 9011 Black, Ø 6.80 mm 80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Thanks to the polyethylene sheath, they are preferred for outdoor and underground installations.

Standards EN 50117, IEC 61196

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	60 m
VHF/UHF distribution[3]	860 MHz	150 m
S-band Cable TV distribution[3]	470 MHz	210 m

Specifications

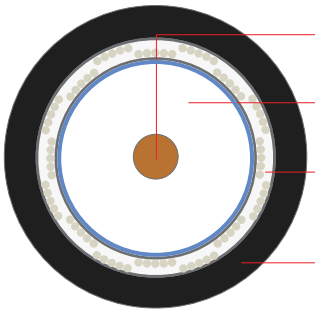
Operating temperature		-40°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
		2150 MHz	32.52 dB/100 m
		2400 MHz	34.59 dB/100 m
		3000 MHz	39.26 dB/100 m
Return loss[1]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Segregation class		"c" EN 50174-2	

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307069	RG 6 U/4 PHY-PE Cu/CuSn	6.80	16	47	Black (RAL 9011)	100/500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 1.02 mm (AWG18)

Physical foam PE, Ø 4.60 mm
70°C, EN 50290-2-23

Al-Pet-Sy foil min. 100% coverage Tinned braided copper wire
Al-Pet foil min. 100% coverage

PE - RAL 9011 Black, Ø 6.80 mm
80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Thanks to the polyethylene sheath, they are preferred for outdoor and underground installations.

Standards EN 50117, IEC 61196

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	60 m
VHF/UHF distribution[3]	860 MHz	150 m
S-band Cable TV distribution[3]	470 MHz	210 m

Specifications

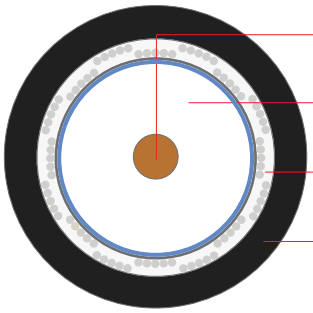
Operating temperature		-40°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
		2150 MHz	32.52 dB/100 m
		2400 MHz	34.59 dB/100 m
		3000 MHz	39.26 dB/100 m
Return loss[1]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Screening Class		Class A+	
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 95 dB
		1000-2000 MHz	≥ 85 dB
		2000-3000 MHz	≥ 75 dB
Transfer Impedance		5-30 MHz	≤ 2.5 mΩ/m

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307075	RG 6 U/4 PHY-PE Cu/CuSn Trishield	6.80	16	47	Black (RAL 9011)	100/500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 1.02 mm (AWG18)

Physical foam PE, Ø 4.60 mm
70°C, EN 50290-2-23

Al-Pet foil min. 100% coverage
Aluminium braided wire

PE - RAL 9011 Black, Ø 6.80 mm
80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Thanks to the polyethylene sheath, they are preferred for outdoor and underground installations.

Standards EN 50117, IEC 61196

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	60 m
VHF/UHF distribution[3]	860 MHz	150 m
S-band Cable TV distribution[3]	470 MHz	210 m

Specifications

Operating temperature		-40°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
		2150 MHz	32.52 dB/100 m
		2400 MHz	34.59 dB/100 m
		3000 MHz	39.26 dB/100 m
Return loss[1]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Screening Class		Class C	
Segregation class		"c" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 75 dB
		1000-2000 MHz	≥ 65 dB
		2000-3000 MHz	≥ 55 dB
Transfer Impedance		5-30 MHz	≤ 50 mΩ/m

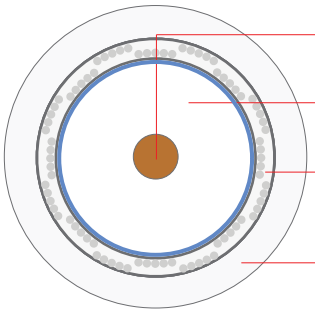
[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307068	RG 6 U/4 PHY-PE Cu/Al	6.80	7.3	30	Black (RAL 9011)	100/500/1000

Specifications may vary depending on technical modifications.

RG 6 U/4 PHY-PVC
Cu/Al Trishield

Cable structure



Conductor	Electrolytic copper wire, Ø 1.02 mm (AWG18)
Insulation	Physical foam PE, Ø 4.60 mm 70°C, EN 50290-2-23
Screen	Al-Pet-Sy foil min. 100% coverage Aluminium braided wire Al-Pet foil min. 100% coverage
Sheath	PVC - RAL 9003 White, Ø 6.80 mm TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	60 m
VHF/UHF distribution[3]	860 MHz	150 m
S-band Cable TV distribution[3]	470 MHz	210 m

Specifications

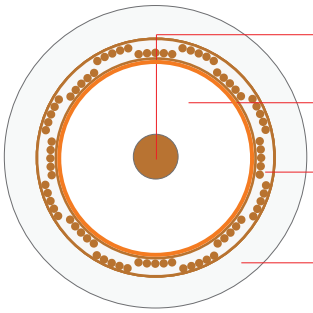
Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
		2150 MHz	32.52 dB/100 m
		2400 MHz	34.59 dB/100 m
		3000 MHz	39.26 dB/100 m
Return loss[1]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Segregation class		"c" EN 50174-2	

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307063	RG 6 U/4 PHY-PVC Cu/Al Trishield	6.80	7.3	40	☐ White (RAL 9003)	100/500/1000

Specifications may vary depending on technical modifications.

Cable structure



Copper-clad steel wire, Ø 1.02 mm (AWG18)
21% conductive

Physical foam PE, Ø 4.60 mm
70°C, EN 50290-2-23

Cu-Pet foil min. 100% coverage
Electrolytic braided copper wire
Cu-Pet foil min. 100% coverage

PVC - RAL 9003 White, Ø 6.80 mm
TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	60 m
VHF/UHF distribution[3]	860 MHz	150 m
S-band Cable TV distribution[3]	470 MHz	210 m

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
		2150 MHz	32.52 dB/100 m
		2400 MHz	34.59 dB/100 m
		3000 MHz	39.26 dB/100 m
Return loss[1]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Segregation class		"d" EN 50174-2	

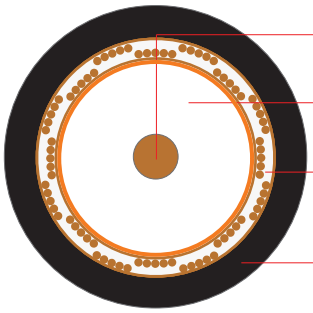
[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307065	RG 6 U/6 PHY-PVC CCS/Cu Trishield	6.80	13	50	White (RAL 9003) Green	100/500/1000
307161	RG 6 U/6 PHY-PVC CCS/Cu Trishield	6.80	13	50	(RAL 6018)	100/500/1000
307191	RG 6 U/6 PHY-PVC CCS/Cu Trishield	6.80	13	50	Black/Green (RAL 9011)	100/500/1000

Specifications may vary depending on technical modifications.

RG 6 U/6 PHY-HF
CCS/Cu Trishield

Cable structure



Copper-clad steel wire, Ø 1.02 mm (AWG18)
21% conductive

Physical foam PE, Ø 4.60 mm
70°C, EN 50290-2-23

Cu-Pet foil min. 100% coverage
Electrolytic braided copper wire
Cu-Pet foil min. 100% coverage

HFFR - RAL 9011 Black, Ø 6.80 mm
70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2)]	2150 MHz	60 m
VHF/UHF distribution[3)]	860 MHz	150 m
S-band Cable TV distribution[3)]	470 MHz	210 m

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
		2150 MHz	32.52 dB/100 m
		2400 MHz	34.59 dB/100 m
		3000 MHz	39.26 dB/100 m
Return loss[1)]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Segregation class		"d" EN 50174-2	

[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2)] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

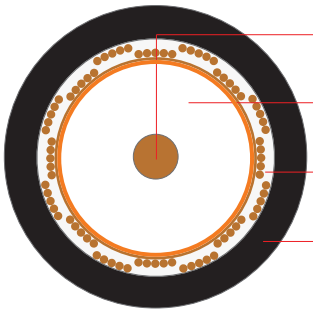
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307092	RG 6 U/6 PHY-HF CCS/Cu Trishield	6.80	13	50	Black (RAL 9011)	100/500/1000

Specifications may vary depending on technical modifications.

RG 6 U/6 PHY-HF
Cu/Cu

Class B
EN 50117-2-4

Cable structure



Conductor	Electrolytic copper wire, Ø 1.02 mm (AWG18)
Insulation	Physical foam PE, Ø 4.60 mm 70°C, EN 50290-2-23
Screen	Cu-Pet foil min. 100% coverage Electrolytic braided copper wire
Sheath	HFFR - RAL 9011 Black, Ø 6.80 mm 70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Standards

EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	60 m
VHF/UHF distribution[3]	860 MHz	150 m
S-band Cable TV distribution[3]	470 MHz	210 m

Specifications

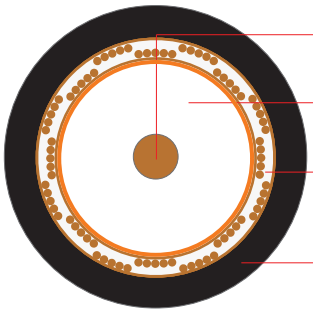
Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		52 ± 2 pF/m
Velocity of propagation		(84 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1300 V
Test voltage		3000 V
Attenuation @20°C	max.	50 MHz — 4.74 dB/100 m
		200 MHz — 9.29 dB/100 m
		470 MHz — 14.35 dB/100 m
		860 MHz — 19.72 dB/100 m
		1000 MHz — 21.37 dB/100 m
		2150 MHz — 32.52 dB/100 m
		2400 MHz — 34.59 dB/100 m
		3000 MHz — 39.26 dB/100 m
Return loss[1]		5-470 MHz — > 20 dB
		470-1000 MHz — > 18 dB
		1000-2000 MHz — > 16 dB
		2000-3000 MHz — > 15 dB
Screening Class		Class B
Segregation class		"c" EN 50174-2
Screen Attenuation		30-1000 MHz — ≥ 75 dB
		1000-2000 MHz — ≥ 65 dB
		2000-3000 MHz — ≥ 55 dB
Transfer Impedance		5-30 MHz — ≤ 15 mΩ/m

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307086	RG 6 U/6 PHY-HF Cu/Cu	6.80	20	50	Black (RAL 9011)	100/500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 1.02 mm (AWG18)

Physical foam PE, Ø 4.60 mm
70°C, EN 50290-2-23

Cu-Pet foil min. 100% coverage
Electrolytic braided copper wire
Cu-Pet foil min. 100% coverage

HFFR - RAL 9011 Black, Ø 6.80 mm
70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2)]	2150 MHz	60 m
VHF/UHF distribution[3)]	860 MHz	150 m
S-band Cable TV distribution[3)]	470 MHz	210 m

Specifications

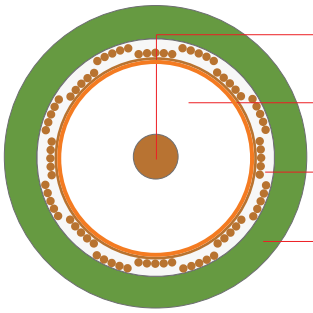
Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		52 ± 2 pF/m
Velocity of propagation		(84 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1300 V
Test voltage		3000 V
Attenuation @20°C	max.	50 MHz — 4.74 dB/100 m
		200 MHz — 9.29 dB/100 m
		470 MHz — 14.35 dB/100 m
		860 MHz — 19.72 dB/100 m
		1000 MHz — 21.37 dB/100 m
		2150 MHz — 32.52 dB/100 m
		2400 MHz — 34.59 dB/100 m
		3000 MHz — 39.26 dB/100 m
Return loss[1)]		5-470 MHz — > 20 dB
		470-1000 MHz — > 18 dB
		1000-2000 MHz — > 16 dB
		2000-3000 MHz — > 15 dB
Screening Class		Class A+
Segregation class		"d" EN 50174-2
Screen Attenuation		30-1000 MHz — ≥ 95 dB
		1000-2000 MHz — ≥ 85 dB
		2000-3000 MHz — ≥ 75 dB
Transfer Impedance		5-30 MHz — ≤ 2.5 mΩ/m

[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2)] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307122	RG 6 U/6 PHY-HF Cu/Cu Trishield	6.80	20	50	Black (RAL 9011)	100/500/1000
307093	RG 6 U/6 PHY-HF Cu/Cu Trishield	6.80	20	50	White (RAL 9003)	100/500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 1.02 mm (AWG18)
Insulation	Physical foam PE, Ø 4.60 mm 70°C, EN 50290-2-23
Screen	Cu-Pet foil min. 100% coverage Electrolytic braided copper wire
Sheath	PVC - RAL 6018 Green, Ø 6.80 mm TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	60 m
VHF/UHF distribution[3]	860 MHz	150 m
S-band Cable TV distribution[3]	470 MHz	210 m

Specifications

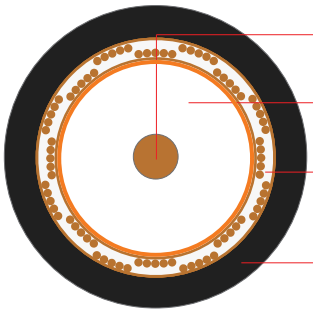
Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
		2150 MHz	32.52 dB/100 m
		2400 MHz	34.59 dB/100 m
		3000 MHz	39.26 dB/100 m
Return loss[1]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Screening Class		Class B	
Segregation class		"c" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 75 dB
		1000-2000 MHz	≥ 65 dB
		2000-3000 MHz	≥ 55 dB
Transfer Impedance		5-30 MHz	≤ 15 mΩ/m

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307059	RG 6 U/6 PHY-PVC Cu/Cu	6.80	17	47	Green (RAL 6018)	100/500/1000
307156	RG 6 U/6 PHY-PVC Cu/Cu	6.80	17	47	White (RAL 9003)	100/500/1000
307157	RG 6 U/6 PHY-PVC Cu/Cu	6.80	17	47	Black/ Green (RAL 9011)	100/500/1000
307158	RG 6 U/6 PHY-PVC Cu/Cu	6.80	17	47	Black (RAL 9011)	100/500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 1.02 mm (AWG18)
Insulation	Physical foam PE, Ø 4.60 mm 70°C, EN 50290-2-23
Screen	Cu-Pet foil min. 100% coverage Electrolytic braided copper wire Cu-Pet foil min. 100% coverage
Sheath	PE - RAL 9011 Black, Ø 6.80 mm 80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Thanks to the polyethylene sheath, they are preferred for outdoor and underground installations.

Specifications

Operating temperature		-40°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
		2150 MHz	32.52 dB/100 m
		2400 MHz	34.59 dB/100 m
		3000 MHz	39.26 dB/100 m
Return loss[1]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Screening Class		Class A+	
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 95 dB
		1000-2000 MHz	≥ 85 dB
		2000-3000 MHz	≥ 75 dB
Transfer Impedance		5-30 MHz	≤ 2.5 mΩ/m

Standards EN 50117, IEC 61196

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

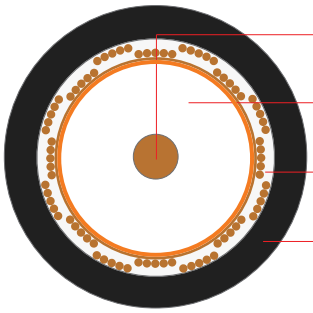
Satellite distribution[2]	2150 MHz	60 m
VHF/UHF distribution[3]	860 MHz	150 m
S-band Cable TV distribution[3]	470 MHz	210 m

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307159	RG 6 U/6 PHY-PE Cu/Cu Trishield	6.80	20	41	Black (RAL 9011)	100/500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 1.02 mm (AWG18)
Insulation	Physical foam PE, Ø 4.60 mm 70°C, EN 50290-2-23
Screen	Cu-Pet foil min. 100% coverage Electrolytic braided copper wire
Sheath	PE - RAL 9011 Black, Ø 6.80 mm 80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Thanks to the polyethylene sheath, they are preferred for outdoor and underground installations.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	60 m
VHF/UHF distribution[3]	860 MHz	150 m
S-band Cable TV distribution[3]	470 MHz	210 m

Specifications

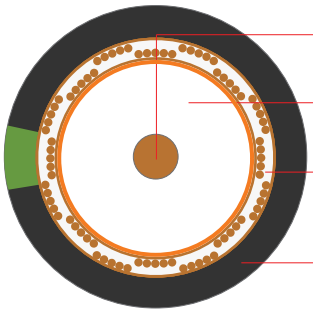
Operating temperature		-40°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
		2150 MHz	32.52 dB/100 m
		2400 MHz	34.59 dB/100 m
		3000 MHz	39.26 dB/100 m
Return loss[1]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Segregation class		"c" EN 50174-2	

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307070	RG 6 U/6 PHY-PE Cu/Cu	6.80	17	37	Black (RAL 9011)	100/500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 1.02 mm (AWG18)

Physical foam PE, Ø 4.60 mm
70°C, EN 50290-2-23

Cu-Pet foil min. 100% coverage
Electrolytic braided copper wire
Cu-Pet foil min. 100% coverage

PVC - RAL 6018 Black/Green, Ø 6.80 mm
TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	60 m
VHF/UHF distribution[3]	860 MHz	150 m
S-band Cable TV distribution[3]	470 MHz	210 m

Specifications

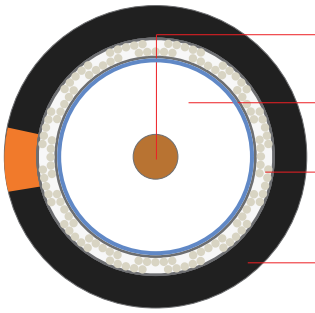
Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
		2150 MHz	32.52 dB/100 m
		2400 MHz	34.59 dB/100 m
		3000 MHz	39.26 dB/100 m
Return loss[1]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Screening Class		Class A+	
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 95 dB
		1000-2000 MHz	≥ 85 dB
		2000-3000 MHz	≥ 75 dB
Transfer Impedance		5-30 MHz	≤ 2.5 mΩ/m

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307066	RG 6 U/6 PHY-PVC Cu/Cu Trishield	6.80	20	50	Black/Green (RAL 9011)	100/500/1000
307160	RG 6 U/6 PHY-PVC Cu/Cu Trishield	6.80	20	50	White (RAL 9003)	100/500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 1.63 mm (AWG14)

Physical foam PE, Ø 7.11 mm
70°C, EN 50290-2-23

Al-Pet-Sy foil min. 100% coverage
Tinned braided copper wire
Al-Pet foil min. 100% coverage

PVC - RAL 9011 Black/Orange, Ø 10.0 mm
TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	90 m
VHF/UHF distribution[3]	860 MHz	230 m
S-band Cable TV distribution[3]	470 MHz	310 m

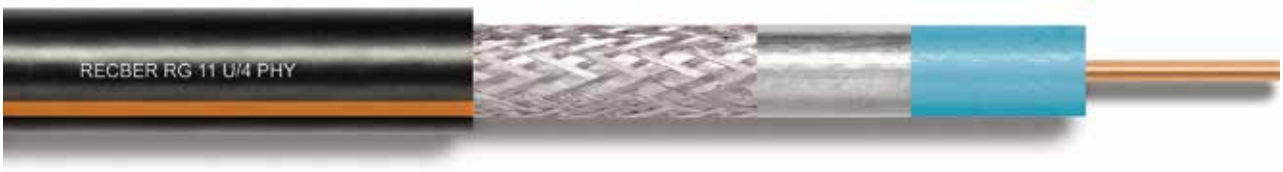
Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	2000 V	
Test voltage		5000 V	
Attenuation @20°C	max.	50 MHz	3.15 dB/100 m
		200 MHz	6.18 dB/100 m
		470 MHz	9.60 dB/100 m
		860 MHz	13.29 dB/100 m
		1000 MHz	14.43 dB/100 m
		2150 MHz	22.25 dB/100 m
		2400 MHz	23.73 dB/100 m
		3000 MHz	27.06 dB/100 m
Return loss[1]		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Screening Class		Class A+	
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 95 dB
		1000-2000 MHz	≥ 85 dB
		2000-3000 MHz	≥ 75 dB
Transfer Impedance		5-30 MHz	≤ 2.5 mΩ/m

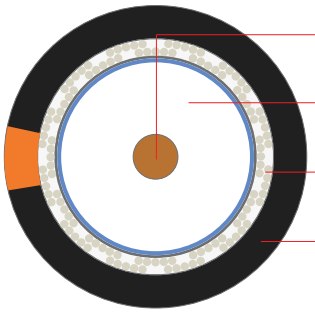
[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307132	RG 11 U/4 PHY-PVC Cu/CuSn Trishield	10.0	32	96	Black/Orange (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.



Cable structure



Electrolytic copper wire, Ø 1.63 mm (AWG14)

Physical foam PE, Ø 7.11 mm
70°C, EN 50290-2-23

Al-Pet foil min. 100% coverage
Tinned braided copper wire

PVC - RAL 9011 Black/Orange, Ø 10.0 mm
TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2)]	2150 MHz	90 m
VHF/UHF distribution[3)]	860 MHz	230 m
S-band Cable TV distribution[3)]	470 MHz	310 m

Specifications

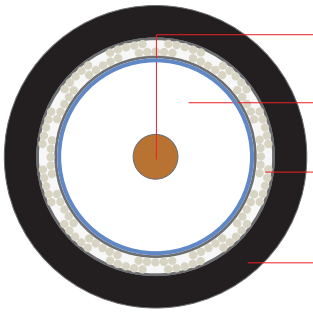
Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		52 ± 2 pF/m
Velocity of propagation		(84 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	2000 V
Test voltage		5000 V
Attenuation @20°C	max.	50 MHz — 3.15 dB/100 m
		200 MHz — 6.18 dB/100 m
		470 MHz — 9.60 dB/100 m
		860 MHz — 13.29 dB/100 m
		1000 MHz — 14.43 dB/100 m
		2150 MHz — 22.25 dB/100 m
		2400 MHz — 23.73 dB/100 m
		3000 MHz — 27.06 dB/100 m
Return loss[1)]		5-470 MHz — > 23 dB
		470-1000 MHz — > 20 dB
		1000-2000 MHz — > 18 dB
		2000-3000 MHz — > 16 dB
Screening Class		Class B
Segregation class		"c" EN 50174-2
Screen Attenuation		30-1000 MHz — ≥ 75 dB
		1000-2000 MHz — ≥ 65 dB
		2000-3000 MHz — ≥ 55 dB
Transfer Impedance		5-30 MHz — ≤ 15 mΩ/m

[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2)] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307061	RG 11 U/4 PHY-PVC Cu/CuSn	10.0	32	94	Black/Orange (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 1.63 mm (AWG14)

Physical foam PE, Ø 7.11 mm
70°C, EN 50290-2-23

Al-Pet-Sy foil min. 100% coverage
Tinned braided copper wire
Al-Pet foil min. 100% coverage

HFFR - RAL 9011 Black, Ø 10.0 mm
70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2)]	2150 MHz	90 m
VHF/UHF distribution[3)]	860 MHz	230 m
S-band Cable TV distribution[3)]	470 MHz	310 m

Specifications

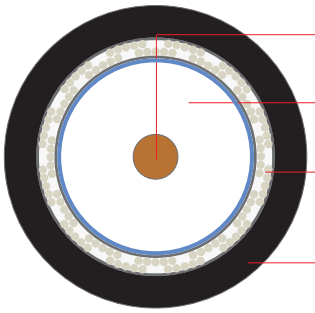
Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	2000 V	
Test voltage		5000 V	
Attenuation @20°C	max.	50 MHz	3.15 dB/100 m
		200 MHz	6.18 dB/100 m
		470 MHz	9.60 dB/100 m
		860 MHz	13.29 dB/100 m
		1000 MHz	14.43 dB/100 m
		2150 MHz	22.25 dB/100 m
		2400 MHz	23.73 dB/100 m
		3000 MHz	27.06 dB/100 m
Return loss[1)]		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Screening Class		Class A+	
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 95 dB
		1000-2000 MHz	≥ 85 dB
		2000-3000 MHz	≥ 75 dB
Transfer Impedance		5-30 MHz	≤ 2.5 mΩ/m

[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2)] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307134	RG 11 U/4 PHY-HF Cu/CuSn Trishield	10.0	32	96	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 1.63 mm (AWG14)
Insulation	Physical foam PE, Ø 7.11 mm 70°C, EN 50290-2-23
Screen	Al-Pet-Sy foil min. 100% coverage Tinned braided copper wire Al-Pet foil min. 100% coverage
Sheath	HFFR - RAL 9011 Black, Ø 10.0 mm 70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Standards

EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	90 m
VHF/UHF distribution[3]	860 MHz	230 m
S-band Cable TV distribution[3]	470 MHz	310 m

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	2000 V	
Test voltage		5000 V	
Attenuation @20°C	max.	50 MHz	3.15 dB/100 m
		200 MHz	6.18 dB/100 m
		470 MHz	9.60 dB/100 m
		860 MHz	13.29 dB/100 m
		1000 MHz	14.43 dB/100 m
		2150 MHz	22.25 dB/100 m
		2400 MHz	23.73 dB/100 m
		3000 MHz	27.06 dB/100 m
Return loss[1]		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Screening Class		Class A+	
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 95 dB
		1000-2000 MHz	≥ 85 dB
		2000-3000 MHz	≥ 75 dB
Transfer Impedance		5-30 MHz	≤ 2.5 mΩ/m

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

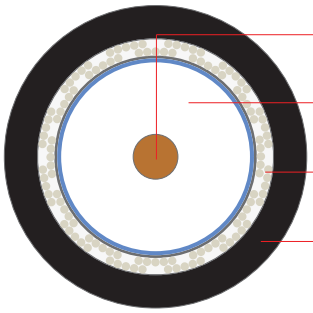
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307134	RG 11 U/4 PHY-HF Cu/CuSn Trishield	10.0	32	96	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

RG 11 U/4 PHY-HF

Cu/CuSn

Cable structure



Conductor	Electrolytic copper wire, Ø 1.63 mm (AWG14)
Insulation	Physical foam PE, Ø 7.11 mm 70°C, EN 50290-2-23
Screen	Al-Pet foil min. 100% coverage Tinned braided copper wire
Sheath	HFFR - RAL 9011 Black, Ø 10.0 mm 70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2)]	2150 MHz	90 m
VHF/UHF distribution[3)]	860 MHz	230 m
S-band Cable TV distribution[3)]	470 MHz	310 m

Specifications

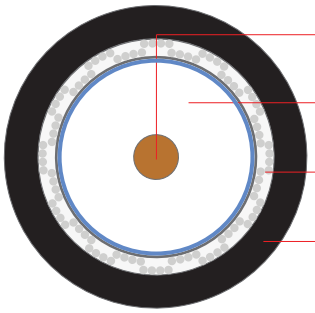
Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		52 ± 2 pF/m
Velocity of propagation		(84 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	2000 V
Test voltage		5000 V
Attenuation @20°C	max.	50 MHz — 3.15 dB/100 m
		200 MHz — 6.18 dB/100 m
		470 MHz — 9.60 dB/100 m
		860 MHz — 13.29 dB/100 m
		1000 MHz — 14.43 dB/100 m
		2150 MHz — 22.25 dB/100 m
		2400 MHz — 23.73 dB/100 m
		3000 MHz — 27.06 dB/100 m
Return loss[1)]		5-470 MHz — > 23 dB
		470-1000 MHz — > 20 dB
		1000-2000 MHz — > 18 dB
		2000-3000 MHz — > 16 dB
Segregation class		"c" EN 50174-2

[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2)] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307088	RG 11 U/4 PHY-HF Cu/CuSn	10.0	32	94	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 1.63 mm (AWG14)

Physical foam PE, Ø 7.11 mm
70°C, EN 50290-2-23

Al-Pet foil min. 100% coverage
Aluminium braided wire

HFFR - RAL 9011 Black, Ø 10.0 mm
70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Standards

EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2)]	2150 MHz	90 m
VHF/UHF distribution[3)]	860 MHz	230 m
S-band Cable TV distribution[3)]	470 MHz	310 m

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	2000 V	
Test voltage		5000 V	
Attenuation @20°C	max.	50 MHz	3.15 dB/100 m
		200 MHz	6.18 dB/100 m
		470 MHz	9.60 dB/100 m
		860 MHz	13.29 dB/100 m
		1000 MHz	14.43 dB/100 m
		2150 MHz	22.25 dB/100 m
		2400 MHz	23.73 dB/100 m
		3000 MHz	27.06 dB/100 m
Return loss[1)]		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Screening Class		Class B	
Segregation class		"c" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 75 dB
		1000-2000 MHz	≥ 65 dB
		2000-3000 MHz	≥ 55 dB
Transfer Impedance		5-30 MHz	≤ 15 mΩ/m

[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2)] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

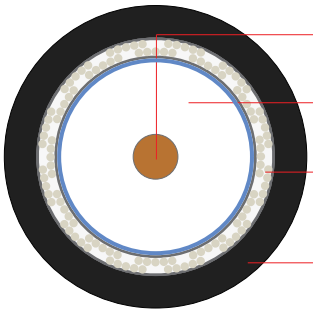
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307087	RG 11 U/4 PHY-HF Cu/Al	10.0	19	85	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

RG 11 U/4 PHY-PE
Cu/CuSn Trishield

Class A+
EN 50117-2-5

Cable structure



Conductor	Electrolytic copper wire, Ø 1.63 mm (AWG14)
Insulation	Physical foam PE, Ø 7.11 mm 70°C, EN 50290-2-23
Screen	Al-Pet-Sy foil min. 100% coverage Tinned braided copper wire Al-Pet foil min. 100% coverage
Sheath	PE - RAL 9011 Black, Ø 10.0 mm 80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Thanks to the polyethylene sheath, they are preferred for outdoor and underground installations.

Standards

EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	90 m
VHF/UHF distribution[3]	860 MHz	230 m
S-band Cable TV distribution[3]	470 MHz	310 m

Specifications

Operating temperature		-40°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		85% ± 2	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	2000 V	
Test voltage		5000 V	
Attenuation @20°C	max.	50 MHz	3.15 dB/100 m
		200 MHz	6.18 dB/100 m
		470 MHz	9.60 dB/100 m
		860 MHz	13.29 dB/100 m
		1000 MHz	14.43 dB/100 m
		2150 MHz	22.25 dB/100 m
		2400 MHz	23.73 dB/100 m
		3000 MHz	27.06 dB/100 m
Return loss[1]		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Screening Class		Class A+	
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 95 dB
		1000-2000 MHz	≥ 85 dB
		2000-3000 MHz	≥ 75 dB
Transfer Impedance		5-30 MHz	≤ 2.5 mΩ/m

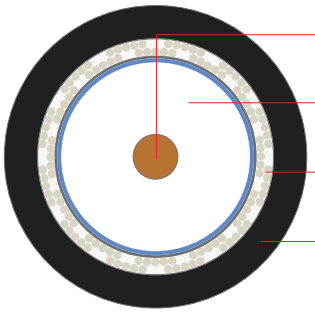
[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307133	RG 11 U/4 PHY-PE Cu/CuSn Trishield	10.0	32	79	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

RG 11 U/4 PHY-PE
Cu/CuSn

Cable structure



Conductor	Electrolytic copper wire, Ø 1.63 mm (AWG14)
Insulation	Physical foam PE, Ø 7.11 mm 70°C, EN 50290-2-23
Screen	Al-Pet foil min. 100% coverage Tinned braided copper wire
Sheath	PE - RAL 9011 Black, Ø 10.0 mm 80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Thanks to the polyethylene sheath, they are preferred for outdoor and underground installations.

Standards EN 50117, IEC 61196

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	90 m
VHF/UHF distribution[3]	860 MHz	230 m
S-band Cable TV distribution[3]	470 MHz	310 m

Specifications

Operating temperature		-40°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		85% ± 2	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	2000 V	
Test voltage		5000 V	
Attenuation @20°C	max.	50 MHz	3.15 dB/100 m
		200 MHz	6.18 dB/100 m
		470 MHz	9.60 dB/100 m
		860 MHz	13.29 dB/100 m
		1000 MHz	14.43 dB/100 m
		2150 MHz	22.25 dB/100 m
		2400 MHz	23.73 dB/100 m
		3000 MHz	27.06 dB/100 m
Return loss[1]		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Segregation class		"c" EN 50174-2	

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

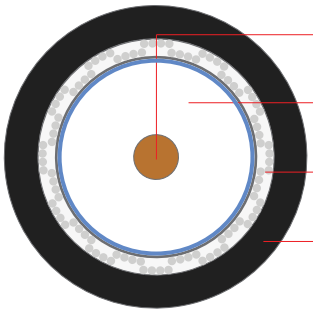
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307072	RG 11 U/4 PHY-PE Cu/CuSn	10.0	32	77	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

RG 11 U/4 PHY-PE
Cu/Al

Class B
EN 50117-2-5

Cable structure



Conductor	Electrolytic copper wire, Ø 1.63 mm (AWG14)
Insulation	Physical foam PE, Ø 7.11 mm 70°C, EN 50290-2-23
Screen	Al-Pet foil min. 100% coverage Aluminium braided wire
Sheath	PE - RAL 9011 Black, Ø 10.0 mm 80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Thanks to the polyethylene sheath, they are preferred for outdoor and underground installations.

Specifications

Operating temperature		-40°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		85% ± 2	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	2000 V	
Test voltage		5000 V	
Attenuation @20°C	max.	50 MHz	3.15 dB/100 m
		200 MHz	6.18 dB/100 m
		470 MHz	9.60 dB/100 m
		860 MHz	13.29 dB/100 m
		1000 MHz	14.43 dB/100 m
		2150 MHz	22.25 dB/100 m
		2400 MHz	23.73 dB/100 m
		3000 MHz	27.06 dB/100 m
Return loss[1]		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Screening Class		Class B	
Segregation class		"c" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 75 dB
		1000-2000 MHz	≥ 65 dB
		2000-3000 MHz	≥ 55 dB
Transfer Impedance		5-30 MHz	≤ 15 mΩ/m

Standards EN 50117, IEC 61196

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

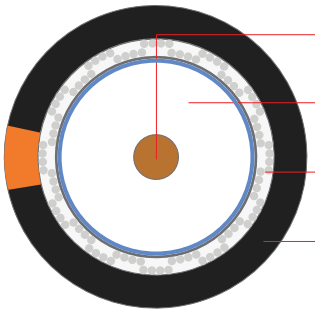
Satellite distribution[2]	2150 MHz	90 m
VHF/UHF distribution[3]	860 MHz	230 m
S-band Cable TV distribution[3]	470 MHz	310 m

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307071	RG 11 U/4 PHY-PE Cu/Al	10.0	19	68	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 1.63 mm (AWG14)

Physical foam PE, Ø 7.11 mm
70°C, EN 50290-2-23

Al-Pet foil min. 100% coverage
Aluminium braided wire

PVC - RAL 9011 Black/Orange, Ø 10.0 mm
TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	90 m
VHF/UHF distribution[3]	860 MHz	230 m
S-band Cable TV distribution[3]	470 MHz	310 m

Specifications

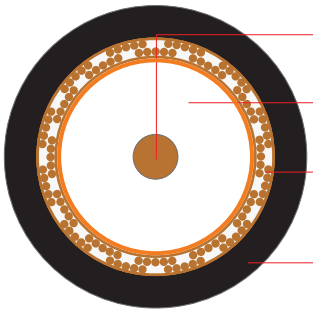
Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	2000 V	
Test voltage		5000 V	
Attenuation @20°C	max.	50 MHz	3.15 dB/100 m
		200 MHz	6.18 dB/100 m
		470 MHz	9.60 dB/100 m
		860 MHz	13.29 dB/100 m
		1000 MHz	14.43 dB/100 m
		2150 MHz	22.25 dB/100 m
		2400 MHz	23.73 dB/100 m
		3000 MHz	27.06 dB/100 m
Return loss[1]		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Screening Class		Class B	
Segregation class		"c" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 75 dB
		1000-2000 MHz	≥ 65 dB
		2000-3000 MHz	≥ 55 dB
Transfer Impedance		5-30 MHz	≤ 15 mΩ/m

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307060	RG 11 U/4 PHY-PVC Cu/Al	10.0	19	85	Black/Orange (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 1.63 mm (AWG14)
Insulation	Physical foam PE, Ø 7.11 mm 70°C, EN 50290-2-23
Screen	Cu-Pet foil min. 100% coverage Electrolytic braided copper wire Cu-Pet foil min. 100% coverage
Sheath	HFFR - RAL 9003 White, Ø 10.0 mm 70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	90 m
VHF/UHF distribution[3]	860 MHz	230 m
S-band Cable TV distribution[3]	470 MHz	310 m

Specifications

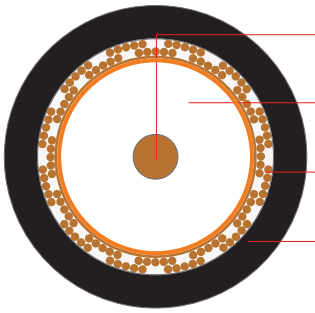
Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	2000 V	
Test voltage		5000 V	
Attenuation @20°C	max.	50 MHz	3.15 dB/100 m
		200 MHz	6.18 dB/100 m
		470 MHz	9.60 dB/100 m
		860 MHz	13.29 dB/100 m
		1000 MHz	14.43 dB/100 m
		2150 MHz	22.25 dB/100 m
		2400 MHz	23.73 dB/100 m
		3000 MHz	27.06 dB/100 m
Return loss[1]		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Screening Class		Class A+	
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 95 dB
		1000-2000 MHz	≥ 85 dB
		2000-3000 MHz	≥ 75 dB
Transfer Impedance		5-30 MHz	≤ 2.5 mΩ/m

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307123	RG 11 U/6 PHY-HF Cu/Cu Trishield	10.0	39	100	■ Black (RAL 9011)	500/1000
307094	RG 11 U/6 PHY-HF Cu/Cu Trishield	10.0	39	100	□ White (RAL 9003)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 1.63 mm (AWG14)

Physical foam PE, Ø 7.11 mm
70°C, EN 50290-2-23

Cu-Pet foil min. 100% coverage
Electrolytic braided copper wire

HFFR - RAL 9011 Black, Ø 10.0 mm
70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	90 m
VHF/UHF distribution[3]	860 MHz	230 m
S-band Cable TV distribution[3]	470 MHz	310 m

Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		52 ± 2 pF/m
Velocity of propagation		(84 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	2000 V
Test voltage		5000 V
Attenuation @20°C	max.	50 MHz — 3.15 dB/100 m
		200 MHz — 6.18 dB/100 m
		470 MHz — 9.60 dB/100 m
		860 MHz — 13.29 dB/100 m
		1000 MHz — 14.43 dB/100 m
		2150 MHz — 22.25 dB/100 m
		2400 MHz — 23.73 dB/100 m
		3000 MHz — 27.06 dB/100 m
Return loss[1]		5-470 MHz — > 23 dB
		470-1000 MHz — > 20 dB
		1000-2000 MHz — > 18 dB
		2000-3000 MHz — > 16 dB
Screening Class		Class B
Segregation class		"c" EN 50174-2
Screen Attenuation		30-1000 MHz — ≥ 75 dB
		1000-2000 MHz — ≥ 65 dB
		2000-3000 MHz — ≥ 55 dB
Transfer Impedance		5-30 MHz — ≤ 15 mΩ/m

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

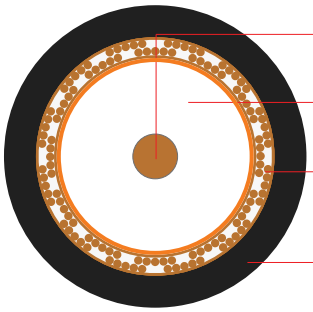
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307089	RG 11 U/6 PHY-HF Cu/Cu	10.0	34	95	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

RG 11 U/6 PHY-PE
Cu/Cu Trishield

Class A+
EN 50117-2-5

Cable structure



Conductor	Electrolytic copper wire, Ø 1.63 mm (AWG14)
Insulation	Physical foam PE, Ø 7.11 mm 70°C, EN 50290-2-23
Screen	Cu-Pet foil min. 100% coverage Electrolytic braided copper wire Cu-Pet foil min. 100% coverage
Sheath	PE - RAL 9011 Black, Ø 10.0 mm 80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Thanks to the polyethylene sheath, they are preferred for outdoor and underground installations.

Standards EN 50117, IEC 61196

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	90 m
VHF/UHF distribution[3]	860 MHz	230 m
S-band Cable TV distribution[3]	470 MHz	310 m

Specifications

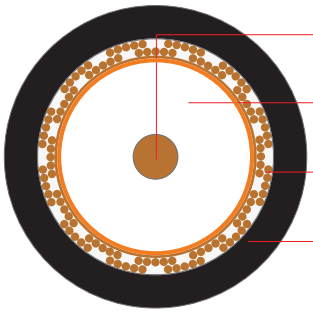
Operating temperature		-40°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		85% ± 2	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	2000 V	
Test voltage		5000 V	
Attenuation @20°C	max.	50 MHz	3.15 dB/100 m
		200 MHz	6.18 dB/100 m
		470 MHz	9.60 dB/100 m
		860 MHz	13.29 dB/100 m
		1000 MHz	14.43 dB/100 m
		2150 MHz	22.25 dB/100 m
		2400 MHz	23.73 dB/100 m
		3000 MHz	27.06 dB/100 m
Return loss[1]		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Screening Class		Class A+	
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 95 dB
		1000-2000 MHz	≥ 85 dB
		2000-3000 MHz	≥ 75 dB
Transfer Impedance		5-30 MHz	≤ 2.5 mΩ/m

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307078	RG 11 U/6 PHY-PE Cu/Cu Trishield	10.0	39	81	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 1.63 mm (AWG14)
Insulation	Physical foam PE, Ø 7.11 mm 70°C, EN 50290-2-23
Screen	Cu-Pet foil min. 100% coverage Electrolytic braided copper wire
Sheath	PE - RAL 9011 Black, Ø 10.0 mm 80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Thanks to the polyethylene sheath, they are preferred for outdoor and underground installations.

Standards EN 50117, IEC 61196

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	90 m
VHF/UHF distribution[3]	860 MHz	230 m
S-band Cable TV distribution[3]	470 MHz	310 m

Specifications

Operating temperature		-40°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		85% ± 2	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	2000 V	
Test voltage		5000 V	
Attenuation @20°C	max.	50 MHz	3.15 dB/100 m
		200 MHz	6.18 dB/100 m
		470 MHz	9.60 dB/100 m
		860 MHz	13.29 dB/100 m
		1000 MHz	14.43 dB/100 m
		2150 MHz	22.25 dB/100 m
		2400 MHz	23.73 dB/100 m
		3000 MHz	27.06 dB/100 m
Return loss[1]		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Screening Class		Class B	
Segregation class		"c" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 75 dB
		1000-2000 MHz	≥ 65 dB
		2000-3000 MHz	≥ 55 dB
Transfer Impedance		5-30 MHz	≤ 15 mΩ/m

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

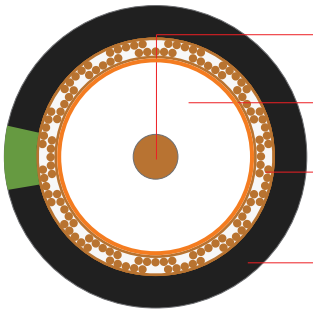
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307073	RG 11 U/6 PHY-PE Cu/Cu	10.0	34	76	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

RG 11 U/6 PHY-PVC
Cu/Cu Trishield

Class A+
EN 50117-2-4

Cable structure



Electrolytic copper wire, Ø 1.63 mm (AWG14)

Physical foam PE, Ø 7.11 mm
70°C, EN 50290-2-23

Cu-Pet foil min. 100% coverage
Electrolytic braided copper wire
Cu-Pet foil min. 100% coverage

PVC - RAL 6018 Black/Green, Ø 10.0 mm
TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	2000 V	
Test voltage		5000 V	
Attenuation @20°C	max.	50 MHz	3.15 dB/100 m
		200 MHz	6.18 dB/100 m
		470 MHz	9.60 dB/100 m
		860 MHz	13.29 dB/100 m
		1000 MHz	14.43 dB/100 m
		2150 MHz	22.25 dB/100 m
		2400 MHz	23.73 dB/100 m
		3000 MHz	27.06 dB/100 m
Return loss[1]		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Screening Class		Class A+	
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 95 dB
		1000-2000 MHz	≥ 85 dB
		2000-3000 MHz	≥ 75 dB
Transfer Impedance		5-30 MHz	≤ 2.5 mΩ/m

Standards

EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

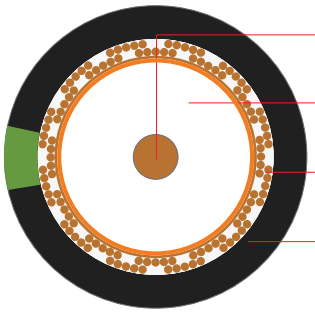
Satellite distribution[2]	2150 MHz	90 m
VHF/UHF distribution[3]	860 MHz	230 m
S-band Cable TV distribution[3]	470 MHz	310 m

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307067	RG 11 U/6 PHY-PVC Cu/Cu Trishield	10.0	39	100	Black/Green (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 1.63 mm (AWG14)

Physical foam PE, Ø 7.11 mm
70°C, EN 50290-2-23

Cu-Pet foil min. 100% coverage
Electrolytic braided copper wire

PVC - RAL 9011 Black/Green, Ø 10.0 mm
TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2)]	2150 MHz	90 m
VHF/UHF distribution[3)]	860 MHz	230 m
S-band Cable TV distribution[3)]	470 MHz	310 m

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	2000 V	
Test voltage		5000 V	
Attenuation @20°C	max.	50 MHz	3.15 dB/100 m
		200 MHz	6.18 dB/100 m
		470 MHz	9.60 dB/100 m
		860 MHz	13.29 dB/100 m
		1000 MHz	14.43 dB/100 m
		2150 MHz	22.25 dB/100 m
		2400 MHz	23.73 dB/100 m
		3000 MHz	27.06 dB/100 m
Return loss[1)]		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Screening Class		Class B	
Segregation class		"c" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 75 dB
		1000-2000 MHz	≥ 65 dB
		2000-3000 MHz	≥ 55 dB
Transfer Impedance		5-30 MHz	≤ 15 mΩ/m

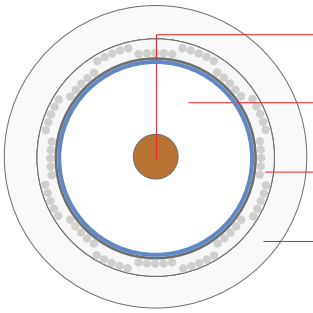
[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2)] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307062	RG 11 U/6 PHY-PVC Cu/Cu	10.0	34	95	Black/Green (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

RG 59 U/4 PHY-PVC
Cu/CuSn

Cable structure



Electrolytic copper wire, Ø 0.81 mm (AWG20)

Physical foam PE, Ø 3.70 mm
70°C, EN 50290-2-23

Al-Pet foil min. 100% coverage
Tinned braided copper wire

PVC - RAL 9003 White, Ø 5.80 mm
TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance
Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	50 m
VHF/UHF distribution[3]	860 MHz	120 m
S-band Cable TV distribution[3]	470 MHz	170 m

Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		54 ± 2 pF/m
Velocity of propagation		(82 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1000 V
Test voltage		2500 V
Attenuation @20°C	max.	50 MHz 5.95 dB/100 m
		200 MHz 11.71 dB/100 m
		470 MHz 18.08 dB/100 m
		860 MHz 24.79 dB/100 m
		1000 MHz 26.85 dB/100 m
		2150 MHz 40.62 dB/100 m
		2400 MHz 43.16 dB/100 m
		3000 MHz 48.87 dB/100 m
Return loss[1]		5-470 MHz > 20 dB
		470-1000 MHz > 18 dB
		1000-2000 MHz > 16 dB
		2000-3000 MHz > 15 dB
Segregation class		"c" EN 50174-2

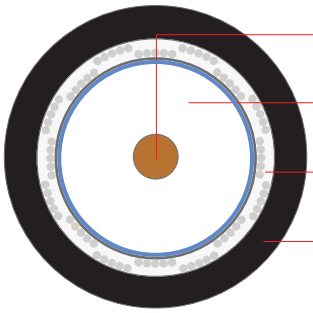
[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307055	RG 59 U/4 PHY-PVC Cu/CuSn	5.80	9.0	34	☐ White (RAL 9003)	100/500/1000

Specifications may vary depending on technical modifications.

RG 59 U/4 PHY-HF
Cu/CuSn

Cable structure



Conductor	Electrolytic copper wire, Ø 0.81 mm (AWG20)
Insulation	Physical foam PE, Ø 3.70 mm 70°C, EN 50290-2-23
Screen	Al-Pet foil min. 100% coverage Tinned braided copper wire
Sheath	HFFR - RAL 9011 Black, Ø 5.80 mm 70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	50 m
VHF/UHF distribution[3]	860 MHz	120 m
S-band Cable TV distribution[3]	470 MHz	170 m

Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		54 ± 2 pF/m
Velocity of propagation		(82 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1000 V
Test voltage		2500 V
Attenuation @20°C	max.	50 MHz — 5.95 dB/100 m
		200 MHz — 11.71 dB/100 m
		470 MHz — 18.08 dB/100 m
		860 MHz — 24.79 dB/100 m
		1000 MHz — 26.85 dB/100 m
		2150 MHz — 40.62 dB/100 m
		2400 MHz — 43.16 dB/100 m
		3000 MHz — 48.87 dB/100 m
Return loss[1]		5-470 MHz — > 20 dB
		470-1000 MHz — > 18 dB
		1000-2000 MHz — > 16 dB
		2000-3000 MHz — > 15 dB
Segregation class		"d" EN 50174-2

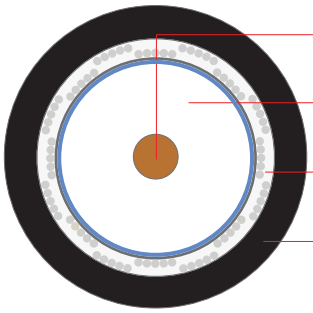
[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307082	RG 59 U/4 PHY-HF Cu/CuSn	5.80	9.0	34	Black (RAL 9011)	100/500/1000

Specifications may vary depending on technical modifications.

RG 59 U/4 PHY-HF
Cu/Al

Cable structure



Conductor	Electrolytic copper wire, Ø 0.81 mm (AWG20)
Insulation	Physical foam PE, Ø 3.70 mm 70°C, EN 50290-2-23
Screen	Al-Pet foil min. 100% coverage Aluminium braided wire
Sheath	HFFR - RAL 9011 Black, Ø 5.80 mm 70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2)]	2150 MHz	50 m
VHF/UHF distribution[3)]	860 MHz	120 m
S-band Cable TV distribution[3)]	470 MHz	170 m

Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		54 ± 2 pF/m
Velocity of propagation		(82 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1000 V
Test voltage		2500 V
Attenuation @20°C	max.	50 MHz — 5.95 dB/100 m
		200 MHz — 11.71 dB/100 m
		470 MHz — 18.08 dB/100 m
		860 MHz — 24.79 dB/100 m
		1000 MHz — 26.85 dB/100 m
		2150 MHz — 40.62 dB/100 m
		2400 MHz — 43.16 dB/100 m
		3000 MHz — 48.87 dB/100 m
Return loss[1)]		5-470 MHz — > 20 dB
		470-1000 MHz — > 18 dB
		1000-2000 MHz — > 16 dB
		2000-3000 MHz — > 15 dB
Segregation class		"c" EN 50174-2

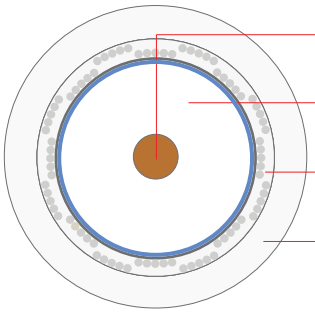
[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2)] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307081	RG 59 U/4 PHY-HF Cu/Al	5.80	4.5	30	Black (RAL 9011)	100/500/1000

Specifications may vary depending on technical modifications.

RG 59 U/4 PHY-HF
Cu/CuSn Trishield

Cable structure



Electrolytic copper wire, Ø 0.81 mm (AWG20)

Physical foam PE, Ø 3.70 mm
70°C, EN 50290-2-23

Al-Pet foil min. 100% coverage
Aluminium braided wire

PVC - RAL 9003 White, Ø 5.80 mm
TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2)]	2150 MHz	50 m
VHF/UHF distribution[3)]	860 MHz	120 m
S-band Cable TV distribution[3)]	470 MHz	170 m

Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		54 ± 2 pF/m
Velocity of propagation		(82 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1000 V
Test voltage		2500 V
Attenuation @20°C	max.	50 MHz 5.95 dB/100 m
		200 MHz 11.71 dB/100 m
		470 MHz 18.08 dB/100 m
		860 MHz 24.79 dB/100 m
		1000 MHz 26.85 dB/100 m
		2150 MHz 40.62 dB/100 m
		2400 MHz 43.16 dB/100 m
		3000 MHz 48.87 dB/100 m
Return loss[1)]		5-470 MHz > 20 dB
		470-1000 MHz > 18 dB
		1000-2000 MHz > 16 dB
		2000-3000 MHz > 15 dB
Segregation class		"c" EN 50174-2

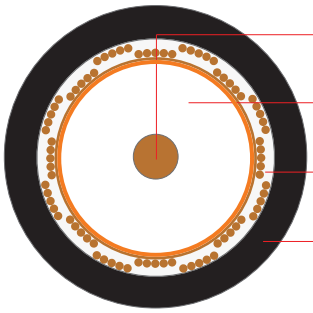
[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2)] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307054	RG 59 U/4 PHY-PVC Cu/Al	5.80	4.5	30	White (RAL 9003)	100/500/1000
307115	RG 59 U/4 PHY-PVC Cu/Al	5.80	4.5	30	Black (RAL 9011)	100/500/1000

Specifications may vary depending on technical modifications.

RG 59 U/6 PHY-HF
Cu/Cu

Cable structure



Conductor	Electrolytic copper wire, Ø 0.81 mm (AWG20)
Insulation	Physical foam PE, Ø 3.70 mm 70°C, EN 50290-2-23
Screen	Cu-Pet foil min. 100% coverage Electrolytic braided copper wire
Sheath	HFFR - RAL 9011 Black, Ø 5.80 mm 70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	50 m
VHF/UHF distribution[3]	860 MHz	120 m
S-band Cable TV distribution[3]	470 MHz	170 m

Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		54 ± 2 pF/m
Velocity of propagation		(82 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1000 V
Test voltage		2500 V
Attenuation @20°C	max.	50 MHz — 5.95 dB/100 m
		200 MHz — 11.71 dB/100 m
		470 MHz — 18.08 dB/100 m
		860 MHz — 24.79 dB/100 m
		1000 MHz — 26.85 dB/100 m
		2150 MHz — 40.62 dB/100 m
		2400 MHz — 43.16 dB/100 m
		3000 MHz — 48.87 dB/100 m
Return loss[1]		5-470 MHz — > 20 dB
		470-1000 MHz — > 18 dB
		1000-2000 MHz — > 16 dB
		2000-3000 MHz — > 15 dB
Segregation class		"c" EN 50174-2

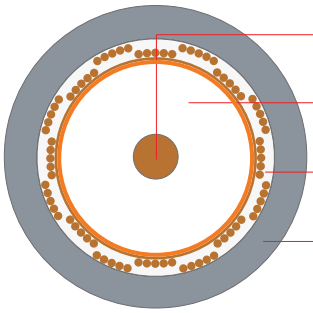
[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307083	RG 59 U/6 PHY-HF Cu/Cu	5.80	13	36	Black (RAL 9011)	100/500/1000

Specifications may vary depending on technical modifications.

RG 59 U/6 PHY-PVC
Cu/Cu

Cable structure



Conductor	Electrolytic copper wire, Ø 0.81 mm (AWG20)
Insulation	Physical foam PE, Ø 3.70 mm 70°C, EN 50290-2-23
Screen	Cu-Pet foil min. 100% coverage Electrolytic braided copper wire
Sheath	PVC - RAL 7001 Grey, Ø 5.80 mm TM51 70°C, EN 50290-2-22

Application
Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance
Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	50 m
VHF/UHF distribution[3]	860 MHz	120 m
S-band Cable TV distribution[3]	470 MHz	170 m

Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		54 ± 2 pF/m
Velocity of propagation		(82 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1000 V
Test voltage		2500 V
Attenuation @20°C	max.	50 MHz 5.95 dB/100 m
		200 MHz 11.71 dB/100 m
		470 MHz 18.08 dB/100 m
		860 MHz 24.79 dB/100 m
		1000 MHz 26.85 dB/100 m
		2150 MHz 40.62 dB/100 m
		2400 MHz 43.16 dB/100 m
		3000 MHz 48.87 dB/100 m
Return loss[1]		5-470 MHz > 20 dB
		470-1000 MHz > 18 dB
		1000-2000 MHz > 16 dB
		2000-3000 MHz > 15 dB
Segregation class		"c" EN 50174-2

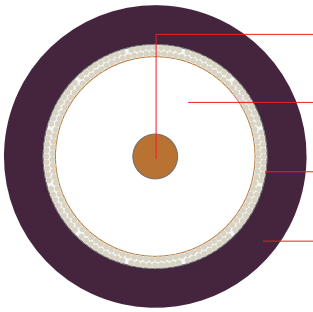
[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307056	RG 59 U/6 PHY-PVC Cu/Cu	5.80	13	36	Grey (RAL 7001)	100/500/1000
307116	RG 59 U/6 PHY-PVC Cu/Cu	5.80	13	36	Black/Green (RAL 9011)	100/500/1000
307117	RG 59 U/6 PHY-PVC Cu/Cu	5.80	13	36	White (RAL 9003)	100/500/1000

Specifications may vary depending on technical modifications.

HDV 60 HFFR

Cable structure



Electrolytic copper wire, Ø 0.64 mm (AWG22)

Physical foam PE, Ø 2.90 mm
70°C, EN 50290-2-23

Al-Pet-Al foil min. 100% coverage
Tinned braided copper wire 95% coverage

HFFR - RAL4007 Purple, Ø 4.50 mm
70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are used in live broadcasts and studio recordings as they transmit digital and HDTV-SDI video and convey rich media content such as HD and 3G without interruption.

Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 1 Ω
Capacitance		54 ± 1 pF/m
Velocity of propagation		(83 ± 1)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1000 V
Test voltage		2500 V
Attenuation @20°C	max.	1 MHz — 1.44 dB/100 m
		5 MHz — 2.61 dB/100 m
		10 MHz — 3.49 dB/100 m
		50 MHz — 7.26 dB/100 m
		100 MHz — 10.12 dB/100 m
		200 MHz — 14.23 dB/100 m
		500 MHz — 22.62 dB/100 m
		800 MHz — 28.85 dB/100 m
		1000 MHz — 32.43 dB/100 m
		1500 MHz — 40.21 dB/100 m
		2250 MHz — 50.04 dB/100 m
		3000 MHz — 58.59 dB/100 m
		3500 MHz — 63.81 dB/100 m
		4000 MHz — 68.75 dB/100 m
		4500 MHz — 73.46 dB/100 m
		5000 MHz — 77.97 dB/100 m
Return loss[1)]		5-300 MHz — > 26 dB
		300-3000 MHz — > 22 dB
		3000-5000 MHz — > 15 dB
Segregation class		"d" EN 50174-2

Standards

EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

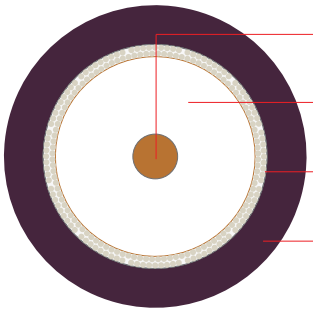
	SD	HD	3G
Data rate	270 Mb/s	1.5 Gb/s	3.0 Gb/s
Std.	SMPTE 292M	SMPTE 259M	SMPTE 424M
Application	Component SDI	720p-1080i	1080p
Assembly length	240 meters	80 meters	45 meters

[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307182	HDV 60 HFFR	4.50	14	28	Purple (RAL 4007)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 0.81 mm (AWG20)
Insulation	Physical foam PE, Ø 3.70 mm 70°C, EN 50290-2-23
Screen	Al-Pet-Al foil min. 100% coverage Tinned braided copper wire 95% coverage
Sheath	HFFR - RAL4007 Purple, Ø 5.90 mm 70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are used in live broadcasts and studio recordings as they transmit digital and HDTV-SDI video and convey rich media content such as HD and 3G without interruption.

Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 1 Ω
Capacitance		54 ± 1 pF/m
Velocity of propagation		(83 ± 1)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1000 V
Test voltage		2500 V
Attenuation @20°C	max.	1 MHz 1.17 dB/100 m
		5 MHz 2.13 dB/100 m
		10 MHz 2.86 dB/100 m
		50 MHz 5.95 dB/100 m
		100 MHz 8.31 dB/100 m
		200 MHz 11.71 dB/100 m
		500 MHz 18.67 dB/100 m
		800 MHz 23.86 dB/100 m
		1000 MHz 26.85 dB/100 m
		1500 MHz 33.37 dB/100 m
		2250 MHz 41.65 dB/100 m
		3000 MHz 48.87 dB/100 m
		3500 MHz 53.30 dB/100 m
		4000 MHz 57.50 dB/100 m
		4500 MHz 61.50 dB/100 m
		5000 MHz 65.35 dB/100 m
Return loss[1)]		5-300 MHz > 26 dB
		300-3000 MHz > 22 dB
		3000-5000 MHz > 15 dB
Segregation class		"d" EN 50174-2

Standards

EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

	SD	HD	3G
Data rate	270 Mb/s	1.5 Gb/s	3.0 Gb/s
Std.	SMPTE 292M	SMPTE 259M	SMPTE 424M
Application	Component SDI	720p-1080i	1080p
Assembly length	340 meters	95 meters	65 meters

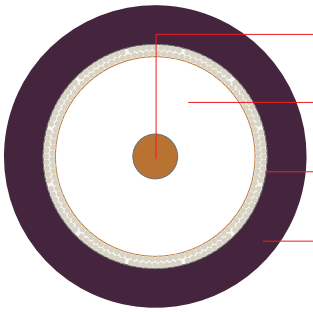
[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307183	HDV 80 HFFR	5.90	23	48	Purple (RAL 4007)	500/1000

Specifications may vary depending on technical modifications.

HDV 100 HFFR

Cable structure



Conductor	Electrolytic copper wire, Ø 1.02 mm (AWG18)
Insulation	Physical foam PE, Ø 4.60 mm 70°C, EN 50290-2-23
Screen	Al-Pet-Al foil min. 100% coverage Tinned braided copper wire 95% coverage
Sheath	HFFR - RAL4007 Purple, Ø 6.90 mm 70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are used in live broadcasts and studio recordings as they transmit digital and HDTV-SDI video and convey rich media content such as HD and 3G without interruption.

Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 1 Ω
Capacitance		53 ± 1 pF/m
Velocity of propagation		(83 ± 1)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1500 V
Test voltage		3000 V
Attenuation @20°C	max.	1 MHz 1.00 dB/100 m
		5 MHz 1.75 dB/100 m
		10 MHz 2.32 dB/100 m
		50 MHz 4.74 dB/100 m
		100 MHz 6.60 dB/100 m
		200 MHz 9.29 dB/100 m
		500 MHz 14.82 dB/100 m
		800 MHz 18.97 dB/100 m
		1000 MHz 21.37 dB/100 m
		1500 MHz 26.64 dB/100 m
		2250 MHz 33.36 dB/100 m
		3000 MHz 39.26 dB/100 m
		3500 MHz 42.90 dB/100 m
		4000 MHz 46.35 dB/100 m
		4500 MHz 49.65 dB/100 m
		5000 MHz 52.83 dB/100 m
Return loss[1)]		5-300 MHz > 26 dB
		300-3000 MHz > 22 dB
		3000-5000 MHz > 15 dB
Segregation class		"d" EN 50174-2

Standards

EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

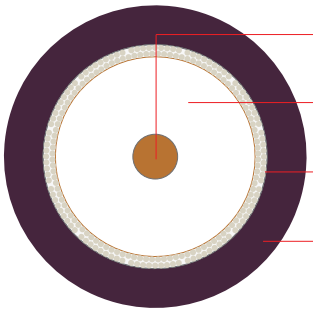
	SD	HD	3G
Data rate	270 Mb/s	1.5 Gb/s	3.0 Gb/s
Std.	SMPTE 292M	SMPTE 259M	SMPTE 424M
Application	Component SDI	720p-1080i	1080p
Assembly length	435 meters	120 meters	80 meters

[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307184	HDV 100 HFFR	6.90	31	63	Purple (RAL 4007)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 1.63 mm (AWG14)

Physical foam PE, Ø 7.11 mm
70°C, EN 50290-2-23

Al-Pet-Al foil min. 100% coverage
Tinned braided copper wire 95% coverage

HFFR - RAL4007 Purple, Ø 10.1 mm
70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are used in live broadcasts and studio recordings as they transmit digital and HDTV-SDI video and convey rich media content such as HD and 3G without interruption.

Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 1 Ω
Capacitance		52 ± 1 pF/m
Velocity of propagation		(85 ± 1)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	2000 V
Test voltage		5000 V
Attenuation @20°C	max.	1 MHz 0.69 dB/100 m
		5 MHz 1.18 dB/100 m
		10 MHz 1.55 dB/100 m
		50 MHz 3.15 dB/100 m
		100 MHz 4.38 dB/100 m
		200 MHz 6.18 dB/100 m
		500 MHz 9.92 dB/100 m
		800 MHz 12.77 dB/100 m
		1000 MHz 14.43 dB/100 m
		1500 MHz 18.10 dB/100 m
		2250 MHz 22.85 dB/100 m
		3000 MHz 27.06 dB/100 m
		3500 MHz 29.67 dB/100 m
		4000 MHz 32.17 dB/100 m
		4500 MHz 34.56 dB/100 m
		5000 MHz 36.88 dB/100 m
Return loss[1)]		5-300 MHz > 26 dB
		300-3000 MHz > 22 dB
		3000-5000 MHz > 15 dB
Segregation class		"d" EN 50174-2

Standards

EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

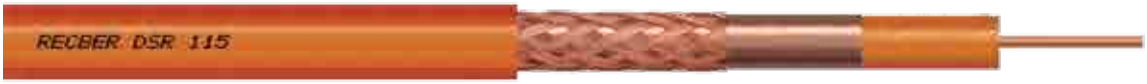
Cable assembly length

	SD	HD	3G
Data rate	270 Mb/s	1.5 Gb/s	3.0 Gb/s
Std.	SMPTE 292M	SMPTE 259M	SMPTE 424M
Application	Component SDI	720p-1080i	1080p
Assembly length	620 meters	165 meters	110 meters

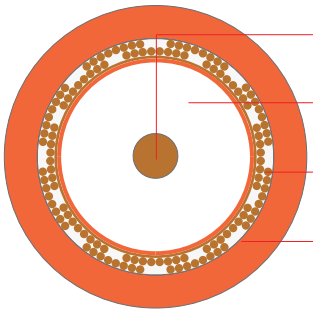
[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307185	HDV 160 HFFR	10.1	60	125	Purple (RAL 4007)	500/1000

Specifications may vary depending on technical modifications.



Cable structure



Conductor	Electrolytic copper wire, Ø 1.13 mm
Insulation	Physical foam PE, Ø 4.80 mm 70°C, EN 50290-2-23
Screen	Cu-Pet foil min. 100% coverage Electrolytic braided copper wire
Sheath	PVC - RAL 2003 orange, Ø 6.90 mm TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	70 m
VHF/UHF distribution[3]	860 MHz	170 m
S-band Cable TV distribution[3]	470 MHz	230 m

Specifications

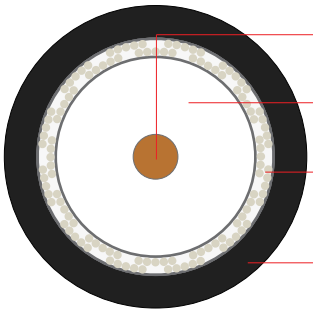
Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(85 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.32 dB/100 m
		200 MHz	8.44 dB/100 m
		470 MHz	13.05 dB/100 m
		860 MHz	17.96 dB/100 m
		1000 MHz	19.48 dB/100 m
		2150 MHz	29.74 dB/100 m
		2400 MHz	31.65 dB/100 m
		3000 MHz	35.98 dB/100 m
Return loss[1]		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Screening Class		Class A	
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 85 dB
		1000-2000 MHz	≥ 75 dB
		2000-3000 MHz	≥ 65 dB
Transfer Impedance		5-30 MHz	≤ 5.0 mΩ/m

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307104	DSR 115	6.90	26	53	Orange (RAL 2003)	100/500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 1.63 mm (AWG14)
Insulation	Physical foam PE, Ø 7.11 mm 70°C, EN 50290-2-23
Screen	Al-Pet-Sy foil min. 100% coverage Tinned braided copper wire Al-Pet foil min. 100% coverage
Sheath	HFFR - RAL 9011 Black, Ø 10.3 mm 70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2)]	2150 MHz	90 m
VHF/UHF distribution[3)]	860 MHz	230 m
S-band Cable TV distribution[3)]	470 MHz	310 m

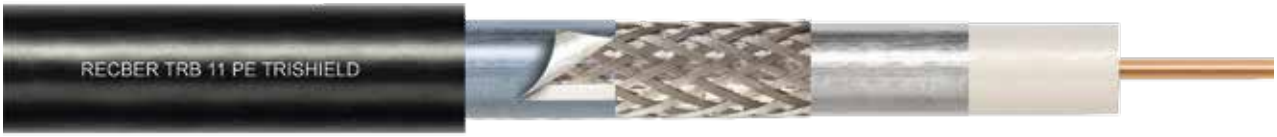
Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(85 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	2000 V	
Test voltage		5000 V	
Attenuation @20°C	max.	50 MHz	3.15 dB/100 m
		200 MHz	6.18 dB/100 m
		470 MHz	9.60 dB/100 m
		860 MHz	13.29 dB/100 m
		1000 MHz	14.43 dB/100 m
		2150 MHz	22.25 dB/100 m
		2400 MHz	23.73 dB/100 m
		3000 MHz	27.06 dB/100 m
Return loss1)		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Screening Class		Class A+	
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 95 dB
		1000-2000 MHz	≥ 85 dB
		2000-3000 MHz	≥ 75 dB
Transfer Impedance		5-30 MHz	≤ 2.5 mΩ/m

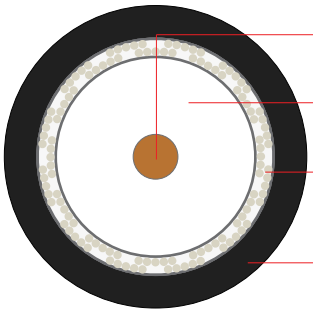
[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2)] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307177	TRB 11 HF	10.3	35	110	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.



Cable structure



Conductor	Electrolytic copper wire, Ø 1.63 mm (AWG14)
Insulation	Physical foam PE, Ø 7.11 mm 70°C, EN 50290-2-23
Screen	Al-Pet-Sy foil min. 100% coverage Tinned braided copper wire Al-Pet foil min. 100% coverage
Sheath	PE - RAL 9011 Black, Ø 10.3 mm 80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Thanks to the polyethylene sheath, they are preferred for outdoor and underground installations.

Standards EN 50117, IEC 61196

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	70 m
VHF/UHF distribution[3]	860 MHz	170 m
S-band Cable TV distribution[3]	470 MHz	230 m

Specifications

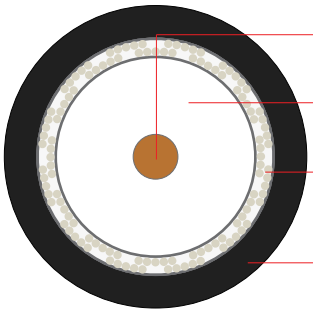
Operating temperature		-40°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(85 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	2000 V	
Test voltage		5000 V	
Attenuation @20°C	max.	50 MHz	3.15 dB/100 m
		200 MHz	6.18 dB/100 m
		470 MHz	9.60 dB/100 m
		860 MHz	13.29 dB/100 m
		1000 MHz	14.43 dB/100 m
		2150 MHz	22.25 dB/100 m
		2400 MHz	23.73 dB/100 m
		3000 MHz	27.06 dB/100 m
Return loss[1]		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Screening Class		Class A+	
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 95 dB
		1000-2000 MHz	≥ 85 dB
		2000-3000 MHz	≥ 75 dB
Transfer Impedance		5-30 MHz	

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307190	TRB 11 PE	10.3	35	85	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 1.63 mm (AWG14)

Physical foam PE, Ø 7.11 mm
70°C, EN 50290-2-23

Al-Pet-Sy foil min. 100% coverage
Tinned braided copper wire
Al-Pet foil min. 100% coverage

PVC - RAL 9011 Black, Ø 10.3 mm
TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2)]	2150 MHz	90 m
VHF/UHF distribution[3)]	860 MHz	230 m
S-band Cable TV distribution[3)]	470 MHz	310 m

Specifications

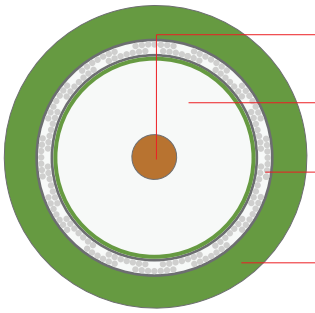
Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(85 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	2000 V	
Test voltage		5000 V	
Attenuation @20°C	max.	50 MHz	3.15 dB/100 m
		200 MHz	6.18 dB/100 m
		470 MHz	9.60 dB/100 m
		860 MHz	13.29 dB/100 m
		1000 MHz	14.43 dB/100 m
		2150 MHz	22.25 dB/100 m
		2400 MHz	23.73 dB/100 m
		3000 MHz	27.06 dB/100 m
Return loss[1)]		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Screening Class		Class A+	
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 95 dB
		1000-2000 MHz	≥ 85 dB
		2000-3000 MHz	≥ 75 dB
Transfer Impedance		5-30 MHz	≤ 2.5 mΩ/m

[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2)] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307107	TRB 11	10.3	35	110	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 1.13 mm
Insulation	Physical foam PE, Ø 4.80 mm 70°C, EN 50290-2-23
Screen	Al-Pet-Sy foil min. 100% coverage Aluminium braided wire Al-Pet foil min. 100% coverage
Sheath	PVC - RAL 6018 Green, Ø 6.90 mm TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	70 m
VHF/UHF distribution[3]	860 MHz	170 m
S-band Cable TV distribution[3]	470 MHz	230 m

Specifications

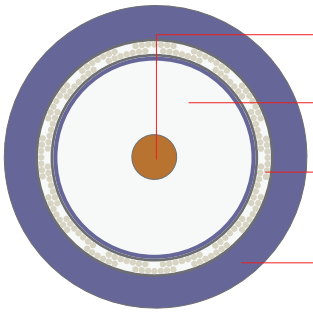
Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(85 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.32 dB/100 m
		200 MHz	8.44 dB/100 m
		470 MHz	13.05 dB/100 m
		860 MHz	17.96 dB/100 m
		1000 MHz	19.48 dB/100 m
		2150 MHz	29.74 dB/100 m
		2400 MHz	31.65 dB/100 m
		3000 MHz	35.98 dB/100 m
Return loss[1]		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Screening Class		Class A	
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 85 dB
		1000-2000 MHz	≥ 75 dB
		2000-3000 MHz	≥ 65 dB
Transfer Impedance		5-30 MHz	≤ 5.0 mΩ/m

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307105	TRB 119	6.90	9.0	42	Green (RAL 6018)	100/500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 1.13 mm

Physical foam PE, Ø 4.80 mm
70°C, EN 50290-2-23

Al-Pet-Sy foil min. 100% coverage
Tinned braided copper wire
Al-Pet foil min. 100% coverage

HFFR - RAL 4005 Lilac, Ø 6.90 mm
70°C, EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Standards

EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2)]	2150 MHz	70 m
VHF/UHF distribution[3)]	860 MHz	170 m
S-band Cable TV distribution[3)]	470 MHz	230 m

Specifications

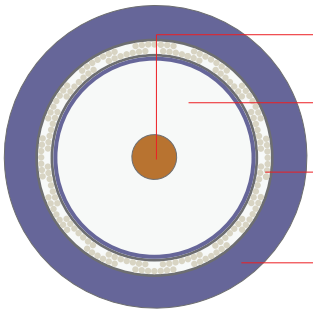
Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		52 ± 2 pF/m
Velocity of propagation		(85 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1300 V
Test voltage		3000 V
Attenuation @20°C	max.	50 MHz — 4.32 dB/100 m
		200 MHz — 8.44 dB/100 m
		470 MHz — 13.05 dB/100 m
		860 MHz — 17.96 dB/100 m
		1000 MHz — 19.48 dB/100 m
		2150 MHz — 29.74 dB/100 m
		2400 MHz — 31.65 dB/100 m
		3000 MHz — 35.98 dB/100 m
Return loss[1)]		5-470 MHz — > 23 dB
		470-1000 MHz — > 20 dB
		1000-2000 MHz — > 18 dB
		2000-3000 MHz — > 16 dB
Screening Class		Class A+
Segregation class		"d" EN 50174-2
Screen Attenuation		30-1000 MHz — ≥ 95 dB
		1000-2000 MHz — ≥ 85 dB
		2000-3000 MHz — ≥ 75 dB
Transfer Impedance		5-30 MHz — ≤ 2.5 mΩ/m

[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2)] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307176	TRB 120 Plus HF	6.90	22	53	Lilac (RAL 4005)	100/500/1000
307175	TRB 120 Plus HF	6.90	22	53	Black (RAL 9011)	100/500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 1.13 mm
Insulation	Physical foam PE, Ø 4.80 mm 70°C, EN 50290-2-23
Screen	Al-Pet-Sy foil min. 100% coverage Tinned braided copper wire Al-Pet foil min. 100% coverage
Sheath	PVC - RAL 4005 Lilac, Ø 6.90 mm TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	70 m
VHF/UHF distribution[3]	860 MHz	170 m
S-band Cable TV distribution[3]	470 MHz	230 m

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(85 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.32 dB/100 m
		200 MHz	8.44 dB/100 m
		470 MHz	13.05 dB/100 m
		860 MHz	17.96 dB/100 m
		1000 MHz	19.48 dB/100 m
		2150 MHz	29.74 dB/100 m
		2400 MHz	31.65 dB/100 m
		3000 MHz	35.98 dB/100 m
Return loss[1]		5-470 MHz	> 23 dB
		470-1000 MHz	> 20 dB
		1000-2000 MHz	> 18 dB
		2000-3000 MHz	> 16 dB
Screening Class		Class A+	
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 95 dB
		1000-2000 MHz	≥ 85 dB
		2000-3000 MHz	≥ 75 dB
Transfer Impedance		5-30 MHz	≤ 2.5 mΩ/m

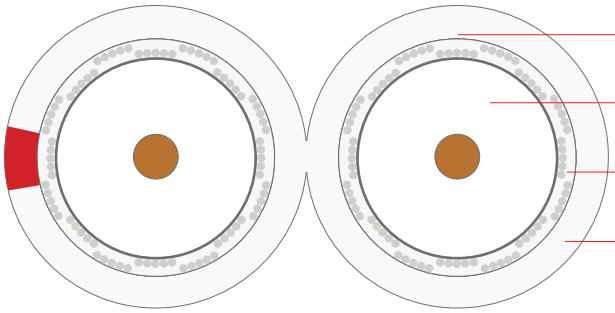
[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307106	TRB 120 Plus	6.90	22	53	Lilac (RAL 4005)	100/500/1000
307131	TRB 120 Plus	6.90	22	53	White (RAL 9003)	100/500/1000

Specifications may vary depending on technical modifications.

2xMini U/4 PHY-PVC
Cu/Al

Cable structure



Conductor	Electrolytic copper wire, Ø 0.64 mm (AWG22)
Insulation	Physical foam PE, Ø 2.90 mm 70°C, EN 50290-2-23
Screen	Al-Pet foil min. 100% coverage Aluminium braided wire
Sheath	PVC - RAL 9003 White, Ø 4.30x8.80 mm TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Thanks to the small-diameter design, the cables are suitable for flush-mount electrical installation in walls and ceilings of the renovated buildings.

Standards

EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2)]	2150 MHz	40 m
VHF/UHF distribution[3)]	860 MHz	100 m
S-band Cable TV distribution[3)]	470 MHz	140 m

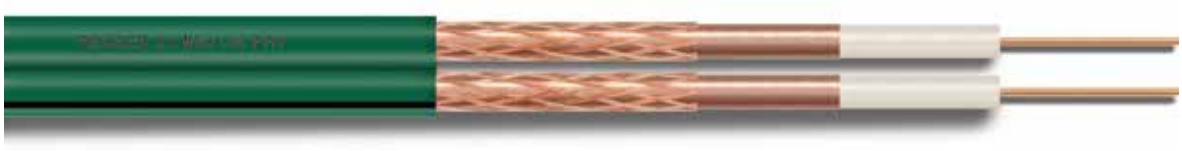
Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		54 ± 2 pF/m
Velocity of propagation		(83 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1000 V
Test voltage		2500 V
Attenuation @20°C	max.	50 MHz — 7.26 dB/100 m
		200 MHz — 14.23 dB/100 m
		470 MHz — 21.91 dB/100 m
		860 MHz — 29.96 dB/100 m
		1000 MHz — 32.43 dB/100 m
		2150 MHz — 48.82 dB/100 m
		2400 MHz — 51.83 dB/100 m
		3000 MHz — 58.59 dB/100 m
Return loss[1)]		5-470 MHz — > 20 dB
		470-1000 MHz — > 18 dB
		1000-2000 MHz — > 16 dB
		2000-3000 MHz — > 15 dB
Segregation class		"c" EN 50174-2

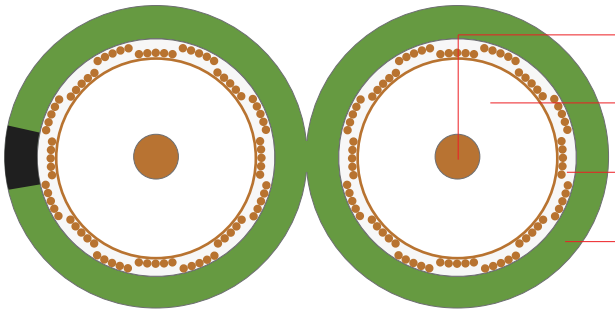
[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2)] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307095	2xMini U/4 PHY-PVC Cu/Al	4.30x8.80	6.0	34	White/Red (RAL 9003)	100/250/500/1000

Specifications may vary depending on technical modifications.



Cable structure



Conductor	Electrolytic copper wire, Ø 0.64 mm (AWG22)
Insulation	Physical foam PE, Ø 2.90 mm 70°C, EN 50290-2-23
Screen	Cu-Pet foil min. 100% coverage Electrolytic braided copper wire
Sheath	PVC - RAL 6018 Green, Ø 4.30x8.80 mm TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems. Thanks to the small-diameter design, the cables are suitable for flush-mount electrical installation in walls and ceilings of the renovated buildings.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	40 m
VHF/UHF distribution[3]	860 MHz	100 m
S-band Cable TV distribution[3]	470 MHz	140 m

Specifications

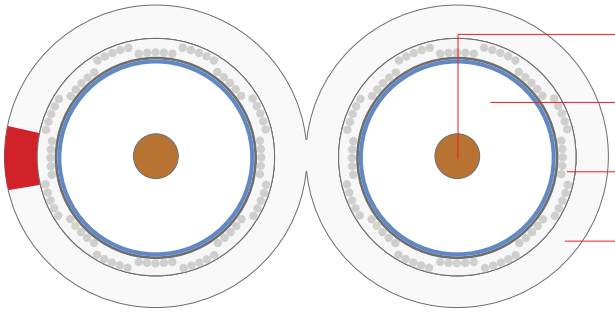
Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		54 ± 2 pF/m
Velocity of propagation		(83 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1000 V
Test voltage		2500 V
Attenuation @20°C	max.	50 MHz — 7.26 dB/100 m
		200 MHz — 14.23 dB/100 m
		470 MHz — 21.91 dB/100 m
		860 MHz — 29.96 dB/100 m
		1000 MHz — 32.43 dB/100 m
		2150 MHz — 48.82 dB/100 m
		2400 MHz — 51.83 dB/100 m
		3000 MHz — 58.59 dB/100 m
Return loss[1]		5-470 MHz — > 20 dB
		470-1000 MHz — > 18 dB
		1000-2000 MHz — > 16 dB
		2000-3000 MHz — > 15 dB
Segregation class		"c" EN 50174-2

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307096	2xMini U/6 PHY-PVC Cu/Cu	4.30x8.80	22	46	Green/Black (RAL 6018)	100/250/500/1000
307119	2xMini U/6 PHY-PVC Cu/Cu	4.30x8.80	22	46	White/Red (RAL 9003)	100/250/500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 1.02 mm (AWG18)
Insulation	Physical foam PE, Ø 4.60 mm 70°C, EN 50290-2-23
Screen	Al-Pet foil min. 100% coverage Aluminium braided wire
Sheath	PVC - RAL 9003 White, Ø 6.80x13.8 mm TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	60 m
VHF/UHF distribution[3]	860 MHz	150 m
S-band Cable TV distribution[3]	470 MHz	210 m

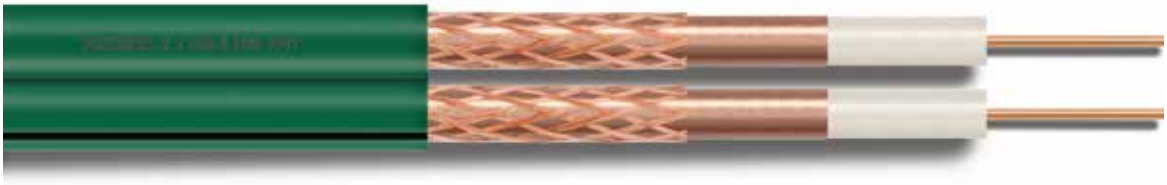
Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
		2150 MHz	32.52 dB/100 m
		2400 MHz	34.59 dB/100 m
		3000 MHz	39.26 dB/100 m
Return loss[1]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Screening Class		Class C	
Segregation class		"c" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 75 dB
		1000-2000 MHz	≥ 65 dB
		2000-3000 MHz	≥ 55 dB
Transfer Impedance		5-30 MHz	≤ 50 mΩ/m

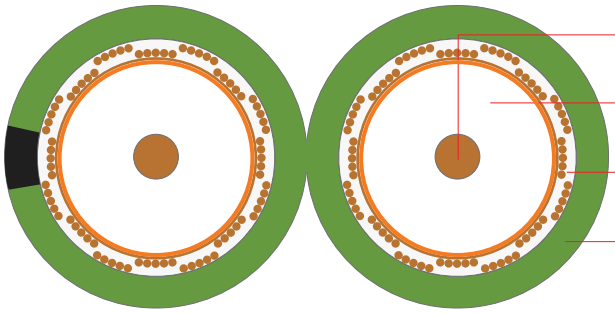
[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307097	2xRG 6 U/4 PHY-PVC Cu/Al	6.80x13.8	15	81	White/Red (RAL 9003)	100/250/500/1000

Specifications may vary depending on technical modifications.



Cable structure



Conductor	Electrolytic copper wire, Ø 1.02 mm (AWG18)
Insulation	Physical foam PE, Ø 4.60 mm 70°C, EN 50290-2-23
Screen	Cu-Pet foil min. 100% coverage Electrolytic braided copper wire
Sheath	PVC - RAL 6018 Green, Ø 6.80x13.8 mm TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and comply with EN 50117. They are primarily used in Cable TV, individual/central satellite distribution and CCTV security camera systems.

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Cable assembly length

Satellite distribution[2]	2150 MHz	60 m
VHF/UHF distribution[3]	860 MHz	150 m
S-band Cable TV distribution[3]	470 MHz	210 m

Specifications

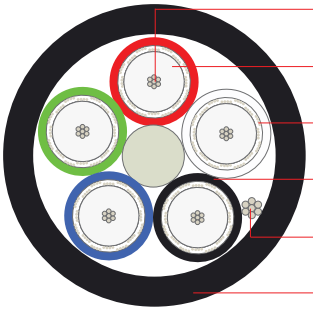
Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
		2150 MHz	32.52 dB/100 m
		2400 MHz	34.59 dB/100 m
		3000 MHz	39.26 dB/100 m
Return loss[1]		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB
		1000-2000 MHz	> 16 dB
		2000-3000 MHz	> 15 dB
Screening Class		Class B	
Segregation class		"c" EN 50174-2	
Screen Attenuation		30-1000 MHz	≥ 75 dB
		1000-2000 MHz	≥ 65 dB
		2000-3000 MHz	≥ 55 dB
Transfer Impedance		5-30 MHz	≤ 15 mΩ/m

[1] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.
[2] Maximum applicable length in 20 dBµV satellite distribution without line amplifier
[3] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307098	2xRG 6 U/6 PHY-PVC Cu/Cu	6.80x13.8	34	95	Green/Black (RAL 6018)	100/250/500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Stranded tinned copper wire, 7x0.16 mm (26/7AWG)
Insulation	Physical foam PE, Ø 2.10 mm
Screen	70°C, EN 50290-2-23 Al-Pet foil min. 100% coverage
Inner Sheath	Tinned braided copper wire, 70% coverage PVC - Red-Green-Blue-Black-White, Ø 3.10 mm
Overall Screen	TM52 70°C, EN 50290-2-22 Tinned copper drain wire, 7x0.25 mm (22/7AWG)
Sheath	Al-Pet tape min. 100% coverage PVC - RAL 9011 Black, Ø 10.8 mm TM52 70°C, EN 50290-2-22

Application

MiniCoax cables insulated with sheaths of Red, Green, Blue, Black and White colours manufactured through physical foam insulation technology are used in VGA signal transmission and LCD, DLP and CRT projector connections. They are terminated with a RCA or BNC connector.

Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 5 Ω
Capacitance		57 ± 5 pF/m
Velocity of propagation		(77 ± 5)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1000 V
Test voltage		2500 V
Attenuation @20°C	max.	1 MHz 2.1 dB/100 m
		5 MHz 4.1 dB/100 m
		10 MHz 5.6 dB/100 m
		20 MHz 7.7 dB/100 m
		30 MHz 9.3 dB/100 m
		50 MHz 11.9 dB/100 m
		100 MHz 16.7 dB/100 m
		150 MHz 20.4 dB/100 m
		200 MHz 23.6 dB/100 m
		250 MHz 26.3 dB/100 m
Segregation class		"c" EN 50174-2

Standards EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

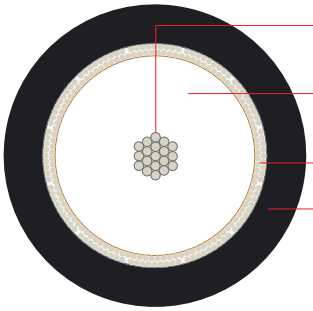
LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
307124	RGB 5HV	10.8	33	120	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

RG 58 C/U

Cable structure



Conductor	Stranded tinned copper wire, Ø 19x0.18 mm
Insulation	LDPE, Ø 2.95 mm 70°C, EN 50290-2-23
Screen	Tinned braided copper wire, 95% coverage
Sheath	PVC - RAL 9011 Black, Ø 4.95 mm TM51 70°C, EN 50290-2-22 PE - RAL 9011 Black, Ø 4.95 mm 80°C, EN 50290-2-24 HFFR - RAL 9011 Black, Ø 4.95 mm 70°C, EN 50290-2-27

Application

Cables with a rated impedance of 50 ohms comply with MIL-C-17 and are used in radio and wireless communications, RFID, WiFi, Distributed antenna systems (DAS), Wireless Internet (WISP), Global positioning (GPS) systems, defence industry and telecommunication systems. Cables with polyethylene sheath are preferable in outdoor and underground installations while the halogen-free version is mainly intended for areas that require fire resistance.

Standards MIL-C-17F, MIL-C-17G

Fire performance

Vertical flame propagation	EN 60332-1-2 (PVC-HFFR)
Corrosive gas	EN 60754-1/2 (HFFR)
Smoke density	EN 61034-2 (HFFR)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

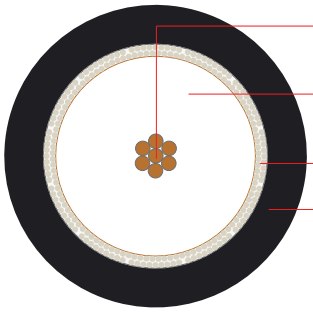
Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		50 ± 3 Ω
Capacitance		101 ± 2 pF/m
Velocity of propagation		(66 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	2000 V
Test voltage		5000 V
Attenuation @20°C	max.	1 MHz — 1.33 dB/100 m
		10 MHz — 4.41 dB/100 m
		50 MHz — 10.69 dB/100 m
		100 MHz — 16.00 dB/100 m
		200 MHz — 24.38 dB/100 m
		400 MHz — 38.00 dB/100 m
		700 MHz — 55.39 dB/100 m
		900 MHz — 66.00 dB/100 m
		1000 MHz — 71.11 dB/100 m

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
305052	RG 58 C/U PVC	4.95	17	38	Black (RAL 9011)	500/1000
305059	RG 58 C/U PE	4.95	17	32	Black (RAL 9011)	500/1000
305066	RG 58 C/U HFFR	4.95	17	38	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Stranded electrolytic copper wire, 7x0.16 mm (26/7AWG)
Insulation	LDPE, Ø 1.50 mm 70°C, EN 50290-2-23
Screen	Tinned braided copper wire, 95% coverage
Sheath	PVC - RAL 9011 Black, Ø 2.85 mm TM51 70°C, EN 50290-2-22 PE - RAL 9011 Black, Ø 2.85 mm 80°C, EN 50290-2-24 HFFR - RAL 9011 Black, Ø 2.85 mm 70°C, EN 50290-2-27

Application

Cables with a rated impedance of 50 ohms comply with MIL-C-17 and are used in radio and wireless communications, RFID, WiFi, Distributed antenna systems (DAS), Wireless Internet (WISP), Global positioning (GPS) systems, defence industry and telecommunication systems. Cables with polyethylene sheath are preferable in outdoor and underground installations while the halogen-free version is mainly intended for areas that require fire resistance.

Standards MIL-C-17F, MIL-C-17G

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

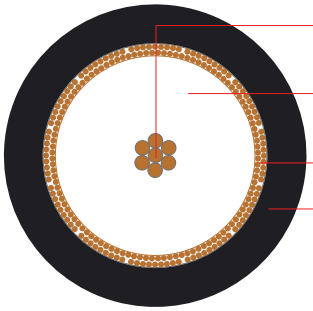
Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		50 ± 3 Ω
Capacitance		101 ± 2 pF/m
Velocity of propagation		(66 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1600 V
Test voltage		4500 V
Attenuation @20°C	max.	1 MHz 6.35 dB/100 m
		10 MHz 11.12 dB/100 m
		50 MHz 20.94 dB/100 m
		100 MHz 29.30 dB/100 m
		200 MHz 42.58 dB/100 m
		400 MHz 64.30 dB/100 m
		700 MHz 92.22 dB/100 m
		900 MHz 109.3 dB/100 m
		1000 MHz 117.5 dB/100 m

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
305051	RG 174 U PVC	2.85	7	14	Black (RAL 9011)	500/1000
305058	RG 174 U PE	2.85	7	12	Black (RAL 9011)	500/1000
305065	RG 174 U HFFR	2.85	7	14	Black (RAL 9011)	500/1000
305073	2xRG 174 U PVC	2.85x5.70	14	28	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Stranded electrolytic copper wire, 7x0.75 mm

LDPE, Ø 7.25 mm
70°C, EN 50290-2-23

Electrolytic braided copper wire, 95% coverage

PVC - RAL 9011 Black, Ø 10.3 mm
TM51 70°C, EN 50290-2-22
PE - RAL 9011 Black, Ø 10.3 mm
80°C, EN 50290-2-24
HFFR - RAL 9011 Black, Ø 10.3 mm
70°C, EN 50290-2-27

Application

Cables with a rated impedance of 50 ohms comply with MIL-C-17 and are used in radio and wireless communications, RFID, WiFi, Distributed antenna systems (DAS), Wireless Internet (WISP), Global positioning (GPS) systems, defence industry and telecommunication systems. Cables with polyethylene sheath are preferable in outdoor and underground installations while the halogen-free version is mainly intended for areas that require fire resistance.

Standards

MIL-C-17F, MIL-C-17G

Fire performance

Vertical flame propagation	EN 60332-1-2 (PVC-HFFR)
Corrosive gas	EN 60754-1/2 (HFFR)
Smoke density	EN 61034-2 (HFFR)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

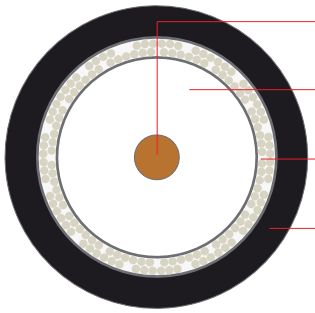
Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		50 ± 3 Ω
Capacitance		101 ± 2 pF/m
Velocity of propagation		(66 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	5000 V
Test voltage		10000 V
Attenuation @20°C	max.	1 MHz — 0.81 dB/100 m
		10 MHz — 2.09 dB/100 m
		50 MHz — 4.64 dB/100 m
		100 MHz — 6.75 dB/100 m
		200 MHz — 10.03 dB/100 m
		400 MHz — 15.25 dB/100 m
		700 MHz — 21.80 dB/100 m
		900 MHz — 25.75 dB/100 m
		1000 MHz — 27.64 dB/100 m

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
305053	RG 213 U PVC	10.3	70	155	Black (RAL 9011)	500/1000
305060	RG 213 U PE	10.3	70	135	Black (RAL 9011)	500/1000
305067	RG 213 U HFFR	10.3	70	155	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 1.12 mm

Physical foam PE, Ø 2.95 mm
70°C, EN 50290-2-23

Al-Pet-Al foil min. 100% coverage
Tinned braided copper wire, 85% coverage

PVC - RAL 9011 Black, Ø 5.00 mm
TM51 70°C, EN 50290-2-22
PE - RAL 9011 Black, Ø 5.00 mm
80°C, EN 50290-2-24
HFFR - RAL 9011 Black, Ø 5.00 mm
70°C, EN 50290-2-27

Application

RWC Low Loss cables are manufactured based on the new-generation 3-layer physical foam technology. Provides superior performance for 50-ohms broadband wireless applications.Lower loss, a higher velocity of propagation and better RF screening compared to conventional RG cables. Generally terminated with BNC, TNC, SMA and N-Type connectors. Used in radio and wireless communication, RFID, WiFi, Distributed antenna systems (DAS), Wireless Internet (WISP), Global positioning (GPS) systems, defence industry and telecommunication systems. Cables with polyethylene sheath are preferable in outdoor and underground installations while the halogen-free version is mainly intended for areas that require fire resistance.

Standards

EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2 (PVC-HFFR)
Corrosive gas	EN 60754-1/2 (HFFR)
Smoke density	EN 61034-2 (HFFR)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

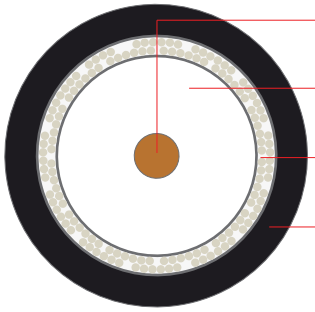
Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		50 ± 3 Ω	
Capacitance		79 ± 2 pF/m	
Velocity of propagation		(85 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	30 MHz	5.90 dB/100 m
		50 MHz	7.50 dB/100 m
		150 MHz	12.8 dB/100 m
		220 MHz	15.5 dB/100 m
		450 MHz	22.3 dB/100 m
		900 MHz	32.0 dB/100 m
		1500 MHz	41.9 dB/100 m
		1800 MHz	46.2 dB/100 m
		2000 MHz	48.9 dB/100 m
		2500 MHz	55.3 dB/100 m
		5800 MHz	88.5 dB/100 m
Return loss[1)]		30-1000 MHz	> 20 dB
		1000-3000 MHz	> 15 dB
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-3000 MHz	≥ 90 dB

[1)] According to EN 50117, 3 return loss peaks, whose value exceeds the limit by a maximum of 4 dB, are permissible.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
305054	RWC 200 PVC	5.0	19	37	Black (RAL 9011)	500/1000
305061	RWC 200 PE	5.0	19	32	Black (RAL 9011)	500/1000
305068	RWC 200 HFFR	5.0	19	37	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 1.40 mm

Physical foam PE, Ø 3.80 mm
70°C, EN 50290-2-23

Al-Pet-Al foil min. 100% coverage
Tinned braided copper wire, 85% coverage

PVC - RAL 9011 Black, Ø 6.00 mm
TM51 70°C, EN 50290-2-22
PE - RAL 9011 Black, Ø 6.00 mm
80°C, EN 50290-2-24
HFFR - RAL 9011 Black, Ø 6.00 mm
70°C, EN 50290-2-27

Application

RWC Low Loss cables are manufactured based on the new-generation 3-layer physical foam technology. Provides superior performance for 50-ohms broadband wireless applications.Lower loss, a higher velocity of propagation and better RF screening compared to conventional RG cables. Generally terminated with BNC, TNC, SMA and N-Type connectors. Used in radio and wireless communication, RFID, WiFi, Distributed antenna systems (DAS), Wireless Internet (WISP), Global positioning (GPS) systems, defence industry and telecommunication systems. Cables with polyethylene sheath are preferable in outdoor and underground installations while the halogen-free version is mainly intended for areas that require fire resistance.

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		50 ± 3 Ω	
Capacitance		79 ± 2 pF/m	
Velocity of propagation		(85 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Attenuation @20°C	max.	30 MHz	4.67 dB/100 m
		50 MHz	5.90 dB/100 m
		150 MHz	9.99 dB/100 m
		220 MHz	12.06 dB/100 m
		450 MHz	17.31 dB/100 m
		900 MHz	24.80 dB/100 m
		1500 MHz	32.55 dB/100 m
		1800 MHz	35.92 dB/100 m
		2000 MHz	38.04 dB/100 m
		2500 MHz	43.00 dB/100 m
		5800 MHz	69.22 dB/100 m
Return loss[3)]		30-1000 MHz	> 23 dB
		1000-3000 MHz	> 20 dB
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-3000 MHz	≥ 90 dB

Standards

EN 50117, IEC 61196

Fire performance

Vertical flame propagation EN 60332-1-2 (PVC-HFFR)
Corrosive gas EN 60754-1/2 (HFFR)
Smoke density EN 61034-2 (HFFR)

EU declaration of conformity

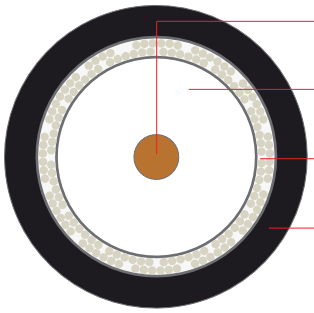
LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
305055	RWC 240 PVC	6.0	26	52	Black (RAL 9011)	500/1000
305062	RWC 240 PE	6.0	26	43	Black (RAL 9011)	500/1000
305069	RWC 240 HFFR	6.0	26	52	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 2.70 mm
Insulation	Physical foam PE, Ø 7.20 mm 70°C, EN 50290-2-23
Screen	Al-Pet-Al foil min. 100% coverage Tinned braided copper wire, 85% coverage
Sheath	PVC - RAL 9011 Black, Ø 10.2 mm TM51 70°C, EN 50290-2-22 PE - RAL 9011 Black, Ø 10.2 mm 80°C, EN 50290-2-24 HFFR - RAL 9011 Black, Ø 10.2 mm 70°C, EN 50290-2-27

Application

RWC Low Loss cables are manufactured based on the new-generation 3-layer physical foam technology. Provides superior performance for 50-ohms broadband wireless applications.Lower loss, a higher velocity of propagation and better RF screening compared to conventional RG cables. Generally terminated with BNC, TNC, SMA and N-Type connectors. Used in radio and wireless communication, RFID, WiFi, Distributed antenna systems (DAS), Wireless Internet (WISP), Global positioning (GPS) systems, defence industry and telecommunication systems. Cables with polyethylene sheath are preferable in outdoor and underground installations while the halogen-free version is mainly intended for areas that require fire resistance.

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance	50 ± 3 Ω		
Capacitance		78.5 ± 2 pF/m	
Velocity of propagation		(85 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	2000 V	
Test voltage		5000 V	
Attenuation @20°C	max.	30 MHz	2.38 dB/100 m
		50 MHz	3.01 dB/100 m
		150 MHz	5.10 dB/100 m
		220 MHz	6.18 dB/100 m
		450 MHz	8.96 dB/100 m
		900 MHz	13.02 dB/100 m
		1500 MHz	17.33 dB/100 m
		1800 MHz	19.24 dB/100 m
		2000 MHz	20.45 dB/100 m
		2500 MHz	23.30 dB/100 m
		5800 MHz	38.92 dB/100 m
Return loss[3)]		30-1000 MHz	> 23 dB
		1000-3000 MHz	> 20 dB
Segregation class		"d" EN 50174-2	
Screen Attenuation		30-3000 MHz	≥ 90 dB

Standards

EN 50117, IEC 61196

Fire performance

Vertical flame propagation	EN 60332-1-2 (PVC-HFFR)
Corrosive gas	EN 60754-1/2 (HFFR)
Smoke density	EN 61034-2 (HFFR)

EU declaration of conformity

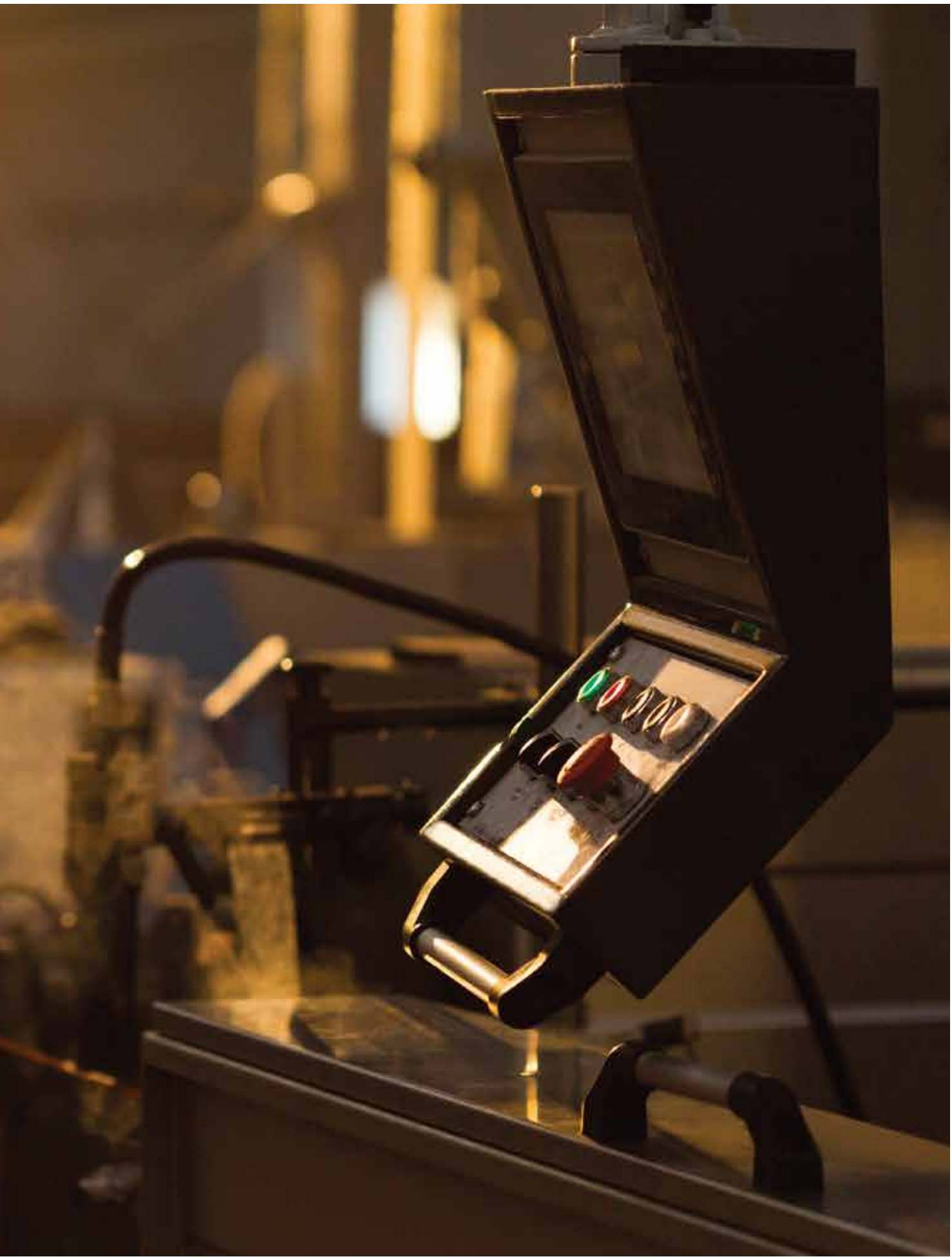
LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

[3)] Maximum applicable length in 30 dBµV VHF/UHF and S-band Cable TV without line amplifier

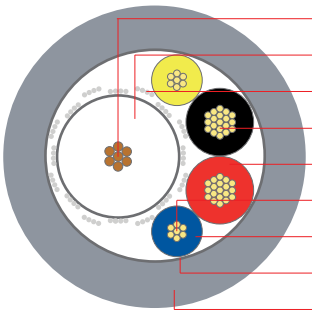
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
305057	RWC 400 PVC	10.2	82	145	Black (RAL 9011)	500/1000
305064	RWC 400 PE	10.2	82	128	Black (RAL 9011)	500/1000
305071	RWC 400 HFFR	10.2	82	145	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

CCTV Camera Cables



Cable structure



Conductor	Stranded copper wire, 7x0.20 mm, Class 5, IEC 60228
Insulation	Physical foam PE, Ø 2.50 mm, 70°C, EN 50290-2-23
Screen	Al-Pet foil min. 100% coverage, Aluminium braided wire
Conductor	Stranded copper wire, 0.50 mm², Class 5, IEC 60228
Insulation	PVC, Black-Red, TI52 EN 50290-2-21
Conductor	Stranded copper wire, 0.22 mm², Class 5, IEC 60228
Insulation	PVC, Yellow-Blue, TI52 EN 50290-2-21
Screen	Al-Pet foil min. 100% coverage
Sheath	PVC - RAL 7001 Grey, TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and are used in indoor and dry environment CCTV closed circuit camera applications. Provides simultaneous transmission of video, power, audio and control signals.

Attenuation @20°C

max.	1 MHz	2.2 dB/100 m
	5 MHz	4.0 dB/100 m
	10 MHz	5.4 dB/100 m
	20 MHz	7.3 dB/100 m
	30 MHz	8.8 dB/100 m
	50 MHz	11.2 dB/100 m
	100 MHz	15.6 dB/100 m

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	15 x D	
Impedance		75 ± 3 Ω	
Capacitance		54 ± 2 pF/m	
Velocity of propagation		(83 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1000 V	
Test voltage		2500 V	
Conductor resistance	max.	0.22 mm²	96 Ω/km
		0.50 mm²	39 Ω/km

Standards TSE K 212

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

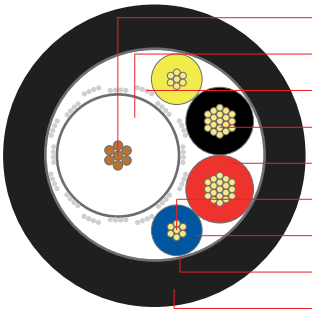
LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
306051	CCTV 1+2 RG 59 MiniCoax + 2x0.22 mm²	5.80	6	30	Grey (RAL 7001)	100/500/1000
306052	CCTV 1+2 RG 59 MiniCoax + 2x0.50 mm²	6.20	10	38	Grey (RAL 7001)	100/500/1000
306053	CCTV 1+4 RG 59 MiniCoax + 4x0.22 mm²	6.30	9	39	Grey (RAL 7001)	100/500/1000
306054	CCTV 1+4 RG 59 MiniCoax + 2x0.50 mm² + 2x0.22	6.30	14	43	Grey (RAL 7001)	100/500/1000
306055	mm² CCTV 1+12 RG 59 MiniCoax + 12x0.22 mm²	7.70	24	74	Grey (RAL 7001)	500/1000

Specifications may vary depending on technical modifications.

CCTV PE RG 59 MiniCoax

Cable structure



Conductor	Stranded copper wire, 7x0.20 mm, Class 5, IEC 60228
Insulation	Physical foam PE, Ø 2.50 mm, 70°C, EN 50290-2-23
Screen	Al-Pet foil min. 100% coverage, Aluminium braided wire
Conductor	Stranded copper wire, 0.50 mm², Class 5, IEC 60228
Insulation	PVC, Black-Red, TI52 EN 50290-2-21
Conductor	Stranded copper wire, 0.22 mm², Class 5, IEC 60228
Insulation	PVC, Yellow-Blue, TI52 EN 50290-2-21
Screen	Al-Pet foil min. 100% coverage
Sheath	PE - RAL 9011 Black, 80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and are used in outdoor and underground CCTV closed circuit camera applications. Provides simultaneous transmission of video, power, audio and control signals.

Attenuation @20°C

max.	1 MHz	2.2 dB/100 m
	5 MHz	4.0 dB/100 m
	10 MHz	5.4 dB/100 m
	20 MHz	7.3 dB/100 m
	30 MHz	8.8 dB/100 m
	50 MHz	11.2 dB/100 m
	100 MHz	15.6 dB/100 m

Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	15 x D
Impedance		75 ± 3 Ω
Capacitance		54 ± 2 pF/m
Velocity of propagation		(83 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1000 V
Test voltage		2500 V
Conductor resistance	max.	0.22 mm² 96 Ω/km
		0.50 mm² 39 Ω/km

Standards

TSE K 212

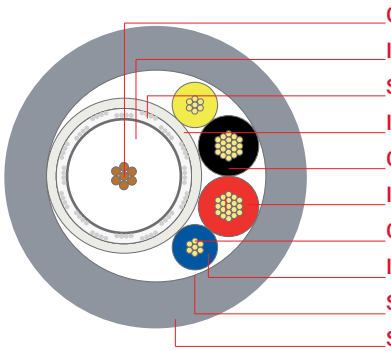
EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
306071	CCTV 1+2 PE RG 59 MiniCoax + 2x0.50 mm²	6.20	10	31	Black (RAL 9011)	100/500/1000
306117	CCTV 1+4 PE RG 59 MiniCoax + 4x0.22 mm²	6.30	9	30	Black (RAL 9011)	100/500/1000
306072	CCTV 1+4 PE RG 59 MiniCoax + 2x0.50 mm² + 2x0.22	6.30	14	38	Black (RAL 9011)	100/500/1000
306119	mm² CCTV 1+12 PE RG 59 MiniCoax + 12x0.22 mm²	7.70	24	64	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Stranded copper wire, 7x0.20 mm, Class 5, IEC 60228
Insulation	Physical foam PE, Ø 2.50 mm, 70°C, EN 50290-2-23
Screen	Al-Pet foil min. 100% coverage, Aluminium braided wire
Inner Sheath	HFFR 70°C, EN 50290-2-27
Conductor	Stranded copper wire, 0.50 mm², Class 5, IEC 60228
Insulation	HFFR, Black-Red, 70°C EN 50290-2-26
Conductor	Stranded copper wire, 0.22 mm², Class 5, IEC 60228
Insulation	HFFR, Yellow-Blue, 70°C EN 50290-2-26
Separator	Polyester tape min. 100% coverage
Sheath	HFFR - RAL 7001 Grey, 70°C EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and are used in indoor and dry environment CCTV closed circuit camera applications. Provides simultaneous transmission of video, power, audio and control signals. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Attenuation @20°C

max.	1 MHz	2.2 dB/100 m
	5 MHz	4.0 dB/100 m
	10 MHz	5.4 dB/100 m
	20 MHz	7.3 dB/100 m
	30 MHz	8.8 dB/100 m
	50 MHz	11.2 dB/100 m
	100 MHz	15.6 dB/100 m

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	15 x D	
Impedance		75 ± 3 Ω	
Capacitance		54 ± 2 pF/m	
Velocity of propagation		(83 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1000 V	
Test voltage		2500 V	
Conductor resistance	max.	0.22 mm²	96 Ω/km
		0.50 mm²	39 Ω/km

Standards TSE K 212

Fire performance

Vertical flame propagation EN 60332-1-2
Corrosive gas EN 60754-1/2
Smoke density EN 61034-2

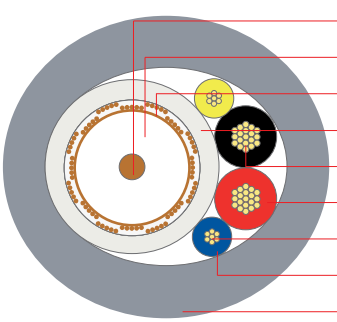
EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
306122	CCTV 1+2 HF RG 59 MiniCoax + 2x0.22 mm²	6.40	6	38	Grey (RAL 7001)	100/500/1000
306080	CCTV 1+2 HF RG 59 MiniCoax + 2x0.50 mm²	6.80	10	45	Grey (RAL 7001)	100/500/1000
306123	CCTV 1+4 HF RG 59 MiniCoax + 4x0.22 mm²	6.50	9	44	Grey (RAL 7001)	100/500/1000
306081	CCTV 1+4 HF RG 59 MiniCoax + 2x0.50 mm² + 2x0.22	6.90	14	52	Grey (RAL 7001)	100/500/1000
306082	mm² CCTV 1+12 HF RG 59 MiniCoax + 12x0.22 mm²	7.70	24	74	Grey (RAL 7001)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 0.81 mm (AWG20)
Physical foam PE, Ø 3.70 mm, 70°C, EN 50290-2-23
Cu-Pet foil min. 100% coverage, Electrolytic braided copper wire
PVC, TM51 70°C, EN 50290-2-22
Stranded copper wire, 0.75 mm², Class 5, IEC 60228
PVC, Black-Red, TI52 EN 50290-2-21
Stranded copper wire, 0.50 mm², Class 5, IEC 60228
PVC, Yellow-Blue, TI52 EN 50290-2-21
PVC - RAL 7001 Grey, TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and are used in indoor and dry environment CCTV closed circuit camera applications. Provides simultaneous transmission of video, power, audio and control signals.

Attenuation @20°C

max.	50 MHz	5.95 dB/100 m	
		200 MHz	11.71 dB/100 m
		470 MHz	18.08 dB/100 m
		860 MHz	24.79 dB/100 m
		1000 MHz	26.85 dB/100 m
Return loss		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		54 ± 2 pF/m	
Velocity of propagation		(82 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1000 V	
Test voltage		2500 V	
Conductor resistance	max.	0.22 mm²	96 Ω/km
		0.50 mm²	39 Ω/km
		0.75 mm²	26 Ω/km
		1.0 mm²	19.5 Ω/km

Standards TSE K 212

Fire performance

Vertical flame propagation EN 60332-1-2

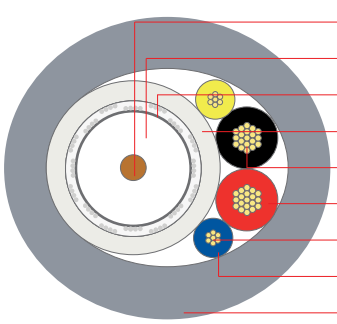
EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
306059	CCTV 1+2 RG 59 U/6 + 2x0.75 mm²	9.30	23	84	Grey (RAL 7001)	500/1000
306060	CCTV 1+4 RG 59 U/6 + 2x0.75 mm² + 2x0.50 mm²	9.30	31	96	Grey (RAL 7001)	500/1000
306099	CCTV 1+4 RG 59 U/6 + 2x1.0 mm² + 2x0.75 mm²	9.60	39	108	Grey (RAL 7001)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 0.81 mm (AWG20)
Insulation	Physical foam PE, Ø 3.70 mm, 70°C, EN 50290-2-23
Screen	Al-Pet foil min. 100% coverage, Aluminium braided wire
Inner Sheath	PVC, TM51 70°C, EN 50290-2-22
Conductor	Stranded copper wire, 0.75 mm², Class 5, IEC 60228
Insulation	PVC, Black-Red, TI52 EN 50290-2-21
Conductor	Stranded copper wire, 0.22 mm², Class 5, IEC 60228
Insulation	PVC, Yellow-Blue, TI52 EN 50290-2-21
Sheath	PVC - RAL 7001 Grey, TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and are used in indoor and dry environment CCTV closed circuit camera applications. Provides simultaneous transmission of video, power, audio and control signals.

Attenuation @20°C

max.	50 MHz	5.95 dB/100 m
	200 MHz	11.71 dB/100 m
	470 MHz	18.08 dB/100 m
	860 MHz	24.79 dB/100 m
	1000 MHz	26.85 dB/100 m
Return loss	5-470 MHz	> 20 dB
	470-1000 MHz	> 18 dB

Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		54 ± 2 pF/m
Velocity of propagation		(82 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1000 V
Test voltage		2500 V
Conductor resistance	max.	0.22 mm² — 96 Ω/km
		0.50 mm² — 39 Ω/km
		0.75 mm² — 26 Ω/km
		1.0 mm² — 19.5 Ω/km

Standards

TSE K 212

Fire performance

Vertical flame propagation EN 60332-1-2

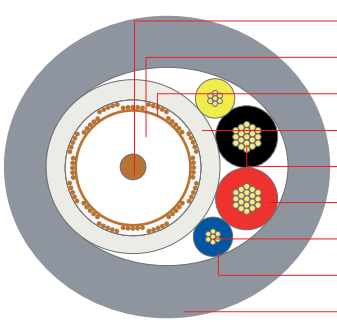
EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
306056	CCTV 1+2 RG 59 U/4 + 2x0.50 mm²	8.80	13	70	Grey (RAL 7001)	500/1000
306129	CCTV 1+2 RG 59 U/4 + 2x0.75 mm²	9.30	17	77	Grey (RAL 7001)	500/1000
306100	CCTV 1+4 RG 59 U/4 + 4x0.50 mm²	9.30	21	84	Grey (RAL 7001)	500/1000
306057	CCTV 1+4 RG 59 U/4 + 2x0.50 mm² + 2x0.22 mm²	8.70	16	74	Grey (RAL 7001)	500/1000
306058	CCTV 1+4 RG 59 U/4 + 2x0.75 mm² + 2x0.22 mm²	9.30	20	84	Grey (RAL 7001)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 0.81 mm (AWG20)
Insulation	Physical foam PE, Ø 3.70 mm, 70°C, EN 50290-2-23
Screen	Cu-Pet foil min. 100% coverage, Electrolytic braided copper wire
Inner Sheath	HFFR 70°C, EN 50290-2-27
Conductor	Stranded copper wire, 0.75 mm², Class 5, IEC 60228
Insulation	HFFR, Black-Red, 70°C EN 50290-2-26
Conductor	Stranded copper wire, 0.50 mm², Class 5, IEC 60228
Insulation	HFFR, Yellow-Blue, 70°C EN 50290-2-26
Sheath	HFFR - RAL 7001 Grey, 70°C EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and are used in indoor and dry environment CCTV closed circuit camera applications. Provides simultaneous transmission of video, power, audio and control signals. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Attenuation @20°C

max.	50 MHz	50 MHz	5.95 dB/100 m
		200 MHz	11.71 dB/100 m
		470 MHz	18.08 dB/100 m
		860 MHz	24.79 dB/100 m
		1000 MHz	26.85 dB/100 m
Return loss		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		54 ± 2 pF/m	
Velocity of propagation		(82 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1000 V	
Test voltage		2500 V	
Conductor resistance	max.	0.22 mm²	96 Ω/km
		0.50 mm²	39 Ω/km
		0.75 mm²	26 Ω/km
		1.0 mm²	19.5 Ω/km

Standards

TSE K 212

Fire performance

Vertical flame propagation EN 60332-1-2
Corrosive gas EN 60754-1/2
Smoke density EN 61034-2

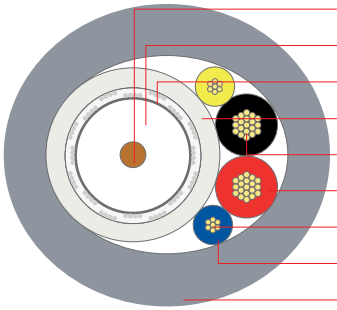
EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
306107	CCTV 1+2 HF RG 59 U/6 + 2x0.75 mm²	9.30	23	84	Grey (RAL 7001)	500/1000
306108	CCTV 1+4 HF RG 59 U/6 + 2x0.75 mm² + 2x0.50 mm²	9.30	31	96	Grey (RAL 7001)	500/1000
306124	CCTV 1+4 HF RG 59 U/6 + 2x1.0 mm² + 2x0.75 mm²	9.60	39	108	Grey (RAL 7001)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 0.81 mm (AWG20)
Insulation	Physical foam PE, Ø 3.70 mm, 70°C, EN 50290-2-23
Screen	Al-Pet foil min. 100% coverage, Aluminium braided wire
Inner Sheath	HFFR 70°C, EN 50290-2-27
Conductor	Stranded copper wire, 0.75 mm², Class 5, IEC 60228
Insulation	HFFR, Black-Red, 70°C EN 50290-2-26
Conductor	Stranded copper wire, 0.22 mm², Class 5, IEC 60228
Insulation	HFFR, Yellow-Blue, 70°C EN 50290-2-26
Sheath	HFFR - RAL 7001 Grey, 70°C EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and are used in indoor and dry environment CCTV closed circuit camera applications. Provides simultaneous transmission of video, power, audio and control signals. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		54 ± 2 pF/m	
Velocity of propagation		(82 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1000 V	
Test voltage		2500 V	
Conductor resistance	max.	0.22 mm²	96 Ω/km
		0.50 mm²	39 Ω/km
		0.75 mm²	26 Ω/km
		1.0 mm²	19.5 Ω/km

Attenuation @20°C

max.	50 MHz	5.95 dB/100 m
	200 MHz	11.71 dB/100 m
	470 MHz	18.08 dB/100 m
	860 MHz	24.79 dB/100 m
	1000 MHz	26.85 dB/100 m
Return loss	5-470 MHz	> 20 dB
	470-1000 MHz	> 18 dB

Standards

TSE K 212

Fire performance

Vertical flame propagation EN 60332-1-2
Corrosive gas EN 60754-1/2
Smoke density EN 61034-2

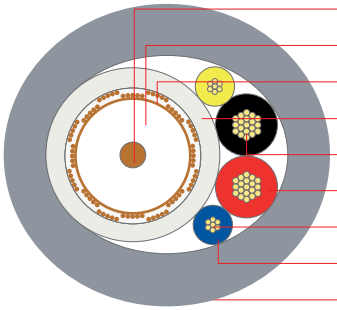
EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
306135	CCTV 1+2 HF RG 59 U/4 + 2x0.75 mm²	9.30	13	70	Grey (RAL 7001)	500/1000
306083	CCTV 1+4 HF RG 59 U/4 + 2x0.75 mm² + 2x0.22 mm²	9.30	17	85	Grey (RAL 7001)	500/1000
306121	CCTV 1+4 HF RG 59 U/4 + 2x0.75 mm² + 2x0.50 mm²	9.30	21	96	Grey (RAL 7001)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 1.02 mm (AWG18)
Insulation	Physical foam PE, Ø 4.60 mm, 70°C, EN 50290-2-23
Screen	Cu-Pet foil min. 100% coverage, Electrolytic braided copper wire
Inner Sheath	PVC, TM51 70°C, EN 50290-2-22
Conductor	Stranded copper wire, 0.75 mm², Class 5, IEC 60228
Insulation	PVC, Black-Red, TI52 EN 50290-2-21
Conductor	Stranded copper wire, 0.50 mm², Class 5, IEC 60228
Insulation	PVC, Yellow-Blue, TI52 EN 50290-2-21
Sheath	PVC - RAL 7001 Grey, TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and are used in indoor and dry environment CCTV closed circuit camera applications. Provides simultaneous transmission of video, power, audio and control signals.

Attenuation @20°C

max.	50 MHz	50 MHz	4.74 dB/100 m
		200 MHz	9.29 dB/100 m
		470 MHz	14.35 dB/100 m
		860 MHz	19.72 dB/100 m
		1000 MHz	21.37 dB/100 m
Return loss		5-470 MHz	> 20 dB
		470-1000 MHz	> 18 dB

Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		52 ± 2 pF/m
Velocity of propagation		(84 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1300 V
Test voltage		3000 V
Conductor resistance	max.	0.22 mm² — 96 Ω/km
		0.50 mm² — 39 Ω/km
		0.75 mm² — 26 Ω/km
		1.0 mm² — 19.5 Ω/km
		1.50 mm² — 13.3 Ω/km
		2.50 mm² — 7.98 Ω/km

Standards

TSE K 212

Fire performance

Vertical flame propagation EN 60332-1-2

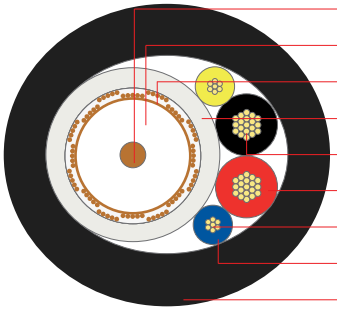
EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
306090	CCTV 1+2 RG 6 U/6 + 2x0.50 mm²	10.0	22	9 3	Grey (RAL 7001)	500/1000
306064	CCTV 1+2 RG 6 U/6 + 2x0.75 mm²	10.2	26	100	Grey (RAL 7001)	500/1000
306065	CCTV 1+2 RG 6 U/6 + 2x1.5 mm²	11.3	38	125	Grey (RAL 7001)	500/1000
306098	CCTV 1+4 RG 6 U/6 + 4x0.50 mm²	10.3	30	107	Grey (RAL 7001)	500/1000
306066	CCTV 1+4 RG 6 U/6 + 2x0.75 mm² + 2x0.50 mm²	10.3	34	115	Grey (RAL 7001)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 1.02 mm (AWG18)
Insulation	Physical foam PE, Ø 4.60 mm, 70°C, EN 50290-2-23
Screen	Cu-Pet foil min. 100% coverage, Electrolytic braided copper wire
Inner Sheath	PVC, TM51 70°C, EN 50290-2-22
Conductor	Stranded copper wire, 0.75 mm², Class 5, IEC 60228
Insulation	PVC, Black-Red, TI52 EN 50290-2-21
Conductor	Stranded copper wire, 0.50 mm², Class 5, IEC 60228
Insulation	PVC, Yellow-Blue, TI52 EN 50290-2-21
Sheath	PE - RAL 9011 Black, 80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and are used in outdoor and underground CCTV closed circuit camera applications. Provides simultaneous transmission of video, power, audio and control signals.

Attenuation @20°C

max.	50 MHz	4.74 dB/100 m
	200 MHz	9.29 dB/100 m
	470 MHz	14.35 dB/100 m
	860 MHz	19.72 dB/100 m
	1000 MHz	21.37 dB/100 m
Return loss	5-470 MHz	> 20 dB
	470-1000 MHz	> 18 dB

Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		52 ± 2 pF/m
Velocity of propagation		(84 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1300 V
Test voltage		3000 V
Conductor resistance	max.	0.22 mm² 96 Ω/km
		0.50 mm² 39 Ω/km
		0.75 mm² 26 Ω/km
		1.0 mm² 19.5 Ω/km
		1.50 mm² 13.3 Ω/km
		2.50 mm² 7.98 Ω/km

Standards

TSE K 212

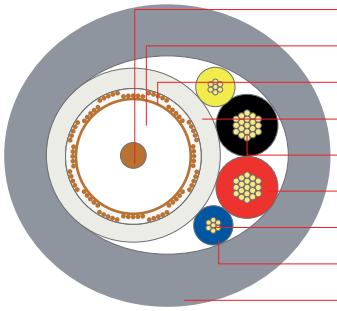
EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
306077	CCTV 1+2 PE RG 6 U/6 + 2x0.75 mm²	10.2	26	85	Black (RAL 9011)	500/1000
306078	CCTV 1+2 PE RG 6 U/6 + 2x1.5 mm²	11.3	38	106	Black (RAL 9011)	500/1000
306079	CCTV 1+4 PE RG 6 U/6 + 2x0.75 mm² + 2x0.50 mm²	10.3	34	97	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 1.02 mm (AWG18)
Insulation	Physical foam PE, Ø 4.60 mm, 70°C, EN 50290-2-23
Screen	Cu-Pet foil min. 100% coverage, Electrolytic braided copper wire
Inner Sheath	HFFR 70°C, EN 50290-2-27
Conductor	Stranded copper wire, 0.75 mm², Class 5, IEC 60228
Insulation	HFFR, Black-Red, 70°C EN 50290-2-26
Conductor	Stranded copper wire, 0.50 mm², Class 5, IEC 60228
Insulation	HFFR, Yellow-Blue, 70°C EN 50290-2-26
Sheath	HFFR - RAL 7001 Grey, 70°C EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and are used in indoor and dry environment CCTV closed circuit camera applications. Provides simultaneous transmission of video, power, audio and control signals. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that require fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Attenuation @20°C

max.	50 MHz	4.74 dB/100 m
	200 MHz	9.29 dB/100 m
	470 MHz	14.35 dB/100 m
	860 MHz	19.72 dB/100 m
	1000 MHz	21.37 dB/100 m
Return loss	5-470 MHz	> 20 dB
	470-1000 MHz	> 18 dB

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Conductor resistance	max.	0.22 mm²	96 Ω/km
		0.50 mm²	39 Ω/km
		0.75 mm²	26 Ω/km
		1.0 mm²	19.5 Ω/km
		1.50 mm²	13.3 Ω/km
		2.50 mm²	7.98 Ω/km

Standards

TSE K 212

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

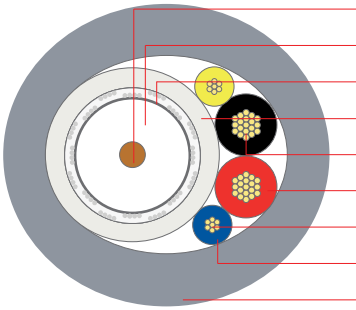
EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
306087	CCTV 1+2 HF RG 6 U/6 + 2x0.75 mm²	10.2	26	100	Grey (RAL 7001)	500/1000
306088	CCTV 1+2 HF RG 6 U/6 + 2x1.50 mm²	11.3	38	125	Grey (RAL 7001)	500/1000
306089	CCTV 1+4 HF RG 6 U/6 + 2x0.75 mm² + 2x0.50 mm²	10.3	34	119	Grey (RAL 7001)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 1.02 mm (AWG18)
Insulation	Physical foam PE, Ø 4.60 mm, 70°C, EN 50290-2-23
Screen	Al-Pet foil min. 100% coverage, Aluminium braided wire
Inner Sheath	PVC, TM51 70°C, EN 50290-2-22
Conductor	Stranded copper wire, 0.75 mm², Class 5, IEC 60228
Insulation	PVC, Black-Red, TI52 EN 50290-2-21
Conductor	Stranded copper wire, 0.50 mm², Class 5, IEC 60228
Insulation	PVC, Yellow-Blue, TI52 EN 50290-2-21
Sheath	PVC - RAL 7001 Grey, TM51 70°C, EN 50290-2-22

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and are used in indoor and dry environment CCTV closed circuit camera applications. Provides simultaneous transmission of video, power, audio and control signals.

Attenuation @20°C

max.	50 MHz	4.74 dB/100 m
	200 MHz	9.29 dB/100 m
	470 MHz	14.35 dB/100 m
	860 MHz	19.72 dB/100 m
	1000 MHz	21.37 dB/100 m
Return loss	5-470 MHz	> 20 dB
	470-1000 MHz	> 18 dB

Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Capacitance		52 ± 2 pF/m
Velocity of propagation		(84 ± 2)%
Insulation resistance	min.	2 GΩ x km
Operating voltage	max.	1300 V
Test voltage		3000 V
Conductor resistance	max.	0.22 mm² — 96 Ω/km
		0.50 mm² — 39 Ω/km
		0.75 mm² — 26 Ω/km
		1.0 mm² — 19.5 Ω/km
		1.50 mm² — 13.3 Ω/km
		2.50 mm² — 7.98 Ω/km

Standards

TSE K 212

Fire performance

Vertical flame propagation EN 60332-1-2

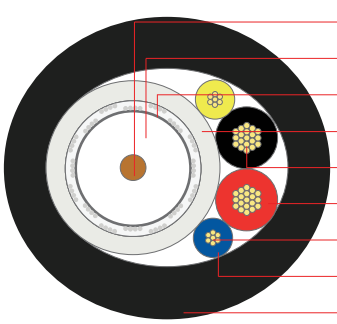
EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
306091	CCTV 1+2 RG 6 U/4 + 2x0.50 mm²	9.90	16	84	Grey (RAL 7001)	500/1000
306061	CCTV 1+2 RG 6 U/4 + 2x0.75 mm²	10.2	20	93	Grey (RAL 7001)	500/1000
306062	CCTV 1+2 RG 6 U/4 + 2x1.5 mm²	11.3	32	118	Grey (RAL 7001)	500/1000
306102	CCTV 1+4 RG 6 U/4 + 2x0.50 mm² + 2x0.22 mm²	10.2	19	94	Grey (RAL 7001)	500/1000
306063	CCTV 1+4 RG 6 U/4 + 2x0.75 mm² + 2x0.50 mm²	10.3	28	106	Grey (RAL 7001)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 1.02 mm (AWG18)
Insulation	Physical foam PE, Ø 4.60 mm, 70°C, EN 50290-2-23
Screen	Al-Pet foil min. 100% coverage, Aluminium braided wire
Inner Sheath	PVC, TM51 70°C, EN 50290-2-22
Conductor	Stranded copper wire, 0.75 mm², Class 5, IEC 60228
Insulation	PVC, Black-Red, TI52 EN 50290-2-21
Conductor	Stranded copper wire, 0.50 mm², Class 5, IEC 60228
Insulation	PVC, Yellow-Blue, TI52 EN 50290-2-21
Sheath	PE - RAL 9011 Black, 80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and are used in outdoor and underground CCTV closed circuit camera applications. Provides simultaneous transmission of video, power, audio and control signals.

Attenuation @20°C

max.	50 MHz	4.74 dB/100 m
	200 MHz	9.29 dB/100 m
	470 MHz	14.35 dB/100 m
	860 MHz	19.72 dB/100 m
	1000 MHz	21.37 dB/100 m
Return loss	5-470 MHz	> 20 dB
	470-1000 MHz	> 18 dB

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Conductor resistance	max.	0.22 mm²	96 Ω/km
		0.50 mm²	39 Ω/km
		0.75 mm²	26 Ω/km
		1.0 mm²	19.5 Ω/km
		1.50 mm²	13.3 Ω/km
		2.50 mm²	7.98 Ω/km

Standards

TSE K 212

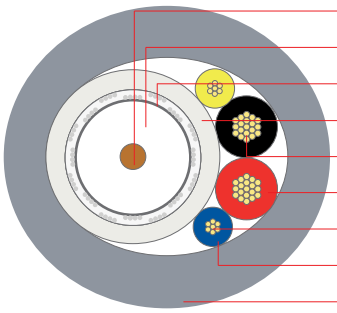
EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
306074	CCTV 1+2 PE RG 6 U/4 + 2x0.75 mm²	10.2	20	78	Black (RAL 9011)	500/1000
306075	CCTV 1+2 PE RG 6 U/4 + 2x1.5 mm²	11.3	32	99	Black (RAL 9011)	500/1000
306076	CCTV 1+4 PE RG 6 U/4 + 2x0.75 mm² + 2x0.50 mm²	10.3	28	90	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 1.02 mm (AWG18)
Insulation	Physical foam PE, Ø 4.60 mm, 70°C, EN 50290-2-23
Screen	Al-Pet foil min. 100% coverage, Aluminium braided wire
Inner Sheath	HFFR 70°C, EN 50290-2-27
Conductor	Stranded copper wire, 0.75 mm², Class 5, IEC 60228
Insulation	HFFR, Black-Red, 70°C EN 50290-2-26
Conductor	Stranded copper wire, 0.50 mm², Class 5, IEC 60228
Insulation	HFFR, Yellow-Blue, 70°C EN 50290-2-26
Sheath	HFFR - RAL 7001 Grey, 70°C EN 50290-2-27

Application

Utilising physical foam insulation technology, cables have a rated impedance of 75 ohms and are used in indoor and dry environment CCTV closed circuit camera applications. Provides simultaneous transmission of video, power, audio and control signals. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as housing estates, hotels, shopping malls and smart buildings.

Attenuation @20°C

max.	50 MHz	4.74 dB/100 m
	200 MHz	9.29 dB/100 m
	470 MHz	14.35 dB/100 m
	860 MHz	19.72 dB/100 m
	1000 MHz	21.37 dB/100 m
Return loss	5-470 MHz	> 20 dB
	470-1000 MHz	> 18 dB

Specifications

Operating temperature		-30°C ...+70°C	
Bending radius	min.	10 x D	
Impedance		75 ± 3 Ω	
Capacitance		52 ± 2 pF/m	
Velocity of propagation		(84 ± 2)%	
Insulation resistance	min.	2 GΩ x km	
Operating voltage	max.	1300 V	
Test voltage		3000 V	
Conductor resistance	max.	0.22 mm²	96 Ω/km
		0.50 mm²	39 Ω/km
		0.75 mm²	26 Ω/km
		1.0 mm²	19.5 Ω/km
		1.50 mm²	13.3 Ω/km
		2.50 mm²	7.98 Ω/km

Standards

TSE K 212

Fire performance

Vertical flame propagation EN 60332-1-2
Corrosive gas EN 60754-1/2
Smoke density EN 61034-2

EU declaration of conformity

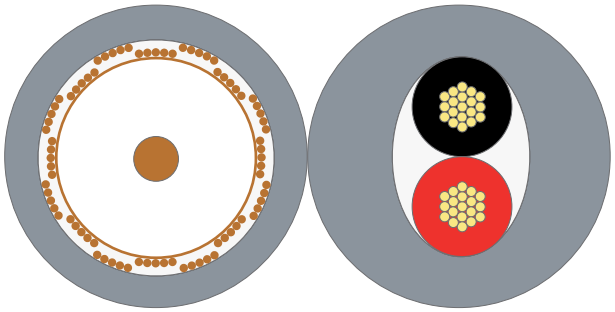
LVD Low Voltage Directive 2014/35/EU
RoHS Restriction of Hazardous Substances 2011/65/EU

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
306084	CCTV 1+2 HF RG 6 U/4 + 2x0.75 mm²	10.2	20	93	Grey (RAL 7001)	500/1000
306085	CCTV 1+2 HF RG 6 U/4 + 2x1.50 mm²	11.3	32	118	Grey (RAL 7001)	500/1000
306086	CCTV 1+4 HF RG 6 U/4 + 2x0.75 mm² + 2x0.50 mm²	10.3	28	106	Grey (RAL 7001)	500/1000

Specifications may vary depending on technical modifications.

Cable structure

Coaxial RG
59 Mini RG
59 B/U RG
59 U/4 RG
59 U/6 RG
6 U/4 RG 6
U/6



Power, Audio, Control
2x0.50 mm²
2x0.75 mm²
2x1.0 mm²
2x1.5 mm²
2x1.5 mm²
2x0.75 mm² + 2x0.22 mm²
2x0.75 mm² + 2x0.50 mm²

Application

Cables with a rated impedance of 75 ohms are used in indoor and dry CCTV closed circuit camera applications. Provides simultaneous transmission of video, power, audio and control signals.

Specifications

Operating temperature		-30°C ...+70°C
Bending radius	min.	10 x D
Impedance		75 ± 3 Ω
Conductor resistance	max.	0.22 mm² — 96 Ω/km
		0.50 mm² — 39 Ω/km
		0.75 mm² — 26 Ω/km
		1.0 mm² — 19.5 Ω/km
		1.5 mm² — 13.3 Ω/km

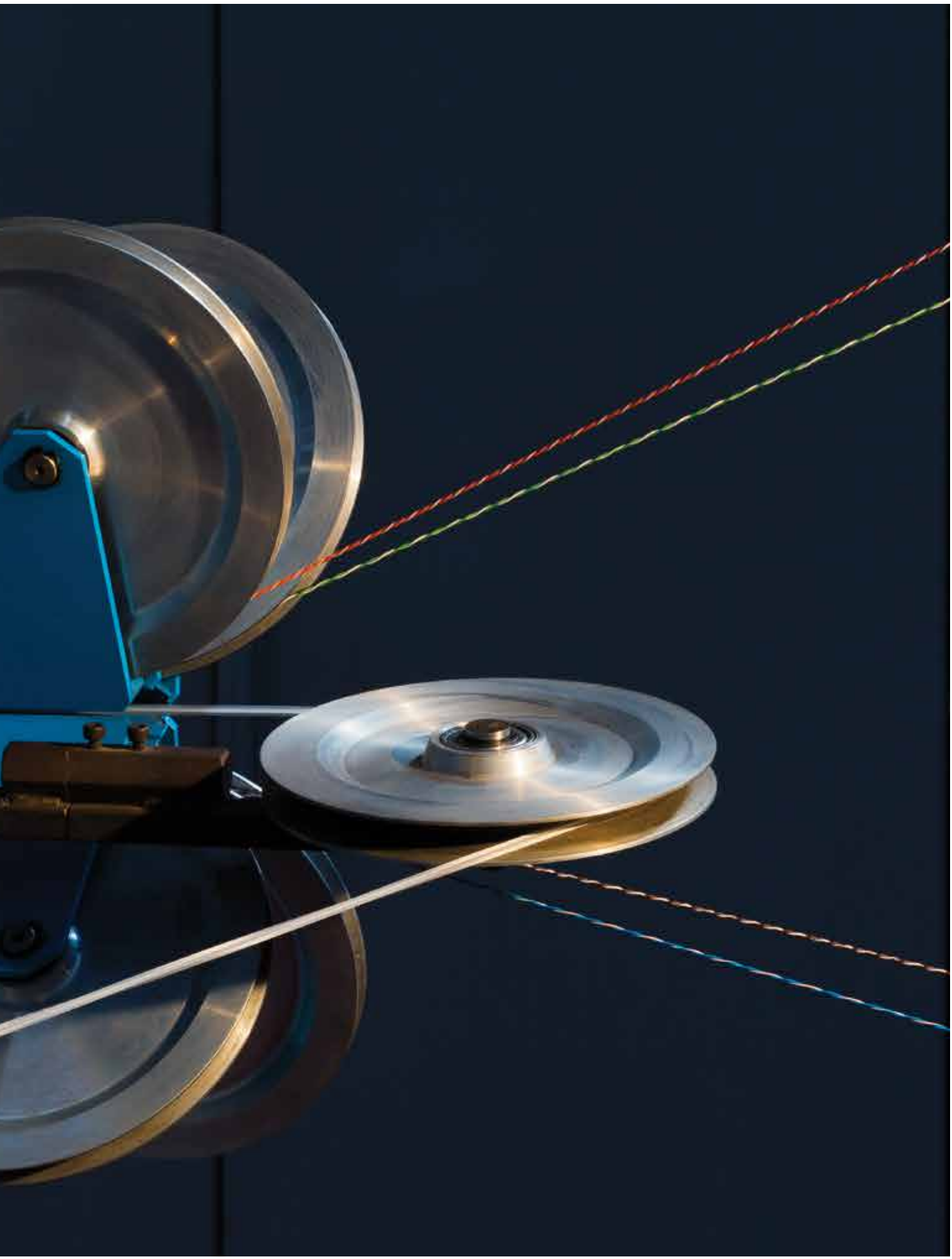
Standards TSE K 212
Fire performance
Vertical flame propagation EN 60332-1-2
EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
306067	CCTV 1+2 RG 59 U/4 + 2x0.75 mm²	5.80x12.0	17	79	Grey (RAL 7001)	500/1000
306068	CCTV 1+2 RG 59 U/6 + 2x0.75 mm²	5.80x12.0	23	85	Grey (RAL 7001)	500/1000
306069	CCTV 1+2 RG 6 U/4 + 2x1.5 mm²	6.80x13.7	32	108	Grey (RAL 7001)	500/1000
306070	CCTV 1+2 RG 6 U/6 + 2x1.5 mm²	6.80x13.7	38	114	Grey (RAL 7001)	500/1000
306152	CCTV 1+2 RG 59 B/U + 2x0.50 mm²	5.80x12.0	20	87	Grey (RAL 7001)	500/1000
306153	CCTV 1+2 RG 59 B/U + 2x0.75 mm²	5.80x12.0	24	90	Grey (RAL 7001)	500/1000
306154	CCTV 1+2 RG 59 B/U + 2x1.0 mm²	5.80x12.0	28	94	Grey (RAL 7001)	500/1000
306097	CCTV 1+4 RG 6 U/4 + 2x0.75 mm² + 2x0.22 mm²	6.80x14.0	23	100	Grey (RAL 7001)	500/1000
306104	CCTV 1+4 RG 6 U/4 + 2x0.75 mm² + 2x0.50 mm²	6.80x14.0	28	102	Grey (RAL 7001)	500/1000
306105	CCTV 1+4 RG 6 U/6 + 2x0.75 mm² + 2x0.50 mm²	6.80x14.0	34	108	Grey (RAL 7001)	500/1000

Specifications may vary depending on technical modifications.

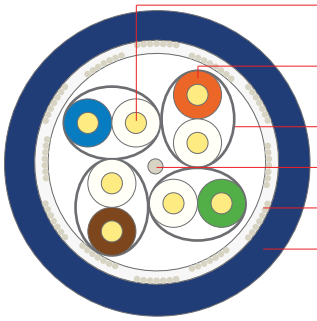
Data Cables



SL1500 S/F22

Category 7A+ S/FTP

Cable structure



Electrolytic copper wire, Ø 22AWG

Physical foam PE, in compliance with TIA 568 insulation colour coding
70°C, EN 50290-2-23

Al-Pet tape min. 100% coverage

Tinned copper drain wire, Ø 26AWG

Tinned braided copper wire, 40% coverage

LSZH/LS0H - RAL 5002 Blue, Ø 7.8 mm
70°C, EN 50290-2-27
PVC - RAL 7001 Grey, Ø 7.8 mm
TM51 70°C, EN 50290-2-22
PE - RAL 9011 Black, Ø 7.8 mm
80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, this data cable range is designed for analogue and digital signal transmission in audio, video and data applications supporting 1.2 GHz, 10 Gbit/s 10 Gigabit Ethernet. Cables meet the requirements of structural cabling standards including ANSI EIA/TIA 568, ISO/IEC 11801 and EN 50173 Class FA.

IEEE 802.3:10Base-T; 100Base-T; 1000Base-T; 10GBase-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM
Power over Ethernet (PoE) / PoE+

Standards

ISO/IEC 11801 2nd ed., IEC 61156-7
EN 50173-1

Fire performance

Vertical flame propagation	EN 60332-1-2 (LSZH-PVC)
Corrosive gas	EN 60754-1/2 (LSZH)
Smoke density	EN 61034-2 (LSZH)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

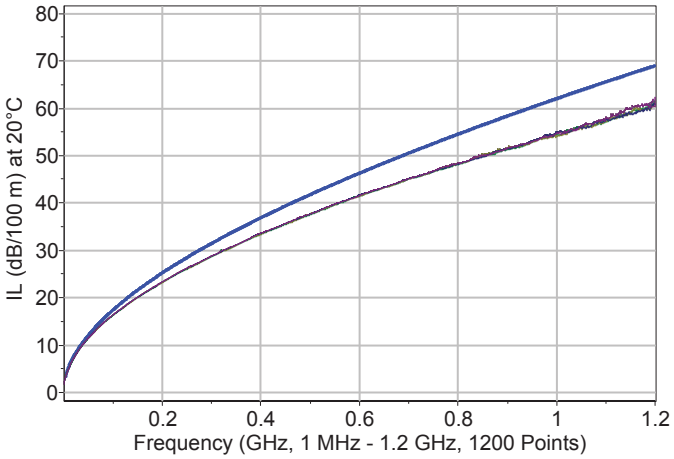
Specifications

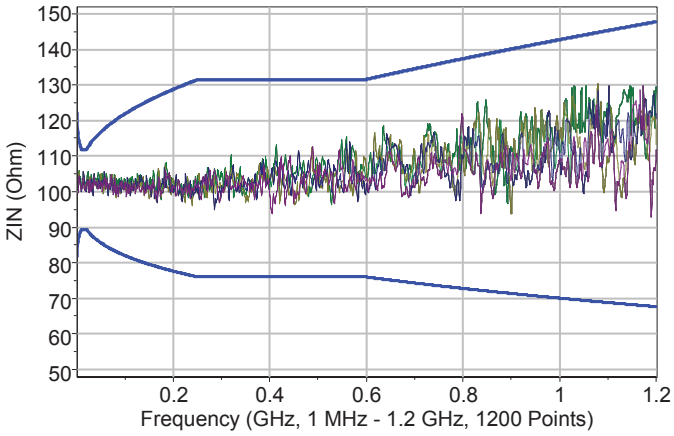
Temperature range	fixed		-20°C ...+60°C
	flexing		0°C ...+50°C
Bending radius	fixed	min.	4 x D
	flexing	min.	8 x D
Tensile strength		max.	135 N
Crushing strength		min.	1000 N/10 cm
Impact strength		min.	10 impacts
Conductor resistance		max.	60 Ω/km
Resistance imbalance		max.	2%
Insulation resistance		min.	5000 MΩ x m
Capacitance		nom.	42 pF/m
Capacity imbalance		max.	1600 pF/km
Rated impedance			100 ± 5 Ω @100 MHz
Velocity of propagation			78-80%
Propagation delay		max.	430 ns/100 m
Signal delay		max.	25 ns/100 m
Test voltage		1000 V	
Operating voltage		max.	125 V
TCL		min.	"Level 2"
Coupling attenuation			"Type Ib"
Transfer impedance			"Class 1"
Segregation class			"d" EN 50174-2

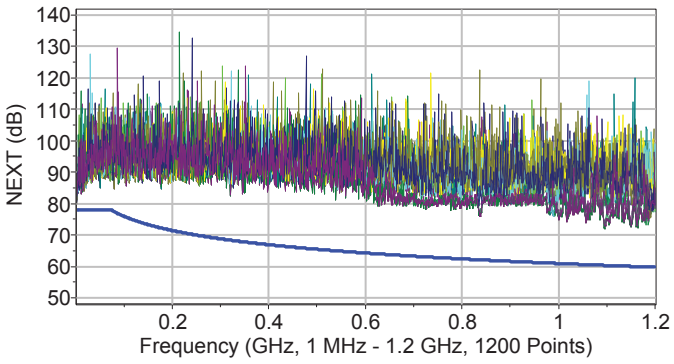
Specifications may vary depending on technical modifications.

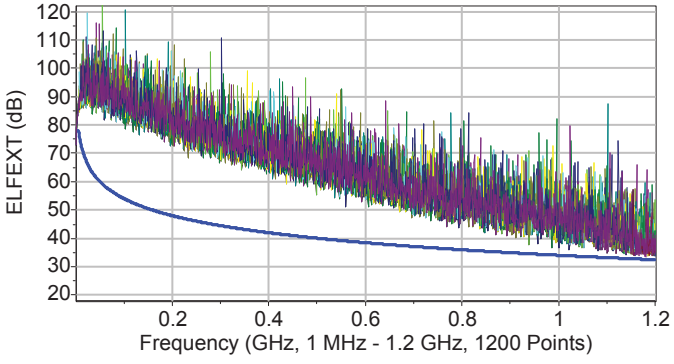
Frequency [MHz]	Attenuation [dB/100 m] typ.	max.	NEXT [dB] typ.	max.	PS-NEXT [dB] typ.	max.	ACR [dB/100 m] typ.	max.	PS-ACR [dB/100 m] typ.	max.	ACR-F [dB/100 m] typ.	max.	PS-ACR-F [dB/100 m] typ.	max.	RL [dB] typ.	max.
1	1.7	1.9	105	78	102	75	103	76.1	100	76.1	100	73.1	110	78	107	75
4	3.2	3.5	105	78	102	75	102	74.5	99	74.5	99	71.5	108	78	105	75
10	4.9	5.4	105	78	102	75	100	72.6	97	72.6	97	69.6	105	74	102	71
100	16.1	17.5	105	76	102	73	89	58.5	86	58.5	86	55.5	95	54	92	51
250	26	28.5	105	70	102	67	79	41.5	76	41.5	76	38.5	85	46	82	43
500	37.2	41.8	99	65.5	96	62.5	62	23.7	59	23.7	59	20.7	71	40	78	37
600	40.2	46.3	96	64.3	93	61.3	56	18	53	18	53	15	63	38.4	60	35.4
800	49	56.9	93	62	90	59	44	5.1	41	5.1	41	2.1	56	35.3	53	32.3
1000	54.8	62	88	61	85	58	33	-1	30	-1	30	-4	52	34	49	31
1200	58.0	69	85	59.8	82	56.8	27	-9.2	24	-9.2	24	-12.2	43	32.4	40	29.4
1500	67.5	-	81	-	78	-	15	-	12	-	12	-	38	-	35	-

IEC 61156- 7





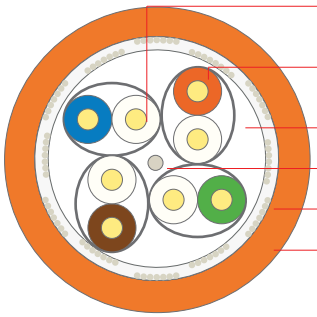




Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
507013	SL1500 S/F22 LSZH Cat 7A+ S/FTP 4x2x22AWG	7.8 7.8 7.8	32	67	Blue (RAL 5002)	500/1000
507014	SL1500 S/F22 PVC Cat 7A+ S/FTP 4x2x22AWG		32	66	Grey (RAL 7001)	500/1000
507015	SL1500 S/F22 PE Cat 7A+ S/FTP 4x2x22AWG		32	59	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 23AWG

Physical foam PE, in compliance with TIA 568 insulation colour coding 70°C, EN 50290-2-23

Al-Pet tape min. 100% coverage

Tinned copper drain wire, Ø 26AWG

Tinned braided copper wire, 40% coverage

LSZH/LS0H - RAL 2003 Orange, Ø 7.6 mm
70°C, EN 50290-2-27
PVC - RAL 7001 Grey, Ø 7.6 mm
TM51 70°C, EN 50290-2-22
PE - RAL 9011 Black, Ø 7.6 mm
80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, this data cable range is designed for analogue and digital signal transmission in audio, video and data applications supporting 1 GHz, 10 Gbit/s 10 Gigabit Ethernet. Cables meet the requirements of structural cabling standards including ANSI EIA/TIA 568, ISO/IEC 11801 and EN 50173 Class FA.

IEEE 802.3:10Base-T; 100Base-T; 1000Base-T; 10GBase-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM
Power over Ethernet (PoE) / PoE+

Standards

ISO/IEC 11801 2nd ed., IEC 61156-5
EN 50173-1, EN 50288-9-1

Fire performance

Vertical flame propagation	EN 60332-1-2 (LSZH-PVC)
Corrosive gas	EN 60754-1/2 (LSZH)
Smoke density	EN 61034-2 (LSZH)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

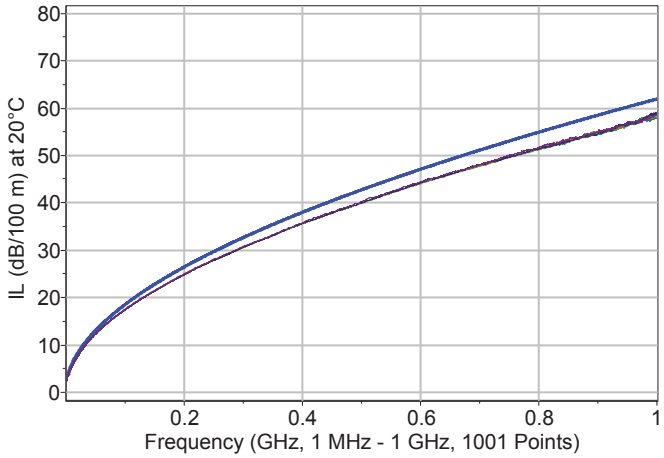
Specifications

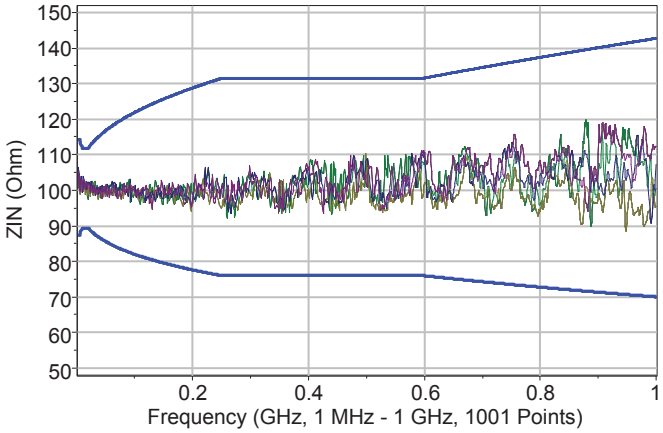
Temperature range	fixed		-20°C ...+60°C
	flexing		0°C ...+50°C
Bending radius	fixed	min.	4 x D
	flexing	min.	8 x D
Tensile strength		max.	120 N
Crushing strength		min.	1000 N/10 cm
Impact strength		min.	10 impacts
Conductor resistance		max.	68 Ω/km
Resistance imbalance		max.	2%
Insulation resistance		min.	5000 MΩ x m
Capacitance		nom.	42 pF/m
Capacity imbalance		max.	1600 pF/km
Rated impedance			100 ± 5 Ω @100 MHz
Velocity of propagation			78-80%
Propagation delay		max.	430 ns/100 m
Signal delay		max.	25 ns/100 m
Test voltage			1000 V
Operating voltage		max.	125 V
TCL		min.	"Level 2"
Coupling attenuation			"Type Ib"
Transfer impedance			"Class 1"
Segregation class			"d" EN 50174-2

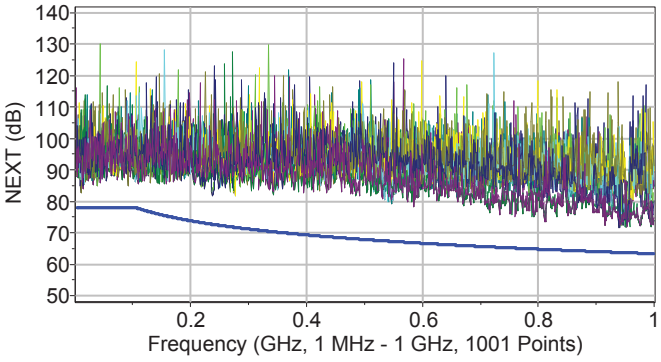
Specifications may vary depending on technical modifications.

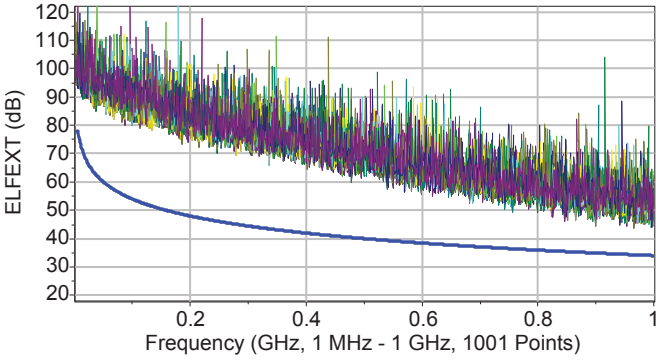
Frequency [MHz]	Attenuation [dB/100 m] typ.	max.	NEXT [dB] typ.	max.	PS-NEXT [dB] typ.	max.	ACR [dB/100 m] typ.	max.	PS-ACR [dB/100 m] typ.	max.	ACR-F [dB/100 m] typ.	max.	PS-ACR-F [dB/100 m] typ.	max.	RL [dB] typ.	max.
1	1.9	2.1	104	78	101	75	102	72.9	99	72.9	108	7 8	105	75	26	20
4	3.5	3.7	104	78	101	75	100	71.3	97	71.3	107	7 8	104	75	30	23
10	5.4	5.8	104	78	101	75	99	69.2	96	69.2	104	75.3	101	72.3	33	25
100	17.4	18.5	104	75.4	101	72.4	87	53.9	84	53.9	92	55.3	89	52.3	33	20.1
200	24.9	26.5	104	70.9	101	67.9	79	41.4	76	41.4	84	49.3	81	46.3	32	18
250	27.8	29.7	104	69.4	101	66.4	76	36.7	73	36.7	79	47.3	76	44.3	30	17.3
500	40.1	42.8	99	64.9	96	61.9	59	19.2	56	19.2	67	41.3	64	38.3	28	17.3
600	43.8	47.1	93	63.7	90	60.7	50	13.6	47	13.6	60	39.7	57	36.7	25	17.3
800	50.1	54.9	86	61.9	83	58.9	32	3.9	29	3.9	53	37.2	50	34.2	23	16.1
1000	59.0	61.9	84	60.4	81	57.4	26	-4.5	23	-4.5	43	35.3	40	32.3	20	15.1
1200	64	-	82	-	79	-	18	-	15	-	38	-	35	-	19	-

IEC 61156-5, EN 50288-9-1









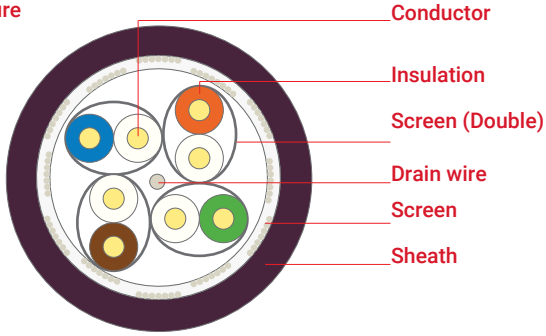
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
507007	SL1200 S/F23 LSZH Cat 7A S/FTP 4x2x23AWG	7.6	30	60	Orange (RAL 2003)	500/1000
507008	SL1200 S/F23 PVC Cat 7A S/FTP 4x2x23AWG	7.6	30	59	Grey (RAL 7001)	500/1000
507009	SL1200 S/F23 PE Cat 7A S/FTP 4x2x23AWG	7.6	30	54	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

SL900 S/F23

Category 7 S/FTP

Cable structure



Electrolytic copper wire, Ø 23AWG

Physical foam PE, in compliance with TIA 568 insulation colour coding
70°C, EN 50290-2-23
Al-Pet tape min. 100% coverage

Tinned copper drain wire, Ø 26AWG

Tinned braided copper wire, 40% coverage

LSZH/LS0H - RAL 4007 Purple, Ø 7.4 mm
70°C, EN 50290-2-27
PVC - RAL 7001 Grey, Ø 7.4 mm
TM51 70°C, EN 50290-2-22
PE - RAL 9011 Black, Ø 7.4 mm
80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, this data cable range is designed for analogue and digital signal transmission in audio, video and data applications supporting 500 MHz, 10 Gbit/s 10 Gigabit Ethernet. Cables meet the requirements of structural cabling standards including ANSI EIA/TIA 568, ISO/IEC 11801 and EN 50173 Class EA.

IEEE 802.3:10Base-T; 100Base-T; 1000Base-T; 10GBase-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM
Power over Ethernet (PoE) / PoE+

Standards

ISO/IEC 11801 2nd ed., IEC 61156-5
EN 50173-1, EN 50288-4-1

Fire performance

Vertical flame propagation	EN 60332-1-2 (LSZH-PVC)
Corrosive gas	EN 60754-1/2 (LSZH)
Smoke density	EN 61034-2 (LSZH)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

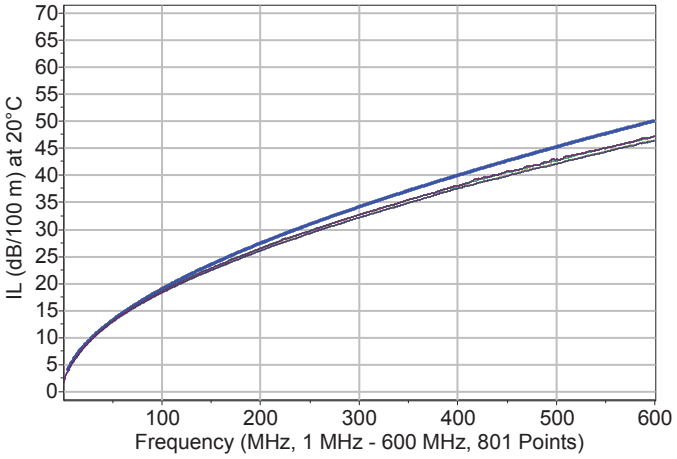
Specifications

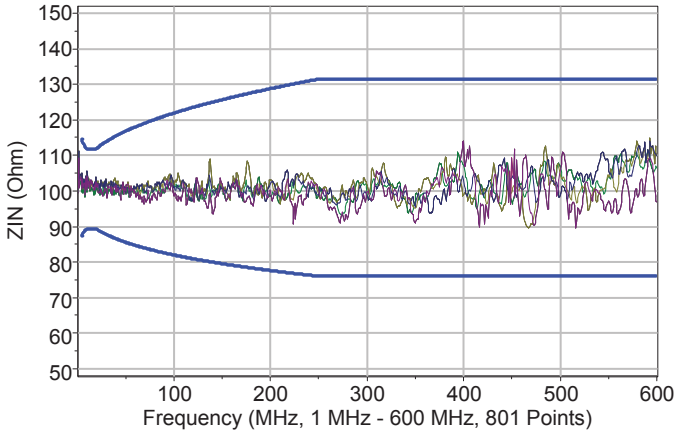
Temperature range	fixed		-20°C ...+60°C
	flexing		0°C ...+50°C
Bending radius	fixed	min.	4 x D
	flexing	min.	8 x D
Tensile strength		max.	110 N
Crushing strength		min.	1000 N/10 cm
Impact strength		min.	10 impacts
Conductor resistance		max.	75 Ω/km
Resistance imbalance		max.	2%
Insulation resistance		min.	5000 MΩ x m
Capacitance		nom.	42 pF/m
Capacity imbalance		max.	1600 pF/km
Rated impedance			100 ± 5 Ω @100 MHz
Velocity of propagation			78-80%
Propagation delay		max.	430 ns/100 m
Signal delay		max.	25 ns/100 m
Test voltage			1000 V
Operating voltage		max.	125 V
TCL		min.	"Level 2"
Coupling attenuation			"Type Ib"
Transfer impedance			"Class 1"
Segregation class			"d" EN 50174-2

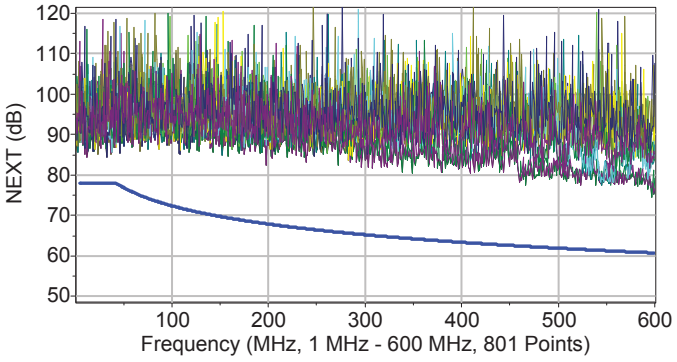
Specifications may vary depending on technical modifications.

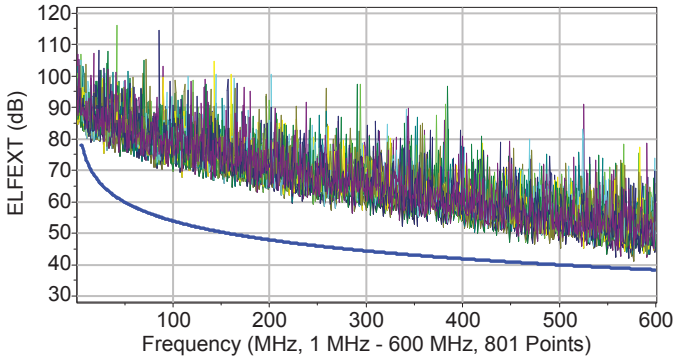
Frequency [MHz]	Attenuation [dB/100 m] typ.	max.	NEXT [dB] typ.	max.	PS-NEXT [dB] typ.	max.	ACR [dB/100 m] typ.	max.	PS-ACR [dB/100 m] typ.	max.	ACR-F [dB/100 m] typ.	max.	PS-ACR-F [dB/100 m] typ.	max.	RL [dB] typ.	max.
1	1.8	2.0	100	80	97	77	98	78	95	75	107	80	104	77	26	20
4	3.3	3.7	100	80	97	77	96	77	93	74	107	80	104	77	30	23
10	5.3	5.9	100	80	97	77	94	74	91	71	104	74	101	71	33	25
100	17.5	19	100	72	97	69	82	54	79	51	92	54	89	51	33	25.7
200	25.2	27.5	100	68	97	65	75	41	72	38	84	48	81	45	32	23.6
250	28.0	31	100	66	97	63	72	36	69	33	81	46	78	43	30	21.5
500	40.5	45.3	96	62	93	59	55	18	52	15	68	40	65	37	27	20.1
600	44.5	50.1	90	61	87	58	45	12	42	9	64	38	61	35	25	17.3
700	53.5	-	84	-	81	-	30	-	27	-	56	-	53	-	23	15.9
800	55.0	-	83	-	80	-	28	-	25	-	54	-	51	-	22	15.2
900	57.0	-	81	-	78	-	24	-	21	-	49	-	46	-	21	

IEC 61156-5, EN 50288-4-1





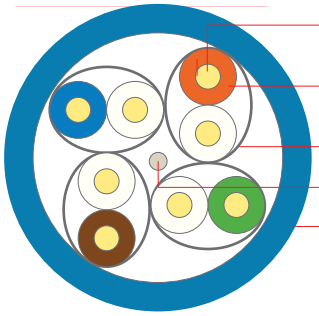




Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
507001	SL900 S/F23 LSZH Cat 7 S/FTP 4x2x23AWG	7.4	28	55	Purple (RAL 4007)	500/1000
507002	SL900 S/F23 PVC Cat 7 S/FTP 4x2x23AWG	7.4	28	54	Grey (RAL 7001)	500/1000
507025	SL900 S/F23 PE Cat 7 S/FTP 4x2x23AWG	7.4	28	48	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 23AWG

Physical foam PE, in compliance with TIA 568 insulation colour coding
70°C, EN 50290-2-23

Al-Pet tape min. 100% coverage

Tinned copper drain wire, Ø 26AWG

LSZH/LS0H - RAL 5015 Blue, Ø 7.0 mm
70°C, EN 50290-2-27
PVC - RAL 7001 Grey, Ø 7.0 mm
TM51 70°C, EN 50290-2-22
PE - RAL 9011 Black, Ø 7.0 mm
80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, this data cable range is designed for analogue and digital signal transmission in audio, video and data applications supporting 500 MHz, 10 Gbit/s 10 Gigabit Ethernet. Cables meet the requirements of structural cabling standards including ANSI EIA/TIA 568, ISO/IEC 11801 and EN 50173 Class EA.

IEEE 802.3:10Base-T; 100Base-T; 1000Base-T; 10GBase-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM
Power over Ethernet (PoE) / PoE+

Standards

ISO/IEC 11801 2nd ed., IEC 61156-5
EN 50173-1, EN 50288-10-1
ANSI EIA/TIA 568-C.2

Fire performance

Vertical flame propagation	EN 60332-1-2 (LSZH-PVC)
Corrosive gas	EN 60754-1/2 (LSZH)
Smoke density	EN 61034-2 (LSZH)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

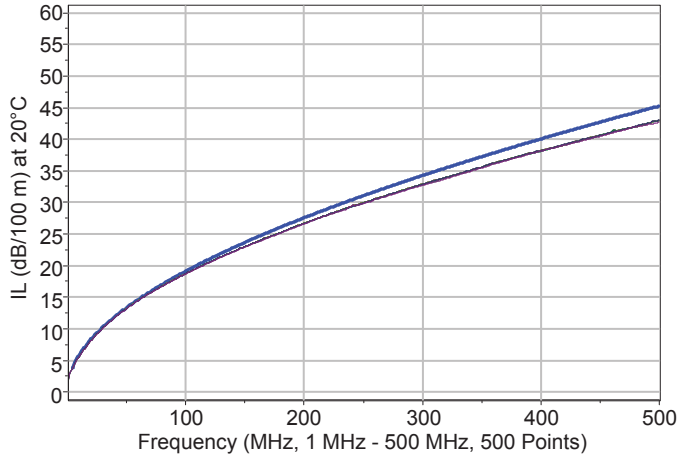
Specifications

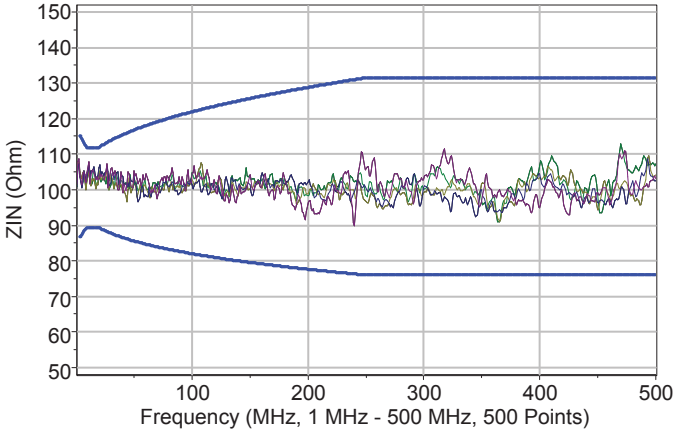
Temperature range	fixed		-20°C ...+60°C
	flexing		0°C ...+50°C
Bending radius			
	fixed	min.	4 x D
	flexing	min.	8 x D
Tensile strength		max.	110 N
Crushing strength		min.	1000 N/10 cm
Impact strength		min.	10 impacts
Conductor resistance		max.	75 Ω/km
Resistance imbalance		max.	2%
Insulation resistance		min.	5000 MΩ x m
Capacitance		nom.	42 pF/m
Capacity imbalance		max.	1600 pF/km
Rated impedance			100 ± 5 Ω @100 MHz
Velocity of propagation			78-80%
Propagation delay		max.	430 ns/100 m
Signal delay		max.	25 ns/100 m
Test voltage			1000 V
Operating voltage		max.	125 V
TCL		min.	"Level 2"
Coupling attenuation			"Type II"
Transfer impedance			"Class 2"
Segregation class			"c" EN 50174-2

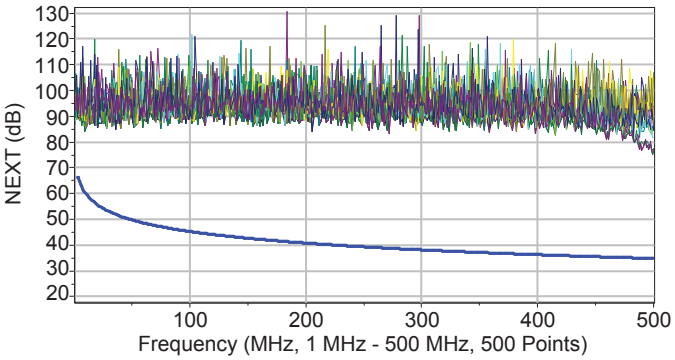
Specifications may vary depending on technical modifications.

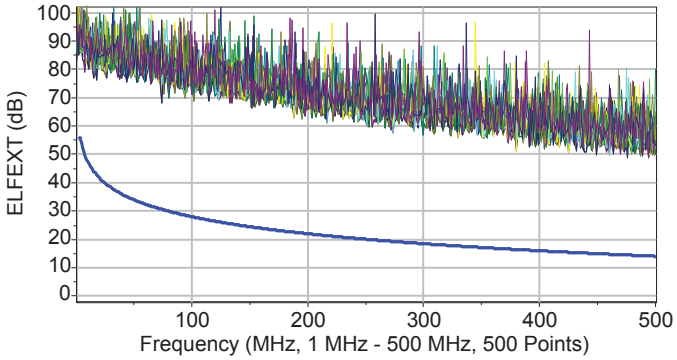
Frequency [MHz]	Attenuation [dB/100 m] typ.	max.	NEXT [dB] typ.	max.	PS-NEXT [dB] typ.	max.	ACR [dB/100 m] typ.	max.	PS-ACR [dB/100 m] typ.	max.	ACR-F [dB/100 m] typ.	max.	PS-ACR-F [dB/100 m] typ.	max.	RL [dB] typ.	max.
1	1.9	2.1	95	75.3	92	72.3	93	73.2	90	70.2	100	68	97	65	26	20
4	3.5	3.8	95	66.3	92	63.3	91	62.5	88	59.5	100	56	97	53	27	23
10	5.6	5.9	95	60.3	92	57.3	89	54.4	86	51.4	92	48	89	45	30	25
16	6.9	7.5	95	57.2	92	54.2	88	49.8	85	46.8	88	43.9	85	40.9	30	25.7
31.25	9.80	10.5	95	52.9	92	49.9	85	42.4	82	39.4	82	38.1	79	35.1	30	23.6
62.50	14.1	15	95	48.4	92	45.4	81	33.4	78	30.4	76	32.1	73	29.1	30	21.5
100	17.7	19.1	95	45.3	92	42.3	77	26.2	74	23.2	72	28	69	25	30	20.1
250	29.5	31.1	85	39.3	82	36.3	55	8.3	52	5.3	64	20	61	17	24	17.3
400	38.8	40.1	80	36.3	77	33.3	41	-3.8	38	-6.8	57	16	54	13	23	15.9
500	43.5	45.3	75	34.8	72	31.8	31	-10.4	28	-13.4	55	14	52	11	22	15.2

IEC 61156-5, EN 50288-10-1





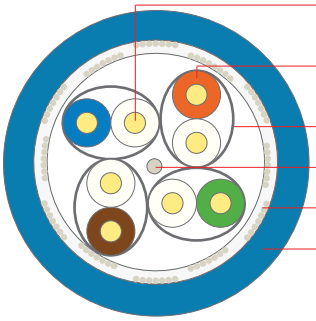




Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
506046	SL500 U/F23 LSZH Cat 6A U/FTP 4x2x23AWG SL500	7.0	21	50	Blue (RAL 5015)	500/1000
506135	U/F23 LSZH Cat 6A U/FTP 4x2x23AWG SL500 U/F23	7.0	21	50	Orange (RAL 2003)	500/1000
506136	LSZH Cat 6A U/FTP 4x2x23AWG SL500 U/F23Dx	7.0	21	50	Grey (RAL 7001)	500/1000
506064	LSZH Cat 6A U/FTP 2x(4x2x23AWG) SL500 U/F23	7.0x14.0	42	100	Blue (RAL 5015)	500
506040	PVC Cat 6A U/FTP 4x2x23AWG SL500 U/F23 PE Cat	7.0	21	49	Grey (RAL 7001)	500/1000
506052	6A U/FTP 4x2x23AWG	7.0	21	44	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 23AWG

Physical foam PE, in compliance with TIA 568 insulation colour coding
70°C, EN 50290-2-23

Al-Pet tape min. 100% coverage

Tinned copper drain wire, Ø 26AWG

Tinned braided copper wire, 40% coverage

LSZH/LS0H - RAL 2003 Orange, Ø 7.4 mm
70°C, EN 50290-2-27
PVC - RAL 7001 Grey, Ø 7.4 mm
TM51 70°C, EN 50290-2-22
PE - RAL 9011 Black, Ø 7.4 mm
80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, this data cable range is designed for analogue and digital signal transmission in audio, video and data applications supporting 500 MHz, 10 Gbit/s 10 Gigabit Ethernet. Cables meet the requirements of structural cabling standards including ANSI EIA/TIA 568, ISO/IEC 11801 and EN 50173 Class EA.

IEEE 802.3:10Base-T; 100Base-T; 1000Base-T; 10GBase-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM
Power over Ethernet (PoE) / PoE+

Standards

ISO/IEC 11801 2nd ed., IEC 61156-5
EN 50173-1, EN 50288-10-1
ANSI EIA/TIA 568-C.2

Fire performance

Vertical flame propagation	EN 60332-1-2 (LSZH-PVC)
Corrosive gas	EN 60754-1/2 (LSZH)
Smoke density	EN 61034-2 (LSZH)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

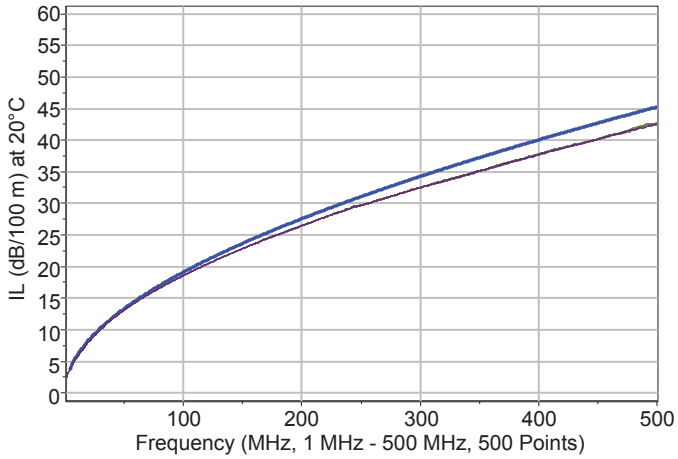
Specifications

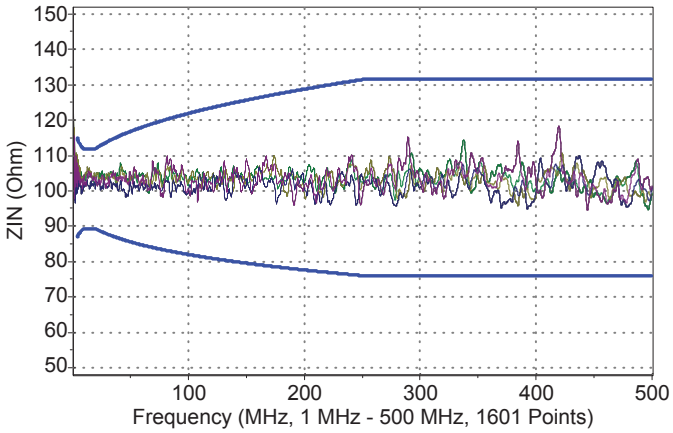
Temperature range	fixed		-20°C ...+60°C
	flexing		0°C ...+50°C
Bending radius	fixed	min.	4 x D
	flexing	min.	8 x D
Tensile strength		max.	110 N
Crushing strength		min.	1000 N/10 cm
Impact strength		min.	10 impacts
Conductor resistance		max.	75 Ω/km
Resistance imbalance		max.	2%
Insulation resistance		min.	5000 MΩ x m
Capacitance		nom.	42 pF/m
Capacity imbalance		max.	1600 pF/km
Rated impedance			100 ± 5 Ω @100 MHz
Velocity of propagation			78-80%
Propagation delay		max.	430 ns/100 m
Signal delay		max.	25 ns/100 m
Test voltage			1000 V
Operating voltage		max.	125 V
TCL		min.	"Level 2"
Coupling attenuation			"Type Ib"
Transfer impedance			"Class 2"
Segregation class			"c" EN 50174-2

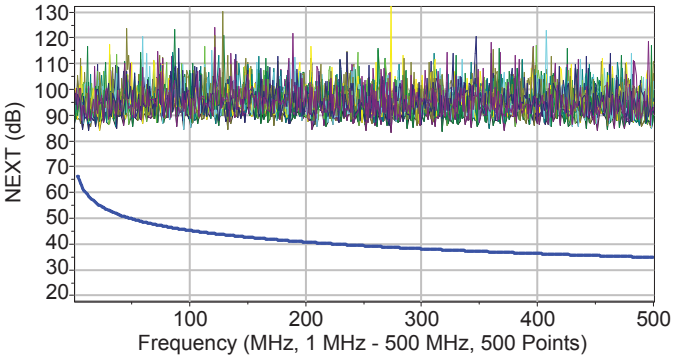
Specifications may vary depending on technical modifications.

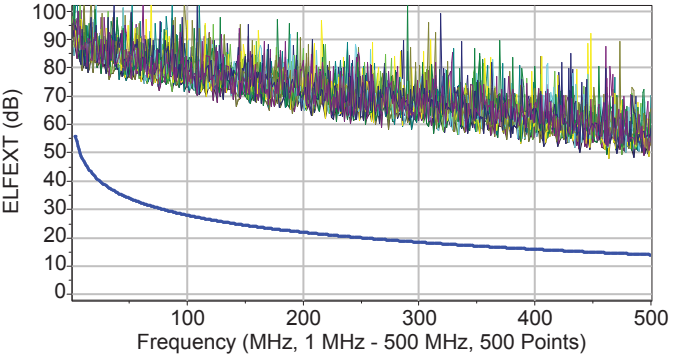
Frequency [MHz]	Attenuation [dB/100 m] typ.	max.	NEXT [dB] typ.	max.	PS-NEXT [dB] typ.	max.	ACR [dB/100 m] typ.	max.	PS-ACR [dB/100 m] typ.	max.	ACR-F [dB/100 m] typ.	max.	PS-ACR-F [dB/100 m] typ.	max.	RL [dB] typ.	max.
1	1.8	2.1	95	75.3	92	72.3	93	73.2	90	70.2	100	68	97	65	26	20
4	3.6	3.8	95	66.3	92	63.3	91	62.5	88	59.5	100	56	97	53	27	23
10	5.3	5.9	95	60.3	92	57.3	89	54.4	86	51.4	92	48	89	45	30	25
16	6.8	7.5	95	57.2	92	54.2	88	49.8	85	46.8	88	43.9	85	40.9	30	25.7
31.25	9.9	10.5	95	52.9	92	49.9	85	42.4	82	39.4	82	38.1	79	35.1	30	23.6
62.50	14.2	15	95	48.4	92	45.4	81	33.4	78	30.4	76	32.1	73	29.1	30	21.5
100	18.0	19.1	95	45.3	92	42.3	77	26.2	74	23.2	72	28	69	25	30	20.1
250	28.9	31.1	85	39.3	82	36.3	56	8.3	52	5.3	64	20	61	17	24	17.3
400	37.0	40.1	80	36.3	77	33.3	43	-3.8	38	-6.8	57	16	54	13	23	15.9
500	41.5	45.3	75	34.8	72	31.8	33	-10.4	28	-13.4	55	14	52	11	22	15.2

IEC 61156-5, EN 50288-10-1





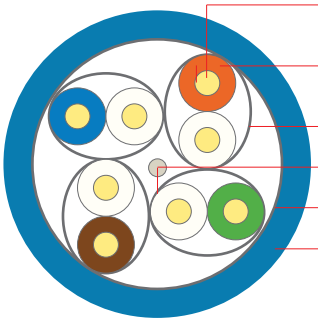




Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
506042	SL500 S/F23 LSZH Cat 6A S/FTP 4x2x23AWG	7.4	28	55	Blue (RAL 5015)	500/1000
506048	SL500 S/F23 PVC Cat 6A S/FTP 4x2x23AWG	7.4	28	54	Grey (RAL 7001)	500/1000
506054	SL500 S/F23 PE Cat 6A S/FTP 4x2x23AWG	7.4	28	48	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 23AWG

Physical foam PE, in compliance with TIA 568 insulation colour coding 70°C, EN 50290-2-23

Al-Pet tape min. 100% coverage

Tinned copper drain wire, Ø 26AWG

Al-Pet tape min. 100% coverage

LSZH/LS0H - RAL 5015 Blue, Ø 7.0 mm
70°C, EN 50290-2-27
PVC - RAL 7001 Grey, Ø 7.0 mm
TM51 70°C, EN 50290-2-22
PE - RAL 9011 Black, Ø 7.0 mm
80°C, EN 50290-2-24

Application

Utilising physical foam insulation technology, this data cable range is designed for analogue and digital signal transmission in audio, video and data applications supporting 500 MHz, 10 Gbit/s 10 Gigabit Ethernet. Cables meet the requirements of structural cabling standards including ANSI EIA/TIA 568, ISO/IEC 11801 and EN 50173 Class EA.

IEEE 802.3:10Base-T; 100Base-T; 1000Base-T; 10GBase-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM
Power over Ethernet (PoE) / PoE+

Standards

ISO/IEC 11801 2nd ed., IEC 61156-5
EN 50173-1, EN 50288-10-1
ANSI EIA/TIA 568-C.2

Fire performance

Vertical flame propagation	EN 60332-1-2 (LSZH-PVC)
Corrosive gas	EN 60754-1/2 (LSZH)
Smoke density	EN 61034-2 (LSZH)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

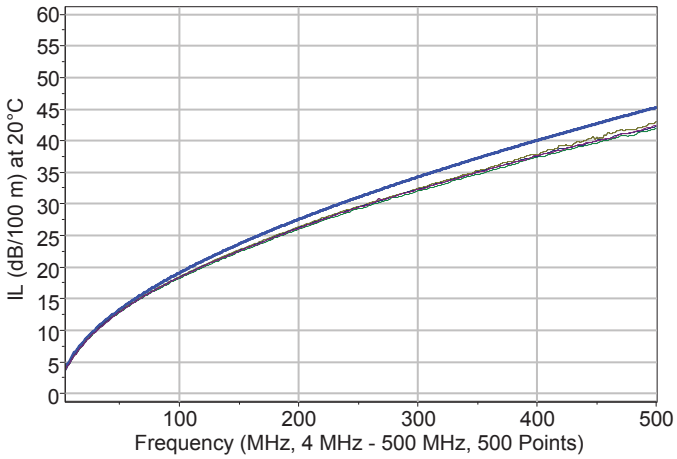
Specifications

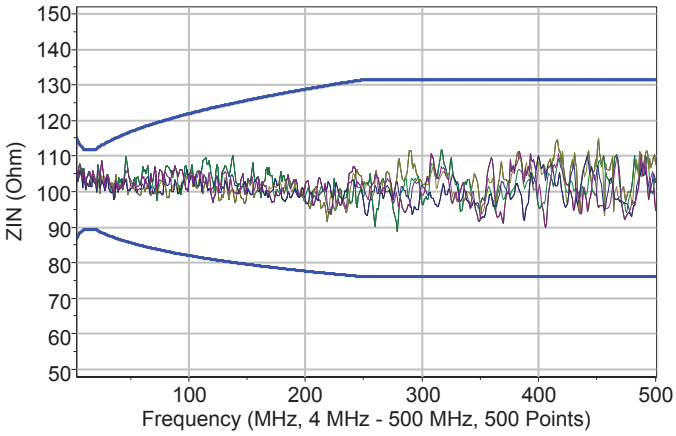
Temperature range	fixed		-20°C ...+60°C
	flexing		0°C ...+50°C
Bending radius			
	fixed	min.	4 x D
	flexing	min.	8 x D
Tensile strength		max.	110 N
Crushing strength		min.	1000 N/10 cm
Impact strength		min.	10 impacts
Conductor resistance		max.	75 Ω/km
Resistance imbalance		max.	2%
Insulation resistance		min.	5000 MΩ x m
Capacitance		nom.	42 pF/m
Capacity imbalance		max.	1600 pF/km
Rated impedance			100 ± 5 Ω @100 MHz
Velocity of propagation			78-80%
Propagation delay		max.	430 ns/100 m
Signal delay		max.	25 ns/100 m
Test voltage			1000 V
Operating voltage		max.	125 V
TCL		min.	"Level 2"
Coupling attenuation			"Type II"
Transfer impedance			"Class 2"
Segregation class			"c" EN 50174-2

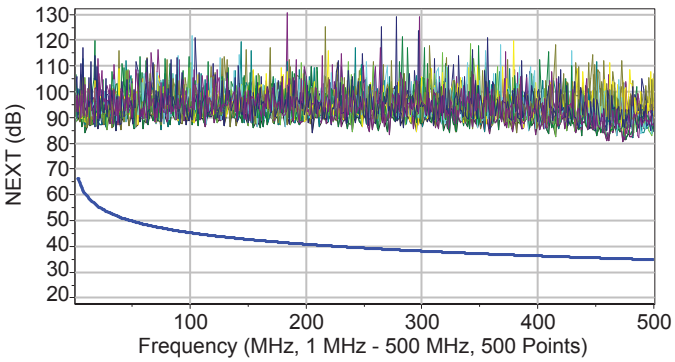
Specifications may vary depending on technical modifications.

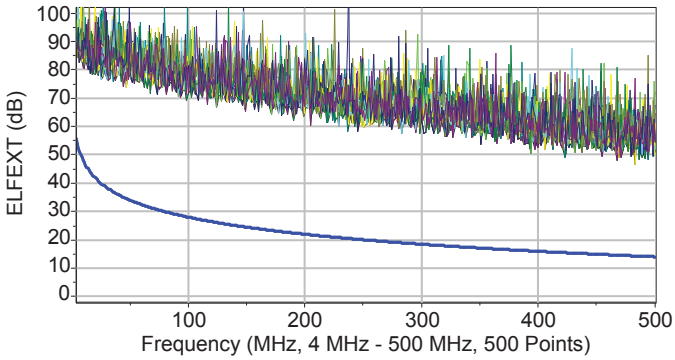
Frequency [MHz]	Attenuation [dB/100 m] typ.max.		NEXT [dB] typ.max.		PS-NEXT [dB] typ.max.		ACR [dB/100 m] typ.max.		PS-ACR [dB/100 m] typ.max.		ACR-F [dB/100 m] typ.max.		PS-ACR-F [dB/100 m] typ.max.		RL [dB] typ.max.	
1	1.9	2.1	95	75.3	92	72.3	93	73.2	90	70.2	100	68	97	65	26	20
4	3.5	3.8	95	66.3	92	63.3	91	62.5	88	59.5	100	56	97	53	27	23
10	5.6	5.9	95	60.3	92	57.3	89	54.4	86	51.4	92	48	89	45	30	25
16	6.9	7.5	95	57.2	92	54.2	88	49.8	85	46.8	88	43.9	85	40.9	30	25.7
31.25	9.80	10.5	95	52.9	92	49.9	85	42.4	82	39.4	82	38.1	79	35.1	30	23.6
62.50	14.1	15	95	48.4	92	45.4	81	33.4	78	30.4	76	32.1	73	29.1	30	21.5
100	17.7	19.1	95	45.3	92	42.3	77	26.2	74	23.2	72	28	69	25	30	20.1
250	29.5	31.1	85	39.3	82	36.3	55	8.3	52	5.3	64	20	61	17	24	17.3
400	38.8	40.1	80	36.3	77	33.3	41	-3.8	38	-6.8	57	16	54	13	23	15.9
500	43.5	45.3	75	34.8	72	31.8	31	-10.4	28	-13.4	55	14	52	11	22	15.2

IEC 61156-5, EN 50288-10-1



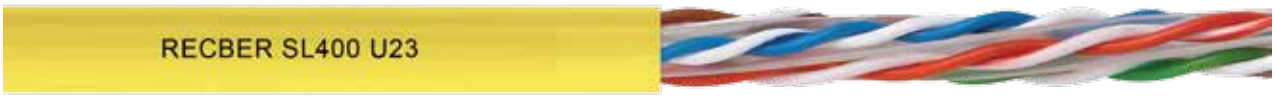




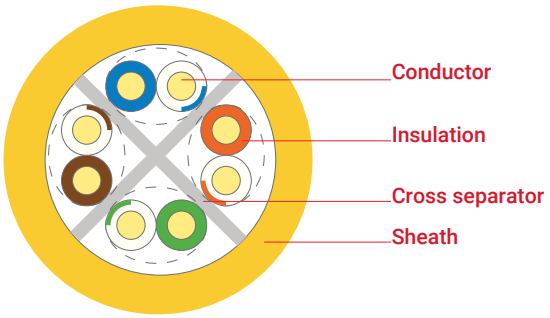


Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
506047	SL500 F/F23 LSZH Cat 6A F/FTP 4x2x23AWG SL500	7.0	21	51	Blue (RAL 5015)	500/1000
506081	F/F23 LSZH Cat 6A F/FTP 4x2x23AWG SL500 F/F23	7.0	21	51	Orange (RAL 2003)	500/1000
506083	LSZH Cat 6A F/FTP 4x2x23AWG SL500 F/F23 LSZH	7.0	21	51	Green (RAL 6018)	500/1000
506084	Cat 6A F/FTP 4x2x23AWG SL500 F/F23 LSZH Cat	7.0	21	51	Grey (RAL 7035)	500/1000
506085	6A F/FTP 4x2x23AWG SL500 F/F23Dx LSZH Cat 6A	7.0	21	51	Yellow (RAL 1018)	500/1000
506065	F/FTP 2x(4x2x23AWG) SL500 F/F23 PVC Cat 6A F/	7.0x14.0	42	102	Blue (RAL 5015)	500
506041	FTP 4x2x23AWG SL500 F/F23 PE Cat 6A F/FTP	7.0	21	50	Grey (RAL 7001)	500/1000
506053	4x2x23AWG	7.0	21	45	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.



Cable structure



Electrolytic copper wire, Ø 23AWG

HDPE, in compliance with TIA 568 insulation colour coding
80°C, EN 50290-2-23

PE

LSZH/LS0H - RAL 1018 Yellow, Ø 6.0 mm
70°C, EN 50290-2-27
PVC - RAL 7001 Grey, Ø 6.0 mm
TM51 70°C, EN 50290-2-22
PE - RAL 9011 Black, Ø 6.0 mm
80°C, EN 50290-2-24

Application

This data cable range is designed for analogue and digital signal transmission in audio, video and data applications in data communication systems supporting 250 MHz, 1.0 Gbit/s 1 Gigabit Ethernet. Cables meet the requirements of structural cabling standards including ANSI EIA/TIA 568, ISO/IEC 11801 and EN 50173 Class E.

IEEE 802.3:10Base-T; 100Base-T; 1000Base-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM
Power over Ethernet (PoE) / PoE+

Standards

ISO/IEC 11801 2nd ed., IEC 61156-5
EN 50173-1, EN 50288-6-1
ANSI EIA/TIA 568-C.2

Fire performance

Vertical flame propagation	EN 60332-1-2 (LSZH-PVC)
Corrosive gas	EN 60754-1/2 (LSZH)
Smoke density	EN 61034-2 (LSZH)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

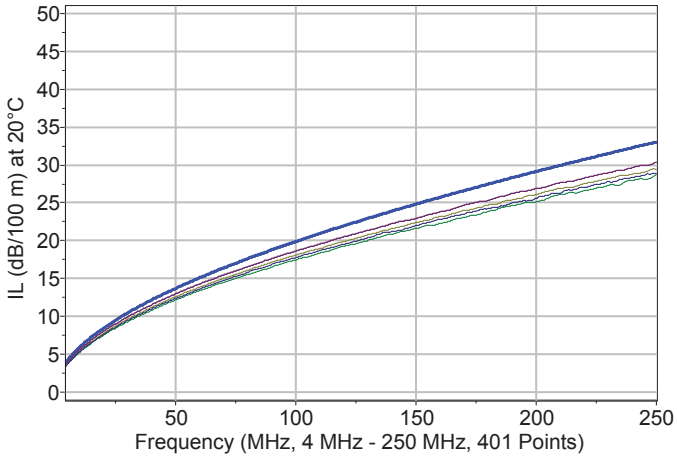
Specifications

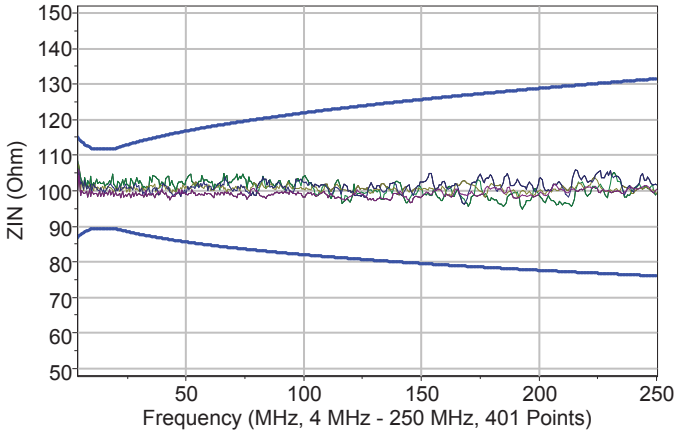
Temperature range	fixed		-20°C ...+60°C
	flexing		0°C ...+50°C
Bending radius			
	fixed	min.	4 x D
	flexing	min.	8 x D
Tensile strength		max.	100 N
Crushing strength		min.	1000 N/10 cm
Impact strength		min.	10 impacts
Conductor resistance		max.	85 Ω/km
Resistance imbalance		max.	2%
Insulation resistance		min.	5000 MΩ x m
Capacitance		nom.	50 pF/m
Capacity imbalance max.			1600 pF/km
Rated impedance			100 ± 5 Ω @100 MHz
Velocity of propagation			67-69%
Propagation delay		max.	537 ns/100 m
Signal delay		max.	45 ns/100 m
Test voltage			1000 V
Operating voltage		max.	125 V
TCL		min.	"Level 2"
Coupling attenuation			"Type III"
Segregation class			"b" EN 50174-2

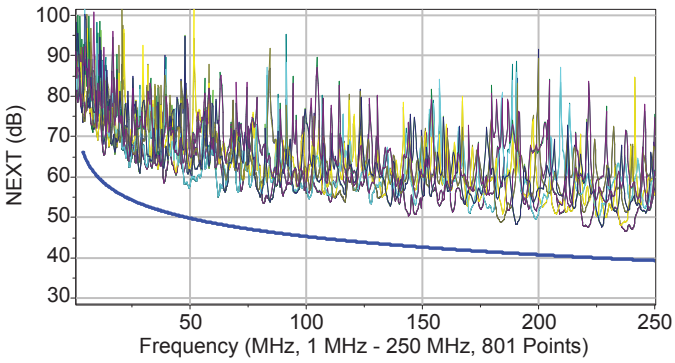
Specifications may vary depending on technical modifications.

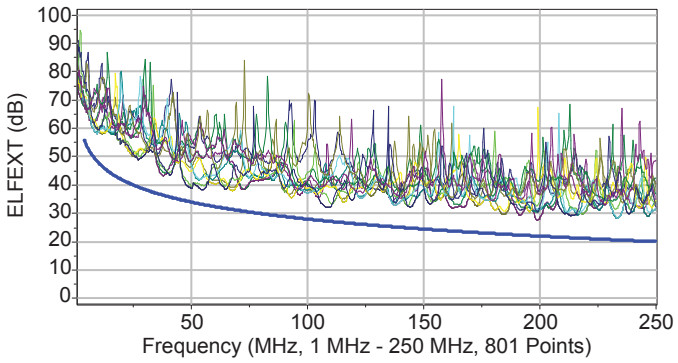
Frequency [MHz]	Attenuation [dB/100 m] typ.max.		NEXT [dB] typ.max.		PS-NEXT [dB] typ.max.		ACR [dB/100 m] typ.max.		PS-ACR [dB/100 m] typ.max.		ACR-F [dB/100 m] typ.max.		PS-ACR-F [dB/100 m] typ.max.		RL [dB] typ.max.	
1	1 . 9	2 . 1	82	66	79	64	80	63.9	77	61.9	85	66	82	64	26	20
4	3 . 8	3 . 8	76	65.3	73	63.3	72	61.4	69	59.4	77	58	74	55	31	23
10	5 . 9	6	70	59.3	67	57.3	64	53.3	61	51.3	68	50	64	47	32	25
16	7 . 4	7 . 6	65	56.2	62	54.2	58	48.6	55	46.6	63	45.9	60	42.9	34	25
31.25	10.5	10.7	60	51.9	57	49.9	49	41.1	46	39.1	51	40.1	48	37.1	36	23.6
62.50	15.1	15.5	58	47.4	55	45.4	43	31.9	40	29.9	44	34.1	41	31.1	32	21.5
100	19	19.9	52	44.3	49	42.3	33	24.4	30	22.4	35	30	32	27	32	20.1
250	31	33	48	38.3	45	36.3	17	5.3	14	3.3	19	22	16	19	30	173
300	36	-	43	-	40	-	13	-	10	-	14	-	11	-	28	-
400	41.6	-	40	-	37	-	8	-	5	-	8	-	5	-	26	-

IEC 61156-5, EN 50288-6-1





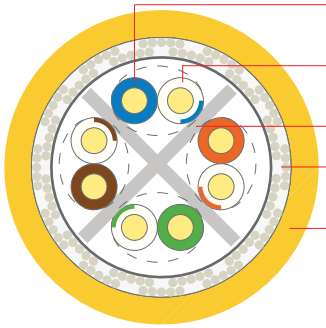




Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
506022	SL400 U23 LSZH Cat 6 U/UTP 4x2x23AWG SL400	6.0	18	40	Yellow (RAL 1018)	Yellow (RAL 1018)
506076	U23 LSZH Cat 6 U/UTP 4x2x23AWG SL400 U23	6.0	18	40	Orange (RAL 2003)	Orange (RAL 2003)
506077	LSZH Cat 6 U/UTP 4x2x23AWG SL400 U23 LSZH	6.0	18	40	Blue (RAL 5015)	Blue (RAL 5015)
506075	Cat 6 U/UTP 4x2x23AWG SL400 U23 LSZH Cat	6.0	18	40	Grey (RAL 7001)	Grey (RAL 7001)
506082	6 U/UTP 4x2x23AWG SL400 U23Dx LSZH Cat 6	6.0	18	40	Green (RAL 6018)	Green (RAL 6018)
506031	U/UTP 2x(4x2x23AWG) SL400 U23 PVC Cat 6	6.0x12.0	36	80	Yellow (RAL 1018)	Yellow (RAL 1018)
506019	U/UTP 4x2x23AWG SL400 U23 PVC Cat 6 U/	6.0	18	39	Grey (RAL 7001)	Grey (RAL 7001)
506126	UTP 4x2x23AWG SL400 U23 PE Cat 6 U/UTP	6.0	18	39	Blue (RAL 5024)	Blue (RAL 5024)
506025	4x2x23AWG	6.0	18	35	Black (RAL 9011)	Black (RAL 9011)

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 23AWG

HDPE, in compliance with TIA 568 insulation colour coding
80°C, EN 50290-2-23

PE

Al-Pet foil min. 100% coverage
Tinned braided copper wire, 50% coverage

LSZH/LS0H - RAL 1018 Yellow, Ø 7.6 mm
70°C, EN 50290-2-27
PVC - RAL 7001 Grey, Ø 7.6 mm
TM51 70°C, EN 50290-2-22
PE - RAL 9011 Black, Ø 7.6 mm
80°C, EN 50290-2-24

Application

This data cable range is designed for analogue and digital signal transmission in audio, video and data applications in data communication systems supporting 250 MHz, 1.0 Gbit/s 1 Gigabit Ethernet. Cables meet the requirements of structural cabling standards including ANSI EIA/TIA 568, ISO/IEC 11801 and EN 50173 Class E.

IEEE 802.3:10Base-T; 100Base-T; 1000Base-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM
Power over Ethernet (PoE) / PoE+

Standards

ISO/IEC 11801 2nd ed., IEC 61156-5
EN 50173-1, EN 50288-5-1
ANSI EIA/TIA 568-C.2

Fire performance

Vertical flame propagation	EN 60332-1-2 (LSZH-PVC)
Corrosive gas	EN 60754-1/2 (LSZH)
Smoke density	EN 61034-2 (LSZH)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

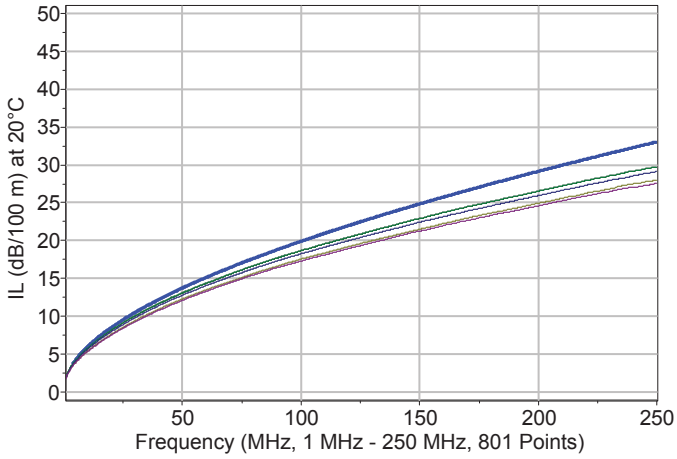
Specifications

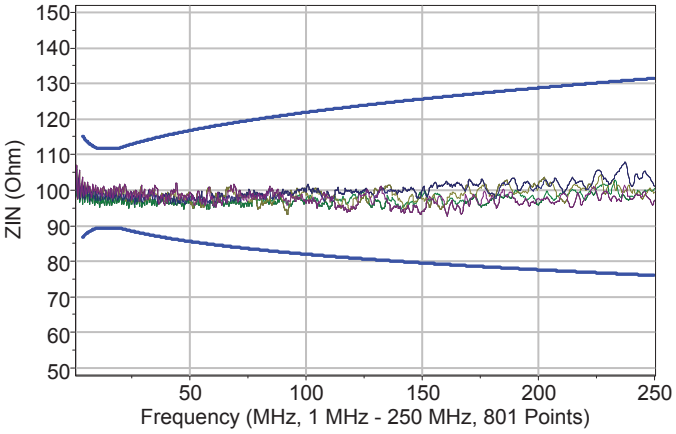
Temperature range	fixed		-20°C ...+60°C
	flexing		0°C ...+50°C
Bending radius			
	fixed	min.	4 x D
	flexing	min.	8 x D
Tensile strength		max.	100 N
Crushing strength		min.	1000 N/10 cm
Impact strength		min.	10 impacts
Conductor resistance		max.	85 Ω/km
Resistance imbalance		max.	2%
Insulation resistance		min.	5000 MΩ x m
Capacitance		nom.	50 pF/m
Capacity imbalance		max.	1600 pF/km
Rated impedance			100 ± 5 Ω @100 MHz
Velocity of propagation			67-69%
Propagation delay		max.	537 ns/100 m
Signal delay		max.	45 ns/100 m
Test voltage			1000 V
Operating voltage		max.	125 V
TCL		min.	"Level 2"
Coupling attenuation			"Type Ib"
Transfer impedance			"Class 2"
Segregation class			"c" EN 50174-2

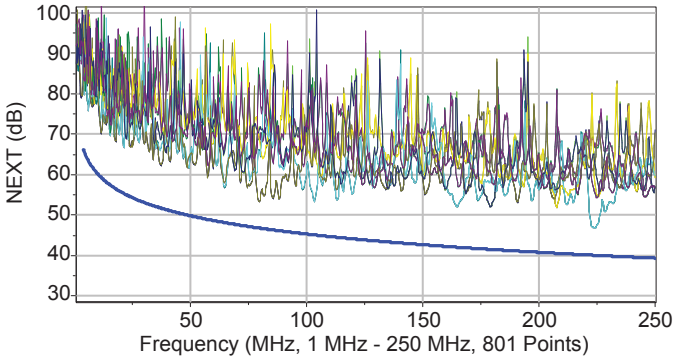
Specifications may vary depending on technical modifications.

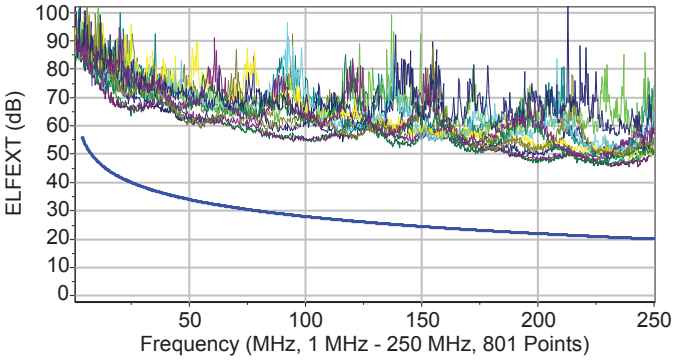
Frequency [MHz]	Attenuation [dB/100 m] typ.max.		NEXT [dB] typ.max.		PS-NEXT [dB] typ.max.		ACR [dB/100 m] typ.max.		PS-ACR [dB/100 m] typ.max.		ACR-F [dB/100 m] typ.max.		PS-ACR-F [dB/100 m] typ.max.		RL [dB] typ.max.	
1	1 . 9	2 . 1	82	66	79	64	80	63.9	77	61.9	85	66	82	64	26	20
4	3 . 8	3 . 8	76	65.3	73	63.3	72	61.4	69	59.4	77	58	74	55	31	23
10	5 . 9	6	70	59.3	67	57.3	64	53.3	61	51.3	68	50	64	47	32	25
16	7 . 4	7 . 6	65	56.2	62	54.2	58	48.6	55	46.6	63	45.9	60	42.9	34	25
31.25	10.5	10.7	60	51.9	57	49.9	49	41.1	46	39.1	51	40.1	48	37.1	36	23.6
62.50	15.1	15.5	58	47.4	55	45.4	43	31.9	40	29.9	44	34.1	41	31.1	32	21.5
100	19	19.9	52	44.3	49	42.3	33	24.4	30	22.4	35	30	32	27	32	20.1
250	31	33	48	38.3	45	36.3	17	5.3	14	3.3	19	22	16	19	30	173
300	36	-	43	-	40	-	13	-	10	-	14	-	11	-	28	-
400	41.6	-	40	-	37	-	8	-	5	-	8	-	5	-	26	-

IEC 61156-5, EN 50288-5-1





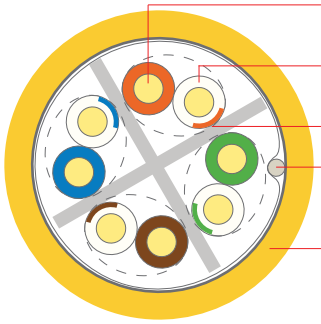




Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
506024	SL400 SF/U23 LSZH Cat 6 SF/UTP 4x2x23AWG	7.6	28	65	Yellow (RAL 1018)	500/1000
506092	SL400 SF/U23 LSZH Cat 6 SF/UTP 4x2x23AWG	7.6	28	65	Blue (RAL 5015)	500/1000
506021	SL400 SF/U23 PVC Cat 6 SF/UTP 4x2x23AWG	7.6	28	64	Grey (RAL 7001)	500/1000
506027	SL400 SF/U23 PE Cat 6 SF/UTP 4x2x23AWG	7.6	28	57	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire, Ø 23AWG
Insulation	HDPE, in compliance with TIA 568 insulation colour coding 80°C, EN 50290-2-23
Cross separator	PE
Screen	Pet tape min. 100% coverage Tinned copper drain wire, Ø 26AWG Al-Pet tape min. 100% coverage
Sheath	LSZH/LS0H - RAL 1018 Yellow, Ø 7.2 mm 70°C, EN 50290-2-27 PVC - RAL 7001 Grey, Ø 7.2 mm TM51 70°C, EN 50290-2-22 PE - RAL 9011 Black, Ø 7.2 mm 80°C, EN 50290-2-24

Application

This data cable range is designed for analogue and digital signal transmission in audio, video and data applications in data communication systems supporting 250 MHz, 1.0 Gbit/s 1 Gigabit Ethernet. Cables meet the requirements of structural cabling standards including ANSI EIA/TIA 568, ISO/IEC 11801 and EN 50173 Class E.

IEEE 802.3:10Base-T; 100Base-T; 1000Base-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM
Power over Ethernet (PoE) / PoE+

Standards

ISO/IEC 11801 2nd ed., IEC 61156-5
EN 50173-1, EN 50288-5-1
ANSI EIA/TIA 568-C.2

Fire performance

Vertical flame propagation	EN 60332-1-2 (LSZH-PVC)
Corrosive gas	EN 60754-1/2 (LSZH)
Smoke density	EN 61034-2 (LSZH)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

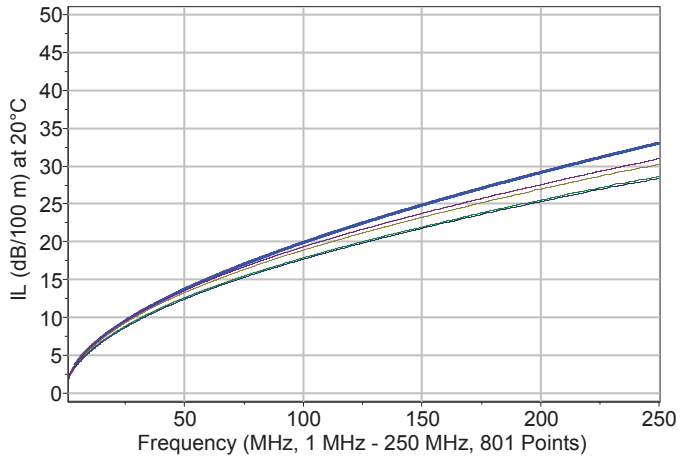
Specifications

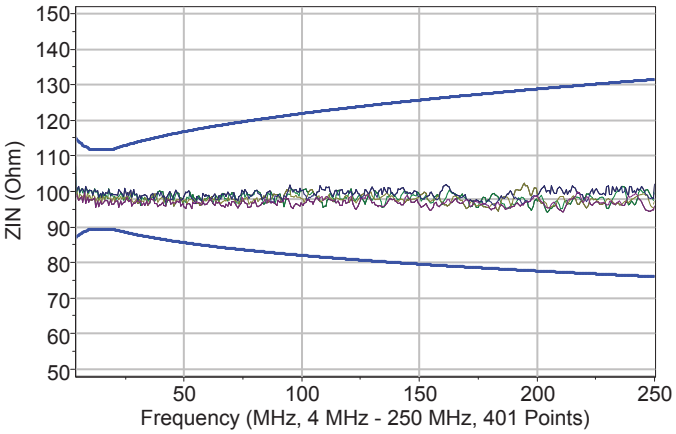
Temperature range	fixed		-20°C ...+60°C
	flexing		0°C ...+50°C
Bending radius			
	fixed	min.	4 x D
	flexing	min.	8 x D
Tensile strength		max.	100 N
Crushing strength		min.	1000 N/10 cm
Impact strength		min.	10 impacts
Conductor resistance		max.	85 Ω/km
Resistance imbalance		max.	2%
Insulation resistance		min.	5000 MΩ x m
Capacitance		nom.	50 pF/m
Capacity imbalance max.			1600 pF/km
Rated impedance			100 ± 5 Ω @100 MHz
Velocity of propagation			67-69%
Propagation delay		max.	537 ns/100 m
Signal delay		max.	45 ns/100 m
Test voltage			1000 V
Operating voltage		max.	125 V
TCL		min.	"Level 2"
Coupling attenuation			"Type II"
Transfer impedance			"Class 2"
Segregation class			"c" EN 50174-2

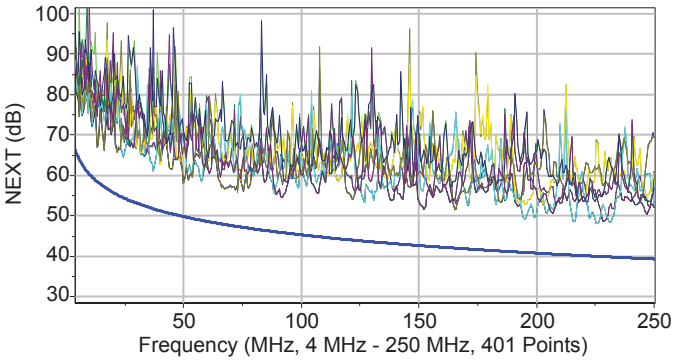
Specifications may vary depending on technical modifications.

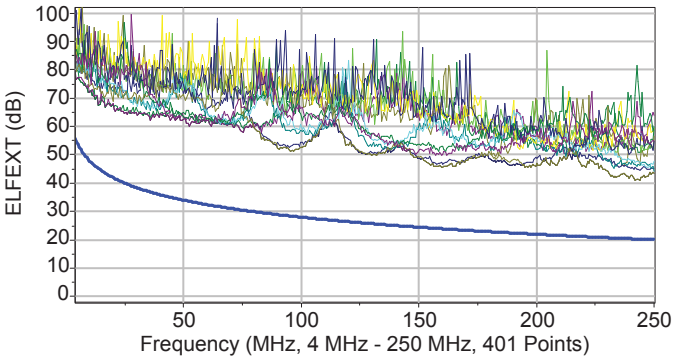
Frequency [MHz]	Attenuation [dB/100 m] typ.max.		NEXT [dB] typ.max.		PS-NEXT [dB] typ.max.		ACR [dB/100 m] typ.max.		PS-ACR [dB/100 m] typ.max.		ACR-F [dB/100 m] typ.max.		PS-ACR-F [dB/100 m] typ.max.		RL [dB] typ.max.	
1	1.9	2.1	82	66	79	64	80	63.9	77	61.9	85	66	82	64	26	20
4	3.8	3.8	76	65.3	73	63.3	72	61.4	69	59.4	77	58	74	55	31	23
10	5.9	6	70	59.3	67	57.3	64	53.3	61	51.3	68	50	64	47	32	25
16	7.4	7.6	65	56.2	62	54.2	58	48.6	55	46.6	63	45.9	60	42.9	34	25
31.25	10.5	10.7	60	51.9	57	49.9	49	41.1	46	39.1	51	40.1	48	37.1	36	23.6
62.50	15.1	15.5	58	47.4	55	45.4	43	31.9	40	29.9	44	34.1	41	31.1	32	21.5
100	19	19.9	52	44.3	49	42.3	33	24.4	30	22.4	35	30	32	27	32	20.1
250	31	33	48	38.3	45	36.3	17	5.3	14	3.3	19	22	16	19	30	173
300	36	-	43	-	40	-	13	-	10	-	14	-	11	-	28	-
400	41.6	-	40	-	37	-	8	-	5	-	8	-	5	-	26	-

IEC 61156-5, EN 50288-5-1









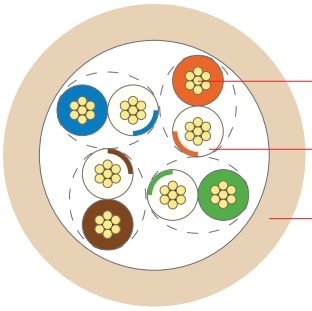
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
506023	SL400 F/U23 LSZH Cat 6 F/UTP 4x2x23AWG SL400	7.2	20	55	Yellow (RAL 1018)	500/1000
506079	F/U23 LSZH Cat 6 F/UTP 4x2x23AWG SL400 F/U23	7.2	20	55	Orange (RAL 2003)	500/1000
506093	LSZH Cat 6 F/UTP 4x2x23AWG SL400 F/U23Dx	7.2	20	55	Blue (RAL 5015)	500/1000
506032	LSZH Cat 6 F/UTP 2x(4x2x23AWG) SL400 F/U23	7.2x14.4	40	110	Yellow (RAL 1018)	500
506020	PVC Cat 6 F/UTP 4x2x23AWG SL400 F/U23 PE Cat	7.2	20	54	Grey (RAL 7001)	500/1000
506026	6 F/UTP 4x2x23AWG	7.2	20	46	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

SL200 U26/7

Category 5e U/UTP

Cable structure



Stranded electrolytic copper wire, Ø 26/7AWG

HDPE, in compliance with TIA 568 insulation colour coding
80°C, EN 50290-2-23

LSZH/LS0H - RAL 1015 Cream, Ø 5.0 mm
70°C, EN 50290-2-27
PVC - RAL 7001 Grey, Ø 5.0 mm
TM52 70°C, EN 50290-2-22

Application

This data cable range is designed for analogue and digital signal transmission in audio, video and data applications in data communication systems supporting 100 MHz, 1.0 Gbit/s 1 Gigabit Ethernet. Cables meet the requirements of structural cabling standards including ANSI EIA/TIA 568, ISO/IEC 11801 and EN 50173 Class D.

IEEE 802.3:10Base-T; 100Base-T; 1000Base-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM
Power over Ethernet (PoE) / PoE+

Standards

ISO/IEC 11801 2nd ed., IEC 61156-5
EN 50173-1, EN 50288-3-1
ANSI EIA/TIA 568-C.2

Fire performance

Vertical flame propagation	EN 60332-1-2 (LSZH-PVC)
Corrosive gas	EN 60754-1/2 (LSZH)
Smoke density	EN 61034-2 (LSZH)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range	fixed		-20°C ...+60°C
	flexing		0°C ...+50°C
Bending radius	fixed	min.	4 x D
	flexing	min.	8 x D
Tensile strength		max.	60 N
Crushing strength		min.	1000 N/10 cm
Impact strength		min.	10 impacts
Conductor resistance		max.	150 Ω/km
Resistance imbalance		max.	3%
Insulation resistance		min.	5000 MΩ x m
Capacitance		nom.	50 pF/m
Capacity imbalance		max.	1600 pF/km
Rated impedance			100 ± 5 Ω @100 MHz
Velocity of propagation			67-69%
Propagation delay		max.	537 ns/100 m
Signal delay		max.	45 ns/100 m
Test voltage			1000 V
Operating voltage		max.	125 V
TCL		min.	"Level 2"
Coupling attenuation			"Type III"
Segregation class			"b" EN 50174-2

Specifications may vary depending on technical modifications.

SL200 U26/7
Category 5e U/UTP

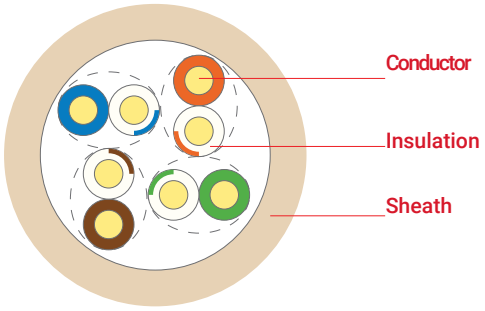
Frequency [MHz]	Attenuation [dB/100 m] typ.	max.	NEXT [dB] typ.	max.	PS-NEXT [dB] typ.	max.	ACR [dB/100 m] typ.	max.	PS-ACR [dB/100 m] typ.	max.	ACR-F [dB/100 m] typ.	max.	PS-ACR-F [dB/100 m] typ.	max.	RL [dB] typ.	max.
1	0.28	0.32	71	65.3	68	62.3	71	65.0	68	62	82	63.8	79	60.8	22	20
4	0.48	0.60	62	56.3	59	53.3	62	55.7	59	52.7	70	51.8	67	48.8	30	23
10	0.85	0.95	56	50.3	53	47.3	55	49.3	52	46.3	55	43.8	52	40.8	28	25
16	1.08	1.21	54	47.2	51	44.2	53	46.0	50	43	48	39.7	45	36.7	27	25
31.25	1.55	1.71	50	42.9	47	39.9	48	41.2	45	38.2	40	33.9	37	30.9	25	23.6
62.50	2.20	2.48	45	38.4	42	35.4	43	35.9	40	32.9	37	27.9	34	24.9	24	21.5
100	2.95	3.2	42	35.3	39	32.3	39	32.1	36	29.1	30	23.8	27	20.8	23	20.1
200	4.10	-	36	-	33	-	32	-	29	-	22	-	19	-	22	-

IEC 61156-5, EN 50288-3-1

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
505052	SL200 U26/7 LSZH Cat 5e U/UTP 4x2x26/7AWG	5.0	10	25	Cream (RAL 1015)	305/500/1000
505049	SL200 U26/7 PVC Cat 5e U/UTP 4x2x26/7AWG	5.0	10	25	Grey (RAL 7001)	305/500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 24AWG

HDPE, in compliance with TIA 568 insulation colour coding
80°C, EN 50290-2-23

LSZH/LS0H - RAL 1015 Cream, Ø 5.0 mm
70°C, EN 50290-2-27
PVC - RAL 7001 Grey, Ø 5.0 mm
TM51 70°C, EN 50290-2-22
PE - RAL 9011 Black, Ø 5.0 mm
80°C, EN 50290-2-24

Application

This data cable range is designed for analogue and digital signal transmission in audio, video and data applications in data communication systems supporting 100 MHz, 1.0 Gbit/s 1 Gigabit Ethernet. Cables meet the requirements of structural cabling standards including ANSI EIA/TIA 568, ISO/IEC 11801 and EN 50173 Class D.

IEEE 802.3:10Base-T; 100Base-T; 1000Base-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM
Power over Ethernet (PoE) / PoE+

Standards	ISO/IEC 11801 2nd ed., IEC 61156-5 EN 50173-1, EN 50288-3-1 ANSI EIA/TIA 568-C.2

Fire performance

Vertical flame propagation	EN 60332-1-2 (LSZH-PVC)
Corrosive gas	EN 60754-1/2 (LSZH)
Smoke density	EN 61034-2 (LSZH)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

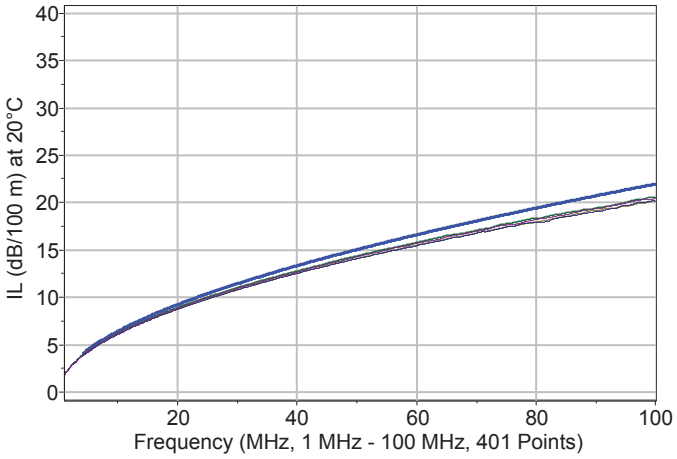
Specifications

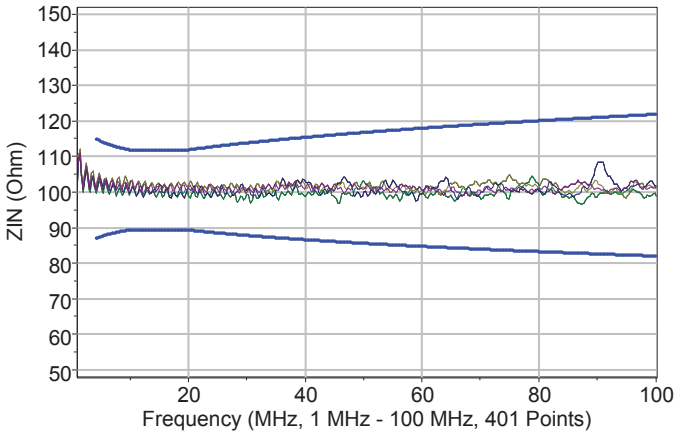
Temperature range	fixed		-20°C ...+60°C
	flexing		0°C ...+50°C
Bending radius	fixed	min.	4 x D
	flexing	min.	8 x D
Tensile strength		max.	85 N
Crushing strength		min.	1000 N/10 cm
Impact strength		min.	10 impacts
Conductor resistance		max.	95 Ω/km
Resistance imbalance		max.	2%
Insulation resistance		min.	5000 MΩ x m
Capacitance		nom.	50 pF/m
Capacity imbalance max.			1600 pF/km
Rated impedance			100 ± 5 Ω @100 MHz
Velocity of propagation			67-69%
Propagation delay		max.	537 ns/100 m
Signal delay		max.	45 ns/100 m
Test voltage			1000 V
Operating voltage		max.	125 V
TCL		min.	"Level 2"
Coupling attenuation			"Type III"
Segregation class			"b" EN 50174-2

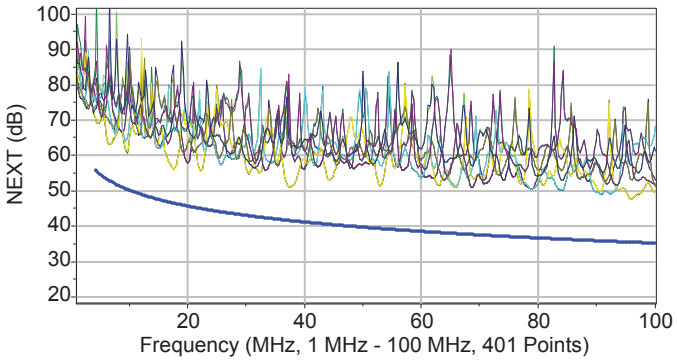
Specifications may vary depending on technical modifications.

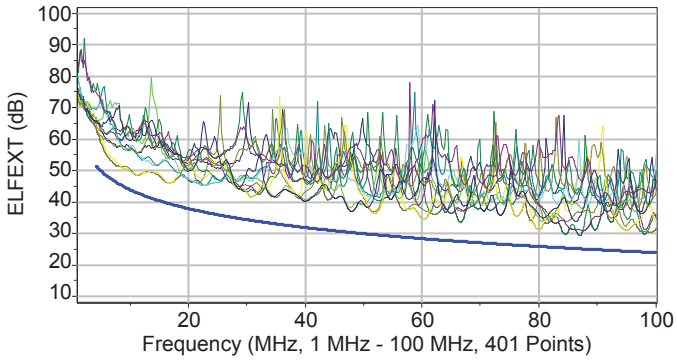
Frequency [MHz]	Attenuation [dB/100 m] typ.max.		NEXT [dB] typ.max.		PS-NEXT [dB] typ.max.		ACR [dB/100 m] typ.max.		PS-ACR [dB/100 m] typ.max.		ACR-F [dB/100 m] typ.max.		PS-ACR-F [dB/100 m] typ.max.		RL [dB] typ.max.	
1	1.9	2 . 1	71	65.3	68	62.3	69	63.2	66	60.2	82	63.8	79	60.8	23	20
4	3.6	4	62	56.3	59	53.3	58	52.3	55	49.3	70	51.8	67	48.8	33	23
10	5.5	6 . 3	56	50.3	53	47.3	51	44	48	41	55	43.8	52	40.8	31	25
16	7.7	8	54	47.2	51	44.2	46	39.2	43	36.2	48	39.7	45	36.7	32	25
31.25	11.3	11.4	50	42.9	47	39.9	39	31.5	36	28.5	40	33.9	37	30.9	32	23.6
62.50	16.2	16.5	45	38.4	42	35.4	29	21.8	26	18.8	37	27.9	34	24.9	29	21.5
100	21	21.3	42	35.3	39	32.3	21	14	18	11	30	23.8	27	20.8	27	20.1
200	27.5	-	36	-	33	-	9	-	6	-	22	-	19	-	19	-

IEC 61156-5, EN 50288-3-1





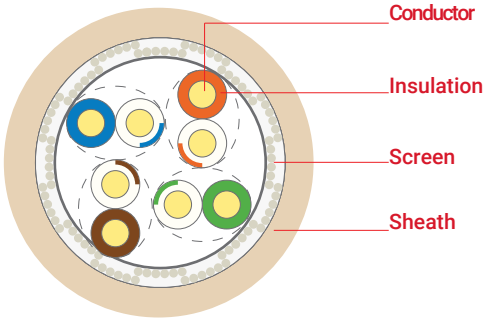




Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
505004	SL200 U24 LSZH Cat 5e U/UTP 4x2x24AWG	5.0	15	30	Cream (RAL 1015)	305/500/1000
505026	SL200 U24 LSZH Cat 5e U/UTP 4x2x24AWG	5.0	15	30	Blue (RAL 5015)	305/500/1000
505001	SL200 U24 PVC Cat 5e U/UTP 4x2x24AWG	5.0	15	30	Grey (RAL 7001)	305/500/1000
505007	SL200 U24 PE Cat 5e U/UTP 4x2x24AWG	5.0	15	26	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 24AWG

HDPE, in compliance with TIA 568 insulation colour coding
80°C, EN 50290-2-23

Al-Pet foil min. 100% coverage
Tinned braided copper wire, 50% coverage

LSZH/LS0H - RAL 1015 Cream, Ø 6.4 mm
70°C, EN 50290-2-27
PVC - RAL 7001 Grey, Ø 6.4 mm
TM51 70°C, EN 50290-2-22
PE - RAL 9011 Black, Ø 6.4 mm
80°C, EN 50290-2-24

Application

This data cable range is designed for analogue and digital signal transmission in audio, video and data applications in data communication systems supporting 100 MHz, 1.0 Gbit/s 1 Gigabit Ethernet. Cables meet the requirements of structural cabling standards including ANSI EIA/TIA 568, ISO/IEC 11801 and EN 50173 Class D.

IEEE 802.3:10Base-T; 100Base-T; 1000Base-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM
Power over Ethernet (PoE) / PoE+

Standards

ISO/IEC 11801 2nd ed., IEC 61156-5
EN 50173-1, EN 50288-2-1
ANSI EIA/TIA 568-C.2

Fire performance

Vertical flame propagation	EN 60332-1-2 (LSZH-PVC)
Corrosive gas	EN 60754-1/2 (LSZH)
Smoke density	EN 61034-2 (LSZH)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

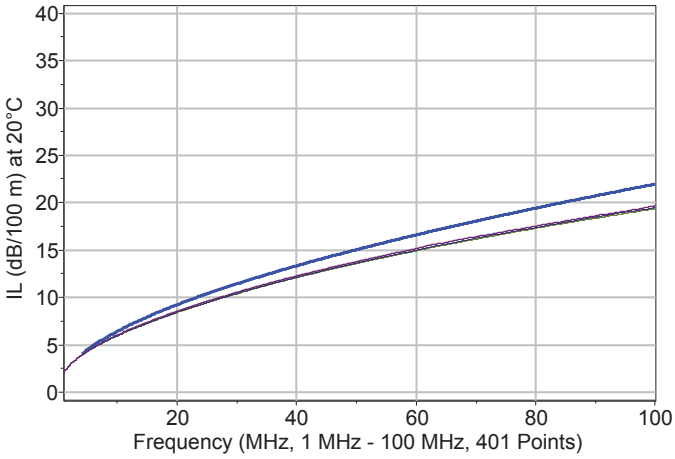
Temperature range	fixed		-20°C ...+60°C
	flexing		0°C ...+50°C
Bending radius	fixed	min.	4 x D
	flexing	min.	8 x D
Tensile strength		max.	90 N
Crushing strength		min.	1000 N/10 cm
Impact strength		min.	10 impacts
Conductor resistance		max.	95 Ω/km
Resistance imbalance		max.	2%
Insulation resistance		min.	5000 MΩ x m
Capacitance		nom.	50 pF/m
Capacity imbalance		max.	1600 pF/km
Rated impedance			100 ± 5 Ω @100 MHz
Velocity of propagation			67-69%
Propagation delay		max.	537 ns/100 m
Signal delay		max.	45 ns/100 m
Test voltage			1000 V
Operating voltage		max.	125 V
TCL		min.	"Level 2"
Coupling attenuation			"Type Ib"
Transfer impedance			"Class 2"
Segregation class			"c" EN 50174-2

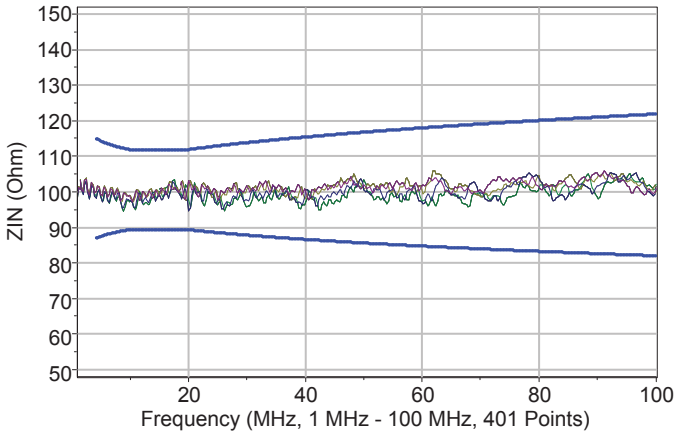
Specifications may vary depending on technical modifications.

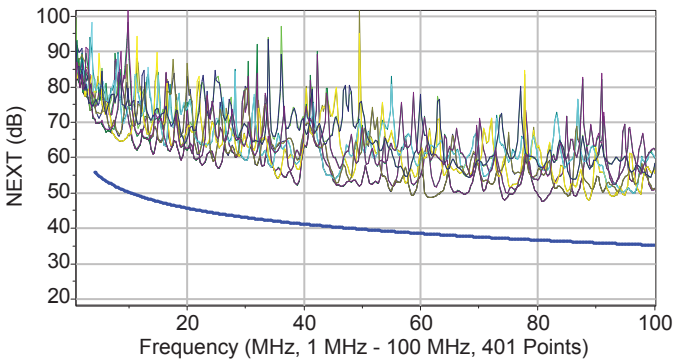
Transmission characteristics @ 20°C

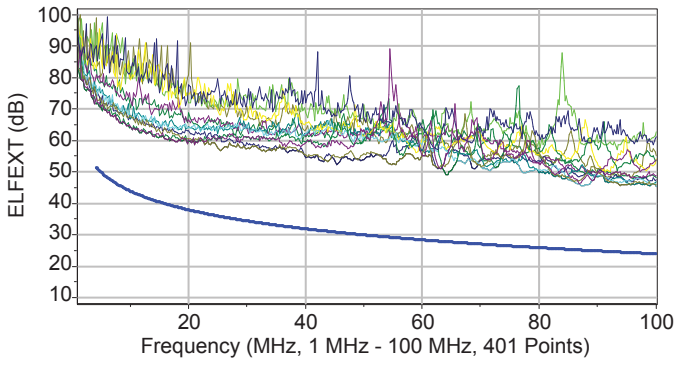
Frequency [MHz]	Attenuation [dB/100 m] typ.max.		NEXT [dB] typ.max.		PS-NEXT [dB] typ.max.		ACR [dB/100 m] typ.max.		PS-ACR [dB/100 m] typ.max.		ACR-F [dB/100 m] typ.max.		PS-ACR-F [dB/100 m] typ.max.		RL [dB] typ.max.	
1	1.9	2 . 1	71	65.3	68	62.3	69	63.2	66	60.2	82	63.8	79	60.8	23	20
4	3.6	4	62	56.3	59	53.3	58	52.3	55	49.3	70	51.8	67	48.8	33	23
10	5.5	6 . 3	56	50.3	53	47.3	51	44	48	41	55	43.8	52	40.8	31	25
16	7.7	8	54	47.2	51	44.2	46	39.2	43	36.2	48	39.7	45	36.7	32	25
31.25	11.3	11.4	50	42.9	47	39.9	39	31.5	36	28.5	40	33.9	37	30.9	32	23.6
62.50	16.2	16.5	45	38.4	42	35.4	29	21.8	26	18.8	37	27.9	34	24.9	29	21.5
100	21	21.3	42	35.3	39	32.3	21	14	18	11	30	23.8	27	20.8	27	20.1
200	27.5	-	36	-	33	-	9	-	6	-	22	-	19	-	19	-

IEC 61156-5, EN 50288-3-1





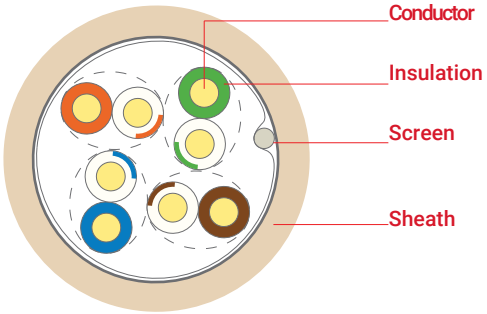




Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
505006	SL200 SF/U24 LSZH Cat 5e SF/UTP 4x2x24AWG	6.4	17	42	Cream (RAL 1015)	500/1000
505003	SL200 SF/U24 PVC Cat 5e SF/UTP 4x2x24AWG	6.4	17	42	Grey (RAL 7001)	500/1000
505009	SL200 SF/U24 PE Cat 5e SF/UTP 4x2x24AWG	6.4	17	35	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 24AWG

HDPE, in compliance with TIA 568 insulation colour coding
80°C, EN 50290-2-23

Pet tape min. 100% coverage
Tinned copper drain wire, Ø 26AWG
Al-Pet tape min. 100% coverage

LSZH/LS0H - RAL 1015 Cream, Ø 6.0 mm
70°C, EN 50290-2-27
PVC - RAL 7001 Grey, Ø 6.0 mm
TM51 70°C, EN 50290-2-22
PE - RAL 9011 Black, Ø 6.0 mm
80°C, EN 50290-2-24

Application

This data cable range is designed for analogue and digital signal transmission in audio, video and data applications in data communication systems supporting 100 MHz, 1.0 Gbit/s 1 Gigabit Ethernet. Cables meet the requirements of structural cabling standards including ANSI EIA/TIA 568, ISO/IEC 11801 and EN 50173 Class D.

IEEE 802.3:10Base-T; 100Base-T; 1000Base-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM
Power over Ethernet (PoE) / PoE+

Standards	ISO/IEC 11801 2nd ed., IEC 61156-5 EN 50173-1, EN 50288-2-1 ANSI EIA/TIA 568-C.2

Fire performance

Vertical flame propagation	EN 60332-1-2 (LSZH-PVC)
Corrosive gas	EN 60754-1/2 (LSZH)
Smoke density	EN 61034-2 (LSZH)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

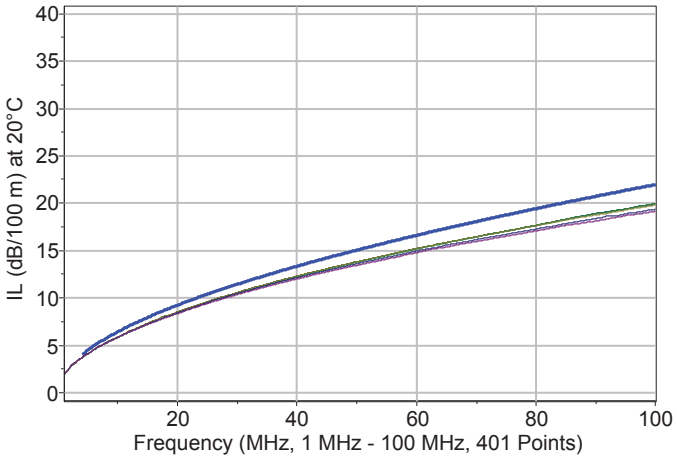
Temperature range	fixed		-20°C ...+60°C
	flexing		0°C ...+50°C
Bending radius	fixed	min.	4 x D
	flexing	min.	8 x D
Tensile strength		max.	90 N
Crushing strength		min.	1000 N/10 cm
Impact strength		min.	10 impacts
Conductor resistance		max.	95 Ω/km
Resistance imbalance		max.	2%
Insulation resistance		min.	5000 MΩ x m
Capacitance		nom.	50 pF/m
Capacity imbalance		max.	1600 pF/km
Rated impedance			100 ± 5 Ω @100 MHz
Velocity of propagation			67-69%
Propagation delay		max.	537 ns/100 m
Signal delay		max.	45 ns/100 m
Test voltage			1000 V
Operating voltage		max.	125 V
TCL		min.	"Level 2"
Coupling attenuation			"Type II"
Transfer impedance			"Class 2"
Segregation class			"c" EN 50174-2

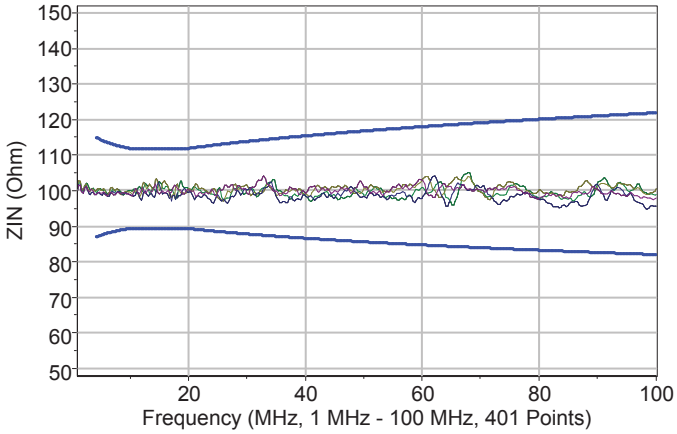
Specifications may vary depending on technical modifications.

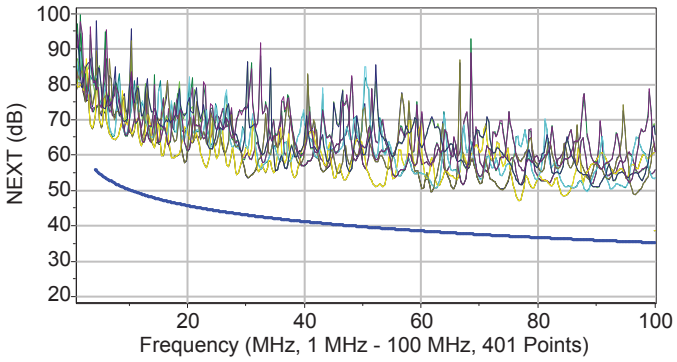
Transmission characteristics @ 20°C

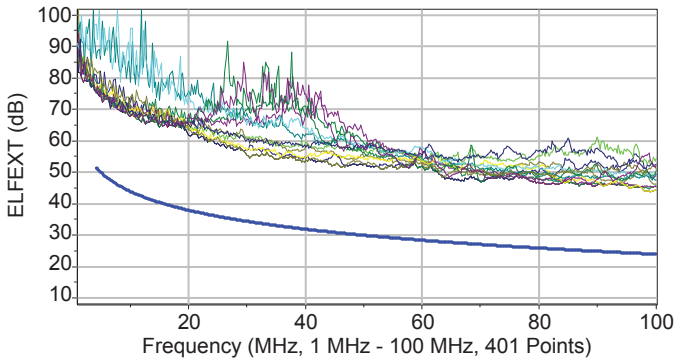
Frequency [MHz]	Attenuation [dB/100 m] typ.max.		NEXT [dB] typ.max.		PS-NEXT [dB] typ.max.		ACR [dB/100 m] typ.max.		PS-ACR [dB/100 m] typ.max.		ACR-F [dB/100 m] typ.max.		PS-ACR-F [dB/100 m] typ.max.		RL [dB] typ.max.	
1	1.9	2 . 1	71	65.3	68	62.3	69	63.2	66	60.2	82	63.8	79	60.8	23	20
4	3.6	4	62	56.3	59	53.3	58	52.3	55	49.3	70	51.8	67	48.8	33	23
10	5.5	6 . 3	56	50.3	53	47.3	51	44	48	41	55	43.8	52	40.8	31	25
16	7.7	8	54	47.2	51	44.2	46	39.2	43	36.2	48	39.7	45	36.7	32	25
31.25	11.3	11.4	50	42.9	47	39.9	39	31.5	36	28.5	40	33.9	37	30.9	32	23.6
62.50	16.2	16.5	45	38.4	42	35.4	29	21.8	26	18.8	37	27.9	34	24.9	29	21.5
100	21	21.3	42	35.3	39	32.3	21	14	18	11	30	23.8	27	20.8	27	20.1
200	27.5	-	36	-	33	-	9	-	6	-	22	-	19	-	19	-

IEC 61156-5, EN 50288-3-1









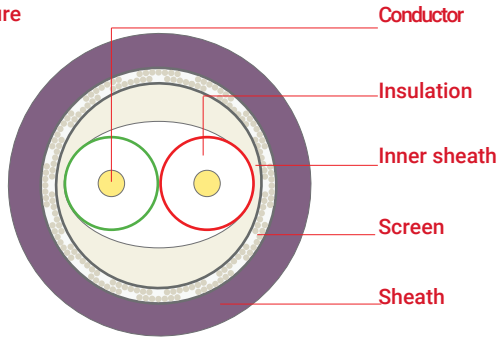
Product code	Cable structure	Diameter [mm]	Cable weight [kg/km]	[kg/km]	Sheath colour	Packaging [m]
505005	SL200 F/U24 LSZH Cat 5e F/UTP 4x2x24AWG	6.0	17	42	Cream (RAL 1015)	500/1000
505002	SL200 F/U24 PVC Cat 5e F/UTP 4x2x24AWG	6.0	17	42	Grey (RAL 7001)	500/1000
505008	SL200 F/U24 PE Cat 5e F/UTP 4x2x24AWG	6.0	17	35	Black (RAL 9011)	500/1000

Specifications may vary depending on technical modifications.

PROFIBUS FC

1x2x22AWG

Cable structure



Electrolytic copper wire, Ø 22AWG

Physical foam PE, Ø 2.55 mm, a(N) wire - green / b(P) wire - red
70°C, EN 50290-2-23

PVC - Natural, Ø 5.50 mm
LSZH/LS0H - Natural, Ø 5.50 mm

Al-Pet foil min. 100% coverage
Tinned braided copper wire, 85% coverage

PVC - RAL 4001 Purple, Ø 8.0 mm
TM51 70°C, EN 50290-2-22
LSZH/LS0H - RAL4001 Purple, Ø 8.0 mm
70°C, EN 50290-2-27

Application

Efficient high-speed data transmission in industrial automation applications. Easy-to-install and cost-effective thanks to the master/slave connection over a single bus cable.

IEEE 802.3:10Base-T; 100Base-T; 1000Base-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM
Power over Ethernet (PoE) / PoE+

Standards IEC 61158, EN 50170

Fire performance

Vertical flame propagation	EN 60332-1-2 (PVC-LSZH)
Corrosive gas	EN 60754-1/2 (LSZH)
Smoke density	EN 61034-2 (LSZH)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

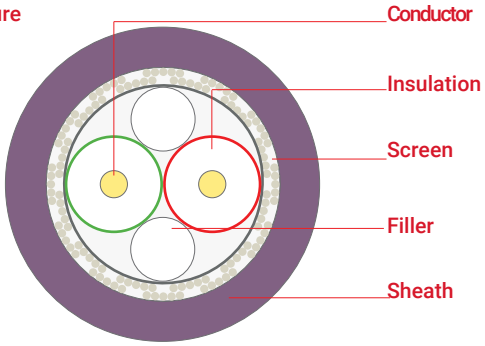
Specifications

Temperature range		-20°C ...+70°C
Bending radius	min.	15 x D
Loop resistance	max.	110 Ω/km
Screen resistance	nom.	9 Ω/km
Insulation resistance	min.	5000 MΩ x m
Capacitance	nom.	28.5 pF/m
Rated impedance		150 ± 15 Ω
Velocity of propagation		78%
Test voltage		1500 V
Operating voltage	max.	300 V
Attenuation @20°C	max.	
		9.6 kHz 0.30 dB/100 m
		38.4 kHz 0.40 dB/100 m
		4 MHz 2.20 dB/100 m
		16 MHz 4.20 dB/100 m

Specifications may vary depending on technical modifications.

PROFIBUS DP
1x2x22AWG

Cable structure



Electrolytic copper wire, Ø 22AWG

Physical foam PE, Ø 2.55 mm, a(N) wire - green / b(P) wire - red
70°C, EN 50290-2-23

Al-Pet foil min. 100% coverage
Tinned braided copper wire, 65% coverage

LDPE - Natural, Ø 1.70 mm
70°C, EN 50290-2-23

PVC - RAL 4001 Purple, Ø 7.90 mm
TM51 70°C, EN 50290-2-22
LSZH/LS0H - RAL4001 Purple, Ø 7.90 mm
70°C, EN 50290-2-27

Application

Efficient high-speed data transmission in industrial automation applications. Easy-to-install and cost-effective thanks to the master/slave connection over a single bus cable.

Standards

IEC 61158, EN 50170

Fire performance

Vertical flame propagation	EN 60332-1-2 (PVC-LSZH)
Corrosive gas	EN 60754-1/2 (LSZH)
Smoke density	EN 61034-2 (LSZH)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

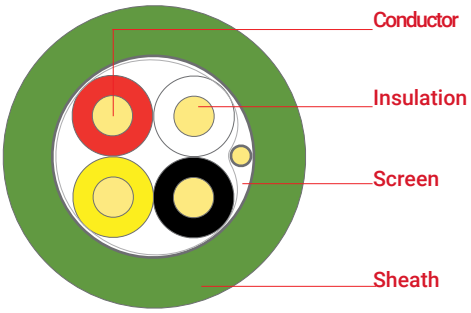
Specifications

Temperature range		-20°C ...+70°C
Bending radius	min.	15 x D
Loop resistance	max.	110 Ω/km
Screen resistance	nom.	12 Ω/km
Insulation resistance	min.	5000 MΩ x m
Capacitance	nom.	28.5 pF/m
Rated impedance		150 ± 15 Ω
Velocity of propagation		78%
Test voltage		1500 V
Operating voltage	max.	300 V
Attenuation @20°C	max.	
		9.6 kHz 0.30 dB/100 m
		38.4 kHz 0.40 dB/100 m
		4 MHz 2.20 dB/100 m
		16 MHz 4.20 dB/100 m

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
501005	PROFIBUS DP PVC 02YS(St)CY 1x2x22AWG	7.9	18	65	Purple (RAL 4001)	500/1000
501007	PROFIBUS DP LSZH 02YS(St)CH 1x2x22AWG	7.9	18	67	Purple (RAL 4001)	500/1000

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire

HFFR, in compliance with DIN VDE 0815 insulation colour coding
70°C EN 50290-2-26

Pet tape min. 100% coverage
Tinned copper drain wire
Al-Pet tape min. 100% coverage

HFFR - RAL6018 Green
70°C, EN 50290-2-27

Application

Used in smart building systems as an EIB instabus communication cable. The cable is protected against ambient electromagnetic interference by its static screen. Used in KNX-compatible home and building electronic systems (HBES) providing automated central or remote control of fixed interior installations for heating, cooling and ventilation in dry or wet areas, lighting, motorised curtains and blinds, audio, video, CCTV, fire detection, security and intercom installations.

Specifications

Temperature range		-20°C ...+70°C
Bending radius	min.	10 x D
Loop resistance	max.	73.2 Ω/km
Insulation resistance	min.	100 MΩ x km
Capacitance	nom.	100 nF/km
Capacity imbalance	max.	300 pF/100 m
Test voltage		800 V
Operating voltage	max.	300 V

Standards DIN VDE 0815

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

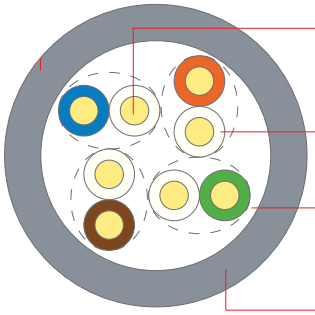
LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]	Sheath colour	Packaging [m]
501004	EIB BUS LSZH 2x2x0.80 mm	6.30	20	54	Green (RAL 6017)	500/1000

Specifications may vary depending on technical modifications.

Fire Alarm and Intercom Cables

Cable structure



Electrolytic copper wire, Ø 0.50 mm (PDV)
Tinned copper wire, Ø 0.50 mm (PDV-K)

HDPE, in compliance with IEC 60708 insulation colour coding
80°C, EN 50290-2-23
Double stranding up to 10 pairs,
10 pairs 5 quad (bundle),
Core is produced by bundling >10 pairs.
PVC - RAL 7001 Grey
TM51 EN 50290-2-22, YM1 DIN VDE 0207-5

Application

The PE, Polyethylene insulated and PVC sheathed cable range is used as telephone cables in fixed interior installations in dry or wet areas. Used in telephone switchboards and subscriber distribution networks.

Specifications

Temperature range		-30°C ...+70°C
Bending radius	min.	10 x D
Conductor resistance	max.	97.8 Ω/km
Insulation resistance	min.	5000 MΩ x km
Capacitance	max.	56 nF/km
Capacity imbalance max.		400 pF/500 m
Test voltage		1000 V
Operating voltage	max.	250 V

Standards

ISO/IEC 11801 2nd ed., IEC 61156-5
EN 50173-1, EN 50288-3-1
ANSI EIA/TIA 568-C.2

Fire performance

Vertical flame propagation	EN 60332-1-2 (LSZH-PVC)
Corrosive gas	EN 60754-1/2 (LSZH)
Smoke density	EN 61034-2 (LSZH)

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

PDV

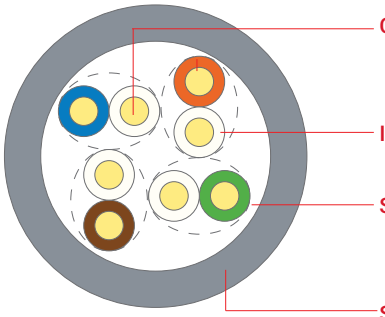
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
401018	1x2x0.50 mm+0.50 mm	3 . 0	5	13
401019	2x2x0.50 mm+0.50 mm	4 . 1	9	20
401020	3x2x0.50 mm+0.50 mm	4 . 3	12	25
401021	4x2x0.50 mm+0.50 mm	4 . 7	16	31
401022	5x2x0.50 mm+0.50 mm	5 . 1	19	36
401023	6x2x0.50 mm+0.50 mm	5 . 7	23	44
401025	10x2x0.50 mm+0.50 mm	6 . 7	37	64
401027	20x2x0.50 mm+0.50 mm	9 . 3	72	123
401029	30x2x0.50 mm+0.50 mm	10.9	108	176
401031	50x2x0.50 mm+0.50 mm	13.7	178	280
401032	100x2x0.50 mm+0.50 mm	18.7	362	536

PDV-K (Tinned)

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
403018	1x2x0.50 mm+0.50 mm	3 . 0	5	13
403019	2x2x0.50 mm+0.50 mm	4 . 1	9	20
403020	3x2x0.50 mm+0.50 mm	4 . 3	12	25
403021	4x2x0.50 mm+0.50 mm	4 . 7	16	31
403022	5x2x0.50 mm+0.50 mm	5 . 1	19	36
403023	6x2x0.50 mm+0.50 mm	5 . 7	23	44
403025	10x2x0.50 mm+0.50 mm	6 . 7	37	64
403027	20x2x0.50 mm+0.50 mm	9 . 3	72	123
403029	30x2x0.50 mm+0.50 mm	10.9	108	176
403031	50x2x0.50 mm+0.50 mm	13.7	178	280
403032	100x2x0.50 mm+0.50 mm	18.7	362	536

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire, Ø 0.50 mm (PDH)
Tinned copper wire, Ø 0.50 mm (PDH-K)

HDPE, in compliance with IEC 60708 insulation colour coding
80°C, EN 50290-2-23
Double stranding up to 10 pairs,
10 pairs 5 quad (bundle),
Core is produced by bundling >10 pairs
LSZH/LS0H - RAL 7001 Grey
70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

PE, Polyethylene insulated and HFFR, Halogen Free sheathed cable range is used as telephone cables in fixed interior installations in dry or wet areas. Used in telephone switchboards and subscriber distribution networks. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance.

Specifications

Temperature range		-30°C ...+70°C
Bending radius	min.	10 x D
Conductor resistance	max.	97.8 Ω/km
Insulation resistance	min.	5000 MΩ x km
Capacitance	max.	56 nF/km
Capacity imbalance	max.	400 pF/500 m
Test voltage		1000 V
Operating voltage	max.	250 V

Standards

TSE K 116, IEC 60708, IEC 60189-2

Fire performance

Vertical flame propagation EN 60332-1-2
Corrosive gas EN 60754-1/2
Smoke density EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

PDH

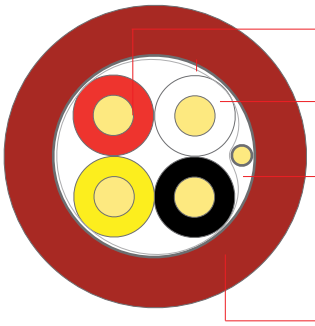
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
402018	1x2x0.50 mm+0.50 mm	3 . 0	5	13
402019	2x2x0.50 mm+0.50 mm	4 . 1	9	20
402020	3x2x0.50 mm+0.50 mm	4 . 3	12	25
402021	4x2x0.50 mm+0.50 mm	4 . 7	16	31
402022	5x2x0.50 mm+0.50 mm	5 . 1	19	36
402023	6x2x0.50 mm+0.50 mm	5 . 7	23	44
402025	10x2x0.50 mm+0.50 mm	6 . 7	37	64
402027	20x2x0.50 mm+0.50 mm	9 . 3	72	123
402029	30x2x0.50 mm+0.50 mm	10.9	108	176
402031	50x2x0.50 mm+0.50 mm	13.7	178	280
402032	100x2x0.50 mm+0.50 mm	18.7	362	536

PDH-K (Tinned)

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
404018	1x2x0.50 mm+0.50 mm	3 . 0	5	13
404019	2x2x0.50 mm+0.50 mm	4 . 1	9	20
404020	3x2x0.50 mm+0.50 mm	4 . 3	12	25
404021	4x2x0.50 mm+0.50 mm	4 . 7	16	31
404022	5x2x0.50 mm+0.50 mm	5 . 1	19	36
404023	6x2x0.50 mm+0.50 mm	5 . 7	23	44
404025	10x2x0.50 mm+0.50 mm	6 . 7	37	64
404027	20x2x0.50 mm+0.50 mm	9 . 3	72	123
404029	30x2x0.50 mm+0.50 mm	10.9	108	176
404031	50x2x0.50 mm+0.50 mm	13.7	178	280
404032	100x2x0.50 mm+0.50 mm	18.7	362	536

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire
Insulation	PVC, in compliance with DIN VDE 0815 insulation colour coding
	TI51 EN 50290-2-21, YI1 DIN VDE 0207-4
Screen	Pet tape min. 100% coverage
	Tinned copper drain wire
	Al-Pet tape min. 100% coverage
	Al-Pet tape min. 100% coverage
Sheath	PVC, RAL 3000 Red
	TM51 EN 50290-2-22, YM1 DIN VDE 0207-5

Application

PVC insulated and sheathed cable range is used for signal and data transmission in fixed interior installations in dry or wet areas. The cable is protected against ambient electromagnetic interference by its static screen. Used between the control panel and detectors, buttons and field control modules in the fire alarm system.

Standards TSE K 173, DIN VDE 0815

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range			-30°C ...+70°C
Bending radius		min.	10 x D
Loop resistance	Ø 0.60 mm max.		130 Ω/km
	Ø 0.80 mm max.		73.2 Ω/km
	Ø 1.0 mm max.		44.4 Ω/km
	1.0 mm² max.		36.2 Ω/km
	1.5 mm² max.		24.2 Ω/km
	2.5 mm² max.		14.8 Ω/km
Insulation resistance		min.	100 MΩ x km
Capacitance		max.	100 nF/km
Capacity imbalance		max.	300 pF/100 m
Test voltage			800 Vac core/core
			800 Vac core/screen
Operating voltage		max.	300 V

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
109069	1x2x0.80 mm+0.40 mm	5 . 3	11	34
109070	2x2x0.80 mm+0.40 mm	5 . 9	20	52
109071	3x2x0.80 mm+0.40 mm	7 . 9	29	76
109072	4x2x0.80 mm+0.40 mm	8 . 6	38	92
109073	5x2x0.80 mm+0.40 mm	9 . 4	48	110
109074	6x2x0.80 mm+0.40 mm	10.3	57	129
109076	8x2x0.80 mm+0.40 mm	10.9	75	158
109087	10x2x0.80 mm+0.60 mm	12.8	95	208

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
109135	1x2x1.0 mm+0.80 mm	5.9	19	46
109136	2x2x1.0 mm+0.80 mm	6.7	33	73
109137	3x2x1.0 mm+0.80 mm	9.0	47	104
109138	4x2x1.0 mm+0.80 mm	9.9	61	129

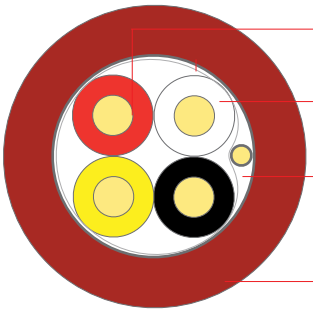
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
109173	1x2x1.0 mm²+0.80 mm	6 . 4	22	54
109174	2x2x1.0 mm²+0.80 mm	7 . 3	40	87
109175	3x2x1.0 mm²+0.80 mm	9 . 9	59	125
109176	4x2x1.0 mm²+0.80 mm	10.9	77	155

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
109211	1x2x1.5 mm²+0.80 mm	7 . 3	30	70
109212	2x2x1.5 mm²+0.80 mm	8 . 3	56	114
109213	3x2x1.5 mm²+0.80 mm	11.6	83	168
109214	4x2x1.5 mm²+0.80 mm	13.2	109	224

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
109230	1x2x2.5 mm²+0.80 mm	8 . 1	46	92
109231	2x2x2.5 mm²+0.80 mm	9 . 3	89	156
109232	3x2x2.5 mm²+0.80 mm	13.5	131	245
109233	4x2x2.5 mm²+0.80 mm	14.8	173	307

Specifications may vary depending on technical modifications.

Cable structure



Electrolytic copper wire

HFFR, in compliance with DIN VDE 0815 insulation colour coding

70°C EN 50290-2-26, HJ2 DIN VDE 0207-23

Pet tape min. 100% coverage

Tinned copper drain wire

Al-Pet tape min. 100% coverage

HFFR, RAL 3000 Red

70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

Halogen Free insulated and sheathed cable range is used for signal and data transmission in fixed interior installations in dry or wet areas. The cable is protected against ambient electromagnetic interference by its static screen. Used between the control panel and detectors, buttons and field control modules in the fire alarm system. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance.

Standards

TSE K 173, DIN VDE 0815

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

Specifications

Temperature range			-30°C ...+70°C
Bending radius		min.	10 x D
Loop resistance	Ø 0.60 mm	max.	130 Ω/km
	Ø 0.80 mm	max.	73.2 Ω/km
	Ø 1.0 mm	max.	44.4 Ω/km
	1.0 mm²	max.	36.2 Ω/km
	1.5 mm²	max.	24.2 Ω/km
	2.5 mm²	max.	14.8 Ω/km
Insulation resistance		min.	100 MΩ x km
Capacitance		max.	100 nF/km
Capacity imbalance		max.	300 pF/100 m
Test voltage			800 Vac core/core
			800 Vac core/screen
Operating voltage		max.	300 V

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
110097	1x2x0.80 mm+0.80 mm	5 . 3	14	38
110098	2x2x0.80 mm+0.80 mm	5 . 9	23	57
110099	3x2x0.80 mm+0.80 mm	7 . 9	32	81
110100	4x2x0.80 mm+0.80 mm	8 . 6	42	98
110101	5x2x0.80 mm+0.80 mm	9 . 4	51	116
110102	6x2x0.80 mm+0.80 mm	10.3	60	136
110104	8x2x0.80 mm+0.80 mm	10.9	79	166
110106	10x2x0.80 mm+0.80 mm	12.8	97	215

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
110135	1x2x1.0 mm+0.80 mm	5.9	19	48
110136	2x2x1.0 mm+0.80 mm	6.7	33	75
110137	3x2x1.0 mm+0.80 mm	9.0	47	106
110138	4x2x1.0 mm+0.80 mm	9.9	61	132

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
110173	1x2x1.0 mm²+0.80 mm	6 . 4	22	56
110174	2x2x1.0 mm²+0.80 mm	7 . 3	40	89
110175	3x2x1.0 mm²+0.80 mm	9 . 9	59	128
110176	4x2x1.0 mm²+0.80 mm	10.9	77	159

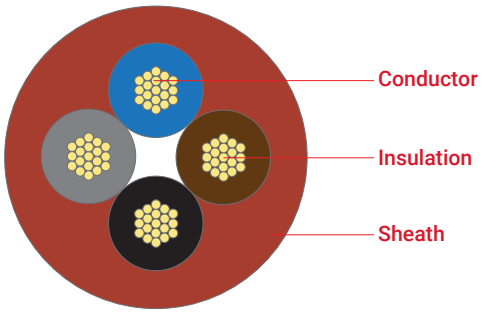
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
109211	1x2x1.5 mm²+0.80 mm	7 . 3	30	72
109212	2x2x1.5 mm²+0.80 mm	8 . 3	56	119
109213	3x2x1.5 mm²+0.80 mm	11.6	83	173
109214	4x2x1.5 mm²+0.80 mm	13.2	109	230

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
110230	1x2x2.5 mm²+0.80 mm	8 . 1	46	95
110231	2x2x2.5 mm²+0.80 mm	9 . 3	89	160
110232	3x2x2.5 mm²+0.80 mm	13.5	131	252
110233	4x2x2.5 mm²+0.80 mm	14.8	173	316

Specifications may vary depending on technical modifications.

Fire Resistant Cables

Cable structure



Stranded copper wire
Class 5, IEC 60228

Silicone insulation, in compliance with HD 308 S2 insulation colour coding
EI2 EN 50363-1

Silicone, RAL 2003 Tile Red
EM9 EN 50363-2-1

Application

The cable with silicone insulation and sheath is used in dry or wet interior areas with high ambient temperature not exposed to mechanical strain. Offers practical advantages thanks to flexible design. Primarily used as a power cable in heating coils and furnaces as well as foundries, glass & ceramic workshops and engineering projects for measuring, controlling and power supplying purposes.

Specifications

Temperature range	fixed		-50°C ...+180°C
	flexing		-20°C ...+150°C
Bending radius	fixed	min.	4 x D
	flexing	min.	8 x D
Conductor resistance			
	0.75 mm²	max.	26.0 Ω/km
	1.0 mm²	max.	19.5 Ω/km
	1.5 mm²	max.	13.3 Ω/km
	2.5 mm²	max.	7.98 Ω/km
Insulation resistance		min.	20 MΩ x km
Test voltage			2000 V
Operating voltage		max.	300/500 V

Standards

EN 50525-2-83

Fire performance

Vertical flame propagation	EN 60332-1-2
Vertical flame propagation	EN 60332-3-24 "Category C"
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2
Continuity of flow	IEC 60331-21 FE180

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
113104	2x0.75 mm²	6.4	12	54
113105	3x0.75 mm²	6.8	19	65
113106	4x0.75 mm²	7.8	25	85

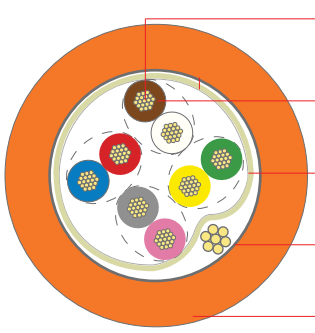
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
113110	2x1 mm²	6.6	16	60
113111	3x1 mm²	7.4	25	79
113112	4x1 mm²	8.0	33	96

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
113116	2x1.5 mm²	7.8	25	86
113117	3x1.5 mm²	8.1	37	101
113118	4x1.5 mm²	8.7	49	121

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
113122	2x2.5 mm²	9.2	41	124
113123	3x2.5 mm²	9.8	62	153
113124	4x2.5 mm²	10.6	82	187

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire

Class 5, IEC 60228

Halogen-free, cross-linked insulation,
In compliance with DIN 47100 insulation colour coding

Pet tape min. 100% coverage

Fibreglass tape min. 100% coverage

Stranded tinned copper drain wire

Al-Pet tape min. 100% coverage

HFFR, RAL 2003 Orange

70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

Used to control and supply power to devices that must remain operational during a fire. Used in emergency lighting and operation of equipment necessary for surveillance and evacuation, and systems that should remain functional for a certain time, such as alarm systems (continuity of flow FE180 continuity of flow with mechanical shocks PH120). The cable is protected against signals from outside by its static screen. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as smart or semi-smart buildings, housing complexes, hospitals, cinema halls, theatres, schools, shopping malls, airports, factories, etc.

Standards

TSE K 178, DIN VDE 0812

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2
Continuity of flow	IEC 60331-21 FE180
Continuity of flow	EN 50200 PH120

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range			-30°C ...+70°C
Bending radius		min.	10 x D
Conductor resistance - effective capacity (core/core)	0.75 mm²	max.	26.0 Ω/km - 120 nF/km
	1.0 mm²	max.	19.5 Ω/km - 130 nF/km
	1.5 mm²	max.	13.3 Ω/km - 140 nF/km
	2.5 mm²	max.	7.98 Ω/km - 160 nF/km
Insulation resistance		min.	20 MΩ x km
Test voltage	0.75 mm²		1200 V
	1.0 mm²		1200 V
	1.5 mm²		2500 V
	2.5 mm²		2500 V
Operating voltage		max.	300 V

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
107104	2x2x0.75 mm²	8 . 8	29	80
107105	3x2x0.75 mm²	9 . 7	42	110
107106	4x2x0.75 mm²	10.6	54	133
107107	5x2x0.75 mm²	11.6	67	157
107108	6x2x0.75 mm²	12.8	79	188
107110	8x2x0.75 mm²	13.6	104	231
107112	10x2x0.75 mm²	15.4	129	280
107114	12x2x0.75 mm²	16.1	154	323

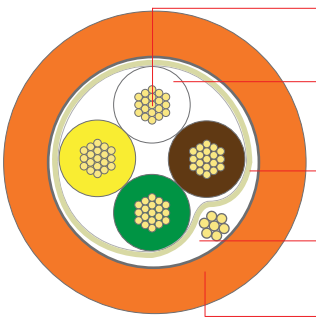
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
107122	2x2x1 mm²	9 . 9	38	103
107123	3x2x1 mm²	10.4	54	130
107124	4x2x1 mm²	11.4	71	158
107125	5x2x1 mm²	12.7	88	195
107126	6x2x1 mm²	13.8	104	226
107128	8x2x1 mm²	14.7	137	280
107130	10x2x1 mm²	17.0	171	353
107132	12x2x1 mm²	17.8	204	408

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
107140	2x2x1.5 mm²	11.7	54	138
107141	3x2x1.5 mm²	12.6	79	184
107142	4x2x1.5 mm²	13.8	104	229
107143	5x2x1.5 mm²	15.1	129	274
107144	6x2x1.5 mm²	16.7	154	327
107146	8x2x1.5 mm²	17.8	203	408
107148	10x2x1.5 mm²	20.2	253	498
107150	12x2x1.5 mm²	21.1	303	577

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
107158	2x2x2.5 mm²	13.2	87	189
107159	3x2x2.5 mm²	14.0	129	250
107160	4x2x2.5 mm²	15.4	170	314
107161	5x2x2.5 mm²	17.2	212	388
107162	6x2x2.5 mm²	18.7	253	454
107164	8x2x2.5 mm²	20.0	336	574
107166	10x2x2.5 mm²	23.3	419	736
107168	12x2x2.5 mm²	24.4	502	856

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire

Class 5, IEC 60228

Halogen-free, cross-linked insulation,
In compliance with DIN 47100 insulation colour coding

Pet tape min. 100% coverage

Fibreglass tape min. 100% coverage

Stranded tinned copper drain wire

Al-Pet tape min. 100% coverage

HFFR, RAL 2003 Orange

70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

Used to control and supply power to devices that must remain operational during a fire. Used in emergency lighting and operation of equipment necessary for surveillance and evacuation, and systems that should remain functional for a certain time, such as alarm systems (continuity of flow FE180 continuity of flow with mechanical shocks PH120). The cable is protected against signals from outside by its static screen. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as smart or semi-smart buildings, housing complexes, hospitals, cinema halls, theatres, schools, shopping malls, airports, factories, etc.

Standards

TSE K 178, DIN VDE 0812

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2
Continuity of flow	IEC 60331-21 FE180
Continuity of flow	EN 50200 PH120

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range			-30°C ...+70°C
Bending radius		min.	10 x D
Conductor resistance - effective capacity (core/core)	0.75 mm²	max.	26.0 Ω/km - 120 nF/km
	1.0 mm²	max.	19.5 Ω/km - 130 nF/km
	1.5 mm²	max.	13.3 Ω/km - 140 nF/km
	2.5 mm²	max.	7.98 Ω/km - 160 nF/km
Insulation resistance		min.	20 MΩ x km
Test voltage	0.75 mm²		1200 V
	1.0 mm²		1200 V
	1.5 mm²		2500 V
	2.5 mm²		2500 V
Operating voltage		max.	300 V

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
103104	2x0.75 mm²	5.8	17	48
103105	3x0.75 mm²	6.0	23	55
103106	4x0.75 mm²	6.8	29	71
103107	5x0.75 mm²	7.4	36	86
103108	6x0.75 mm²	8.0	42	101
103109	7x0.75 mm²	8.0	48	105
103110	8x0.75 mm²	8.6	54	122
103111	9x0.75 mm²	9.7	60	148
103112	10x0.75 mm²	10.4	67	154
103114	12x0.75 mm²	10.7	79	174

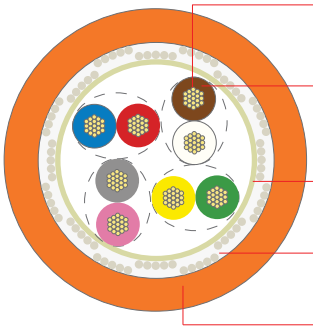
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
103122	2x1 mm²	6.2	21	55
103123	3x1 mm²	6.7	29	69
103124	4x1 mm²	7.3	38	84
103125	5x1 mm²	7.9	46	101
103126	6x1 mm²	8.6	54	121
103127	7x1 mm²	8.6	62	127
103128	8x1 mm²	9.6	71	154
103129	9x1 mm²	10.4	79	175
103130	10x1 mm²	11.2	88	184
103132	12x1 mm²	11.5	104	208

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
103140	2x1.5 mm²	7.4	29	78
103141	3x1.5 mm²	7.7	42	91
103142	4x1.5 mm²	8.5	54	114
103143	5x1.5 mm²	9.6	66	147
103144	6x1.5 mm²	10.5	79	175
103145	7x1.5 mm²	10.5	91	185
103146	8x1.5 mm²	11.3	104	213
103147	9x1.5 mm²	12.4	116	249
103148	10x1.5 mm²	13.4	129	262
103150	12x1.5 mm²	13.8	154	300

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
103158	2x2.5 mm²	8.2	46	101
103159	3x2.5 mm²	8.6	66	124
103160	4x2.5 mm²	9.9	87	165
103161	5x2.5 mm²	10.8	108	203
103162	6x2.5 mm²	11.7	128	241
103163	7x2.5 mm²	11.7	149	257
103164	8x2.5 mm²	12.8	170	303
103165	9x2.5 mm²	13.9	190	348
103166	10x2.5 mm²	15.0	211	366
103168	12x2.5 mm²	15.5	253	425

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire

Class 5, IEC 60228

Halogen-free, cross-linked insulation,
In compliance with DIN 47100 insulation colour coding

EI8 EN 50363-5

Pet tape min. 100% coverage

Fibreglass tape min. 100% coverage

Al-Pet tape min. 100% coverage

Tinned braided copper wire

HFFR, RAL 2003 Orange

70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

Used to control and supply power to devices that must remain operational during a fire. Used in emergency lighting and operation of equipment necessary for surveillance and evacuation, and systems that should remain functional for a certain time, such as alarm systems (continuity of flow FE180 continuity of flow with mechanical shocks PH120). The cable is protected against ambient electromagnetic interference by its foil and braided screen. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as smart or semi-smart buildings, housing complexes, hospitals, cinema halls, theatres, schools, shopping malls, airports, factories, etc.

Specifications

Temperature range			-30°C ...+70°C
Bending radius		min.	10 x D
Conductor resistance - effective capacity (core/core)	0.75 mm²	max.	26.0 Ω/km - 120 nF/km
	1.0 mm²	max.	19.5 Ω/km - 130 nF/km
	1.5 mm²	max.	13.3 Ω/km - 140 nF/km
	2.5 mm²	max.	7.98 Ω/km - 160 nF/km
Insulation resistance		min.	20 MΩ x km
Test voltage	0.75 mm²		1200 V
	1.0 mm²		1200 V
	1.5 mm²		2500 V
	2.5 mm²		2500 V
Operating voltage		max.	300 V

Standards

TSE K 178, DIN VDE 0812

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2
Continuity of flow	IEC 60331-21 FE180
Continuity of flow	EN 50200 PH120

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
108104	2x2x0.75 mm²	9 . 6	35	95
108105	3x2x0.75 mm²	10.1	48	117
108106	4x2x0.75 mm²	11.0	62	142
108107	5x2x0.75 mm²	12.2	74	172
108108	6x2x0.75 mm²	13.2	89	200
108110	8x2x0.75 mm²	14.0	115	244
108112	10x2x0.75 mm²	15.8	143	296
108114	12x2x0.75 mm²	16.7	168	347

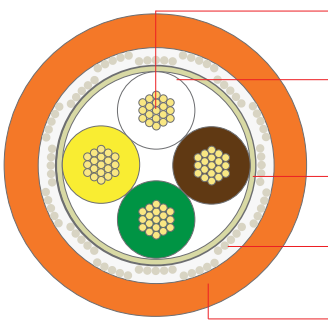
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
108122	2x2x1 mm²	10.3	43	110
108123	3x2x1 mm²	10.8	61	139
108124	4x2x1 mm²	11.8	78	167
108125	5x2x1 mm²	13.1	97	206
108126	6x2x1 mm²	14.2	115	238
108128	8x2x1 mm²	15.1	149	293
108130	10x2x1 mm²	17.4	185	369
108132	12x2x1 mm²	18.2	219	424

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
108140	2x2x1.5 mm²	12.3	62	153
108141	3x2x1.5 mm²	13.0	88	195
108142	4x2x1.5 mm²	14.2	114	241
108143	5x2x1.5 mm²	15.5	140	286
108144	6x2x1.5 mm²	17.1	168	343
108146	8x2x1.5 mm²	18.2	219	424
108148	10x2x1.5 mm²	20.6	273	518
108150	12x2x1.5 mm²	21.5	323	598

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
108158	2x2x2.5 mm²	13.6	98	201
108159	3x2x2.5 mm²	14.4	139	262
108160	4x2x2.5 mm²	15.8	184	329
108161	5x2x2.5 mm²	17.6	226	403
108162	6x2x2.5 mm²	19.1	269	470
108164	8x2x2.5 mm²	20.4	355	593
108166	10x2x2.5 mm²	23.7	441	758
108168	12x2x2.5 mm²	24.8	525	879

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire
Class 5, IEC 60228

Halogen-free, cross-linked insulation,
In compliance with DIN 47100 insulation colour coding

EI8 EN 50363-5

Pet tape min. 100% coverage

Fibreglass tape min. 100% coverage

Al-Pet tape min. 100% coverage

Tinned braided copper wire

HFFR, RAL 2003 Orange

70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

Used to control and supply power to devices that must remain operational during a fire. Used in emergency lighting and operation of equipment necessary for surveillance and evacuation, and systems that should remain functional for a certain time, such as alarm systems (continuity of flow FE180 continuity of flow with mechanical shocks PH120). The cable is protected against ambient electromagnetic interference by its foil and braided screen. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as smart or semi-smart buildings, housing complexes, hospitals, cinema halls, theatres, schools, shopping malls, airports, factories, etc.

Specifications

Temperature range			-30°C ...+70°C
Bending radius		min.	10 x D
Conductor resistance	0.75 mm²	max.	26.0 Ω/km
	1.0 mm²	max.	19.5 Ω/km
	1.5 mm²	max.	13.3 Ω/km
	2.5 mm²	max.	7.98 Ω/km
Insulation resistance		min.	20 MΩ x km
Test voltage	0.75 mm²		1200 V
	1.0 mm²		1200 V
	1.5 mm²		2500 V
	2.5 mm²		2500 V
Operating voltage		max.	300 V

Standards

TSE K 178, DIN VDE 0812

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2
Continuity of flow	IEC 60331-21 FE180
Continuity of flow	EN 50200 PH120

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
104104	2x0.75 mm²	6.2	19	50
104105	3x0.75 mm²	6.7	26	62
104106	4x0.75 mm²	7.2	32	73
104107	5x0.75 mm²	7.8	39	89
104108	6x0.75 mm²	8.4	46	104
104109	7x0.75 mm²	8.4	52	109
104110	8x0.75 mm²	9.0	59	123
104111	9x0.75 mm²	10.1	66	144
104112	10x0.75 mm²	10.8	73	160
104114	12x0.75 mm²	11.1	86	179

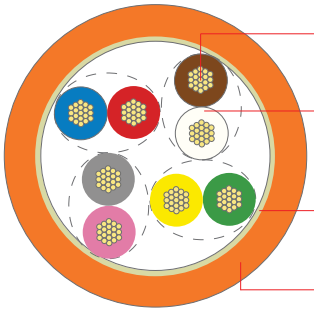
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
104122	2x1 mm²	6.8	23	60
104123	3x1 mm²	7.1	32	71
104124	4x1 mm²	7.7	41	87
104125	5x1 mm²	8.3	50	104
104126	6x1 mm²	9.0	59	125
104127	7x1 mm²	9.0	67	131
104128	8x1 mm²	10.1	77	158
104129	9x1 mm²	10.9	86	174
104130	10x1 mm²	11.6	94	189
104132	12x1 mm²	12.0	111	216

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
104140	2x1.5 mm²	7.8	33	81
104141	3x1.5 mm²	8.2	45	96
104142	4x1.5 mm²	8.9	59	118
104143	5x1.5 mm²	10.1	71	153
104144	6x1.5 mm²	10.9	85	181
104145	7x1.5 mm²	10.9	98	190
104146	8x1.5 mm²	11.7	112	214
104147	9x1.5 mm²	12.9	124	245
104148	10x1.5 mm²	13.8	137	268
104150	12x1.5 mm²	14.2	163	306

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
104158	2x2.5 mm²	8.6	49	104
104159	3x2.5 mm²	9.0	71	128
104160	4x2.5 mm²	10.3	92	169
104161	5x2.5 mm²	11.2	114	207
104162	6x2.5 mm²	12.3	136	252
104163	7x2.5 mm²	12.3	157	268
104164	8x2.5 mm²	13.3	178	304
104165	9x2.5 mm²	14.3	199	335
104166	10x2.5 mm²	15.4	223	373
104168	12x2.5 mm²	15.9	264	431

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire

Class 5, IEC 60228

Halogen-free, cross-linked insulation,
In compliance with DIN 47100 insulation colour coding

EI8 EN 50363-5

Pet tape min. 100% coverage

Fibreglass tape min. 100% coverage

HFFR, RAL 2003 Orange

70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

Used to control and supply power to devices that must remain operational during a fire. Used in emergency lighting and operation of equipment necessary for surveillance and evacuation, and systems that should remain functional for a certain time, such as alarm systems (continuity of flow FE180 continuity of flow with mechanical shocks PH120). Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as smart or semi-smart buildings, housing complexes, hospitals, cinema halls, theatres, schools, shopping malls, airports, factories, etc.

Standards

TSE K 178, DIN VDE 0812

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2
Continuity of flow	IEC 60331-21 FE180
Continuity of flow	EN 50200 PH120

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range			-30°C ...+70°C
Bending radius		min.	10 x D
Conductor resistance - effective capacity (core/core)	0.75 mm²	max.	26.0 Ω/km - 120 nF/km
	1.0 mm²	max.	19.5 Ω/km - 130 nF/km
	1.5 mm²	max.	13.3 Ω/km - 140 nF/km
	2.5 mm²	max.	7.98 Ω/km - 160 nF/km
Insulation resistance		min.	20 MΩ x km
Test voltage	0.75 mm²		1200 V
	1.0 mm²		1200 V
	1.5 mm²		2500 V
	2.5 mm²		2500 V
Operating voltage		max.	300 V

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
105104	2x2x0.75 mm²	8 . 7	25	73
105105	3x2x0.75 mm²	9 . 6	37	103
105106	4x2x0.75 mm²	10.5	50	125
105107	5x2x0.75 mm²	11.5	62	150
105108	6x2x0.75 mm²	12.7	75	180
105110	8x2x0.75 mm²	13.5	100	223
105112	10x2x0.75 mm²	15.3	125	272
105114	12x2x0.75 mm²	16.0	150	314

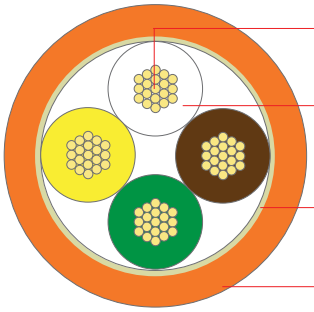
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
105122	2x2x1 mm²	9 . 8	33	95
105123	3x2x1 mm²	10.3	50	123
105124	4x2x1 mm²	11.3	66	150
105125	5x2x1 mm²	12.6	83	187
105126	6x2x1 mm²	13.8	100	221
105128	8x2x1 mm²	14.7	133	275
105130	10x2x1 mm²	16.9	166	344
105132	12x2x1 mm²	17.7	199	398

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
105140	2x2x1.5 mm²	11.6	50	130
105141	3x2x1.5 mm²	12.5	74	176
105142	4x2x1.5 mm²	13.7	99	220
105143	5x2x1.5 mm²	15.0	124	264
105144	6x2x1.5 mm²	16.6	149	317
105146	8x2x1.5 mm²	17.7	199	398
105148	10x2x1.5 mm²	20.1	249	487
105150	12x2x1.5 mm²	21.0	299	566

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
105158	2x2x2.5 mm²	13.1	83	180
105159	3x2x2.5 mm²	13.9	124	241
105160	4x2x2.5 mm²	15.3	166	305
105161	5x2x2.5 mm²	17.1	207	378
105162	6x2x2.5 mm²	18.6	249	443
105164	8x2x2.5 mm²	19.9	332	562
105166	10x2x2.5 mm²	23.2	415	723
105168	12x2x2.5 mm²	24.3	498	843

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire

Class 5, IEC 60228

Halogen-free, cross-linked insulation,
In compliance with DIN 47100 insulation colour coding

EI8 EN 50363-5

Pet tape min. 100% coverage

Fibreglass tape min. 100% coverage

HFFR, RAL 2003 Orange

70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

Used to control and supply power to devices that must remain operational during a fire. Used in emergency lighting and operation of equipment necessary for surveillance and evacuation, and systems that should remain functional for a certain time, such as alarm systems (continuity of flow FE180 continuity of flow with mechanical shocks PH120). Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as smart or semi-smart buildings, housing complexes, hospitals, cinema halls, theatres, schools, shopping malls, airports, factories, etc.

Upon demand, following customised types with numeric codes can be manufactured.
LIHH-OZ: black core with white number codes

Specifications

Temperature range			-30°C ...+70°C
Bending radius		min.	10 x D
Conductor resistance	0.75 mm²	max.	26.0 Ω/km
	1.0 mm²	max.	19.5 Ω/km
	1.5 mm²	max.	13.3 Ω/km
	2.5 mm²	max.	7.98 Ω/km
Insulation resistance		min.	20 MΩ x km
Test voltage	0.75 mm²		1200 V
	1.0 mm²		1200 V
	1.5 mm²		2500 V
	2.5 mm²		2500 V
Operating voltage		max.	300 V

Standards

TSE K 178, DIN VDE 0812

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2
Continuity of flow	IEC 60331-21 FE180
Continuity of flow	EN 50200 PH120

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
101104	2x0.75 mm²	5 . 7	12	42
101105	3x0.75 mm²	6 . 0	19	50
101106	4x0.75 mm²	6 . 8	25	66
101107	5x0.75 mm²	7 . 3	31	79
101108	6x0.75 mm²	7 . 9	37	94
101109	7x0.75 mm²	7 . 9	43	99
101110	8x0.75 mm²	8 . 5	50	114
101111	9x0.75 mm²	9 . 6	56	140
101112	10x0.75 mm²	10.3	62	147
101114	12x0.75 mm²	10.6	75	166

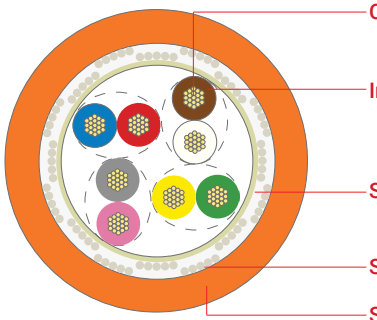
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
101122	2x1 mm²	6 . 1	16	49
101123	3x1 mm²	6 . 6	25	62
101124	4x1 mm²	7 . 2	33	77
101125	5x1 mm²	7 . 9	41	96
101126	6x1 mm²	8 . 5	50	114
101127	7x1 mm²	8 . 5	58	120
101128	8x1 mm²	9 . 6	66	149
101129	9x1 mm²	10.3	75	167
101130	10x1 mm²	11.1	83	176
101132	12x1 mm²	11.5	100	204

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
101140	2x1.5 mm²	7 . 3	25	71
101141	3x1.5 mm²	7 . 7	37	86
101142	4x1.5 mm²	8 . 4	49	107
101143	5x1.5 mm²	9 . 6	62	142
101144	6x1.5 mm²	10.4	74	168
101145	7x1.5 mm²	10.4	87	177
101146	8x1.5 mm²	11.2	99	206
101147	9x1.5 mm²	12.4	111	245
101148	10x1.5 mm²	13.3	124	254
101150	12x1.5 mm²	13.7	149	292

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
101158	2x2.5 mm²	8 . 1	41	94
101159	3x2.5 mm²	8 . 5	62	117
101160	4x2.5 mm²	9 . 8	82	158
101161	5x2.5 mm²	10.7	103	195
101162	6x2.5 mm²	11.6	124	234
101163	7x2.5 mm²	11.6	144	250
101164	8x2.5 mm²	12.7	165	295
101165	9x2.5 mm²	13.8	186	340
101166	10x2.5 mm²	14.9	207	357
101168	12x2.5 mm²	15.4	248	416

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Stranded copper wire Class 5, IEC 60228
Insulation	Halogen-free, cross-linked insulation, In compliance with DIN 47100 insulation colour coding EI8 EN 50363-5
Separator tape	Pet tape min. 100% coverage Fibreglass tape min. 100% coverage
Screen	Tinned braided copper wire
Sheath	HFFR, RAL 2003 Orange 70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

Used to control and supply power to devices that must remain operational during a fire. Used in emergency lighting and operation of equipment necessary for surveillance and evacuation, and systems that should remain functional for a certain time, such as alarm systems (continuity of flow FE180 continuity of flow with mechanical shocks PH120). The cable is protected against ambient electromagnetic interference by its braided screen. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as smart or semi-smart buildings, housing complexes, hospitals, cinema halls, theatres, schools, shopping malls, airports, factories, etc.

Specifications

Temperature range			-30°C ...+70°C
Bending radius		min.	10 x D
Conductor resistance - effective capacity (core/core)	0.75 mm²	max.	26.0 Ω/km - 120 nF/km
	1.0 mm²	max.	19.5 Ω/km - 130 nF/km
	1.5 mm²	max.	13.3 Ω/km - 140 nF/km
	2.5 mm²	max.	7.98 Ω/km - 160 nF/km
Insulation resistance		min.	20 MΩ x km
Test voltage	0.75 mm²		1200 V
	1.0 mm²		1200 V
	1.5 mm²		2500 V
	2.5 mm²		2500 V
Operating voltage		max.	300 V

Standards

TSE K 178, DIN VDE 0812

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2
Continuity of flow	IEC 60331-21 FE180
Continuity of flow	EN 50200 PH120

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
106104	2x2x0.75 mm²	9 . 6	36	96
106105	3x2x0.75 mm²	10.1	51	120
106106	4x2x0.75 mm²	11.0	64	142
106107	5x2x0.75 mm²	12.0	79	169
106108	6x2x0.75 mm²	13.2	92	201
106110	8x2x0.75 mm²	14.0	119	246
106112	10x2x0.75 mm²	15.8	145	296
106114	12x2x0.75 mm²	16.7	173	349

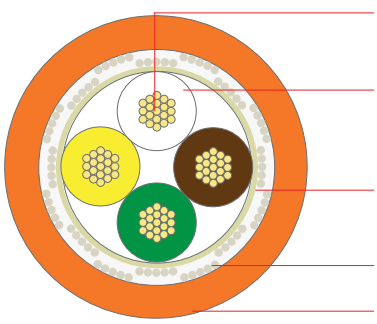
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
106122	2x2x1 mm²	10.3	47	112
106123	3x2x1 mm²	10.8	63	140
106124	4x2x1 mm²	11.8	82	170
106125	5x2x1 mm²	13.1	100	207
106126	6x2x1 mm²	14.2	119	241
106128	8x2x1 mm²	15.1	153	295
106130	10x2x1 mm²	17.3	190	368
106132	12x2x1 mm²	18.1	224	423

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
106140	2x2x1.5 mm²	12.2	66	152
106141	3x2x1.5 mm²	12.9	91	193
106142	4x2x1.5 mm²	14.1	119	240
106143	5x2x1.5 mm²	15.4	145	285
106144	6x2x1.5 mm²	17.0	173	341
106146	8x2x1.5 mm²	18.1	223	423
106148	10x2x1.5 mm²	20.6	283	522
106150	12x2x1.5 mm²	21.5	334	603

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
106158	2x2x2.5 mm²	13.5	102	200
106159	3x2x2.5 mm²	14.3	144	261
106160	4x2x2.5 mm²	15.7	188	328
106161	5x2x2.5 mm²	17.5	231	402
106162	6x2x2.5 mm²	19.0	274	468
106164	8x2x2.5 mm²	20.4	366	598
106166	10x2x2.5 mm²	23.7	456	766
106168	12x2x2.5 mm²	24.8	541	888

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Stranded copper wire Class 5, IEC 60228
Insulation	Halogen-free, cross-linked insulation, In compliance with DIN 47100 insulation colour coding EI8 EN 50363-5
Separator tape	Pet tape min. 100% coverage
Screen	Fibreglass tape min. 100% coverage Tinned braided copper wire
Sheath	HFFR, RAL 2003 Orange 70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

Used to control and supply power to devices that must remain operational during a fire. Used in emergency lighting and operation of equipment necessary for surveillance and evacuation, and systems that should remain functional for a certain time, such as alarm systems (continuity of flow FE180 continuity of flow with mechanical shocks PH120). The cable is protected against ambient electromagnetic interference by its braided screen. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as smart or semi-smart buildings, housing complexes, hospitals, cinema halls, theatres, schools, shopping malls, airports, factories, etc.

Upon demand, following customised types with numeric codes can be manufactured.
LIHCH-OZ: black core with white number codes

Specifications

Temperature range			-30°C ...+70°C
Bending radius		min.	10 x D
Conductor resistance	0.75 mm²	max.	26.0 Ω/km
	1.0 mm²	max.	19.5 Ω/km
	1.5 mm²	max.	13.3 Ω/km
	2.5 mm²	max.	7.98 Ω/km
Insulation resistance		min.	200 MΩ x km
Test voltage	0.75 mm²		1200 V
	1.0 mm²		1200 V
	1.5 mm²		2500 V
	2.5 mm²		2500 V
Operating voltage		max.	300 V

Standards

TSE K 178, DIN VDE 0812

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2
Continuity of flow	IEC 60331-21 FE180
Continuity of flow	EN 50200 PH120

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
102104	2x0.75 mm²	6 . 2	19	51
102105	3x0.75 mm²	6 . 6	27	62
102106	4x0.75 mm²	7 . 2	33	75
102107	5x0.75 mm²	7 . 8	41	92
102108	6x0.75 mm²	8 . 4	48	108
102109	7x0.75 mm²	8 . 4	55	112
102110	8x0.75 mm²	9 . 0	61	128
102111	9x0.75 mm²	10.1	69	157
102112	10x0.75 mm²	10.8	76	164
102114	12x0.75 mm²	11.1	89	183

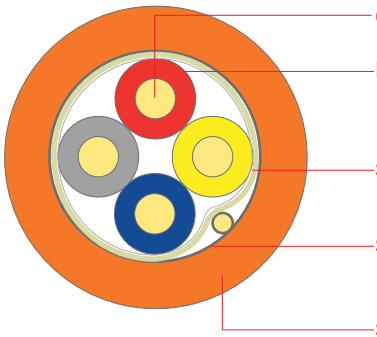
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
102122	2x1 mm²	6 . 8	25	62
102123	3x1 mm²	7 . 1	33	73
102124	4x1 mm²	7 . 7	43	90
102125	5x1 mm²	8 . 3	52	108
102126	6x1 mm²	9 . 0	61	128
102127	7x1 mm²	9 . 0	69	134
102128	8x1 mm²	10.0	79	162
102129	9x1 mm²	10.8	88	184
102130	10x1 mm²	11.6	99	196
102132	12x1 mm²	11.9	116	221

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
102140	2x1.5 mm²	7 . 8	34	83
102141	3x1.5 mm²	8 . 1	47	97
102142	4x1.5 mm²	8 . 9	61	121
102143	5x1.5 mm²	10.1	75	158
102144	6x1.5 mm²	10.9	88	185
102145	7x1.5 mm²	10.9	100	195
102146	8x1.5 mm²	11.7	115	225
102147	9x1.5 mm²	12.8	128	262
102148	10x1.5 mm²	13.8	143	277
102150	12x1.5 mm²	14.2	168	316

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
102158	2x2.5 mm²	8 . 6	52	108
102159	3x2.5 mm²	9 . 0	73	131
102160	4x2.5 mm²	10.3	95	174
102161	5x2.5 mm²	11.1	117	210
102162	6x2.5 mm²	12.3	140	259
102163	7x2.5 mm²	12.3	160	275
102164	8x2.5 mm²	13.2	182	316
102165	9x2.5 mm²	14.3	205	364
102166	10x2.5 mm²	15.4	227	382
102168	12x2.5 mm²	15.9	269	441

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Electrolytic copper wire
Insulation	Halogen-free, cross-linked insulation, In compliance with DIN VDE 0815 insulation colour coding EI8 EN 50363-5
Separator tape	Pet tape min. 100% coverage
	Fibreglass tape min. 100% coverage
Screen	Tinned copper drain wire
	Al-Pet tape min. 100% coverage
Sheath	HFFR, RAL 2003 Orange 70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

Used to control and supply power to devices in a fire alarm system that must remain operational during a fire. Used in emergency lighting and operation of equipment necessary for surveillance and evacuation, and systems that should remain functional for a certain time, such as alarm systems (continuity of flow FE180 continuity of flow with mechanical shocks PH120). The cable is protected against signals from outside by its static screen. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance, such as smart or semi-smart buildings, housing complexes, hospitals, cinema halls, theatres, schools, shopping malls, airports, factories, etc.

Standards

TSE K 173, DIN VDE 0815

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2
Continuity of flow	IEC 60331-21 FE180
Continuity of flow	EN 50200 PH120

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

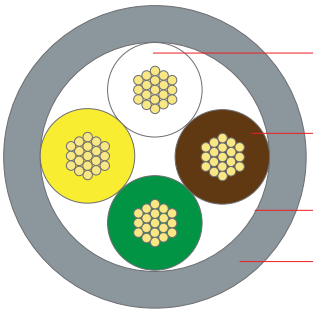
Temperature range			-30°C ...+70°C
Bending radius		min.	10 x D
Loop resistance	Ø 0.80 mm	max.	73.2 Ω/km
	Ø 1.0 mm	max.	44.4 Ω/km
	1.0 mm²	max.	36.2 Ω/km
	1.5 mm²	max.	24.2 Ω/km
	2.5 mm²	max.	14.8 Ω/km
Insulation resistance		min.	100 MΩ x km
Capacitance		max.	120 nF/km
Capacity imbalance		max.	200 pF/100 m
Test voltage			500 Vac core/core 2000 Vac core/screen
Operating voltage		max.	225 V

Specifications may vary depending on technical modifications.

Specifications may vary depending on technical modifications.

Signal Control Cables

Cable structure



Stranded copper wire
Class 5, IEC 60228

PVC, in compliance with DIN 47100 insulation colour coding
TI52 EN 50290-2-21, YI2 DIN VDE 0207-4

Pet tape min. 100% coverage

PVC - RAL 7001 Grey
TM51 EN 50290-2-22, YM1 DIN VDE 0207-5

Application

PVC insulated and sheathed range is used for signal transmission in interior installations. Flexible and slim design provides installation advantages in confined spaces. Used in industrial electronics, computers and office equipment, indoor communication, audio and security systems.

Upon demand, following customised types with numeric codes can be manufactured.
LIYY-OZ: black core with white number codes
LIYY-JZ: ground protection conductor (yellow/green), black & white number coded cores

Standards TSE K 353, DIN VDE 0812

Fire performance
Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range		
fixed		-30°C ...+70°C
flexing		0°C ...+50°C
Bending radius		
fixed min.		7.5 x D
flexing	min.	15 x D
Conductor resistance		
0.22 mm²	max.	96.0 Ω/km
0.50 mm²	max.	39.0 Ω/km
0.75 mm²	max.	26.0 Ω/km
1.0 mm²	max.	19.5 Ω/km
1.5 mm²	max.	13.2 Ω/km
2.5 mm²	max.	7.98 Ω/km
Insulation resistance	min.	200 MΩ x km
Test voltage		
0.22 mm²		1200 V
0.50 mm²		1200 V
0.75 mm²		1200 V
1.0 mm²		1200 V
1.5 mm²		2500 V
2.5 mm²		2500 V
Operating voltage	max.	300 V

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
201050	2x0.22 mm²	3.6	4	16
201051	3x0.22 mm²	4.0	6	21
201052	4x0.22 mm²	4.3	8	25
201053	5x0.22 mm²	4.7	10	31
201054	6x0.22 mm²	5.0	12	36
201055	7x0.22 mm²	5.0	14	37
201056	8x0.22 mm²	5.4	16	43
201057	9x0.22 mm²	5.8	18	49
201058	10x0.22 mm²	6.2	20	51
201060	12x0.22 mm²	6.6	24	61
201062	14x0.22 mm²	7.0	28	69
201064	16x0.22 mm²	7.4	32	79
201067	19x0.22 mm²	7.6	38	88

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
201086	2x0.50 mm²	4.8	8	28
201087	3x0.50 mm²	5.1	12	35
201088	4x0.50 mm²	5.5	17	42
201089	5x0.50 mm²	6.0	21	52
201090	6x0.50 mm²	6.7	25	66
201091	7x0.50 mm²	6.7	29	69
201092	8x0.50 mm²	7.2	33	80
201093	9x0.50 mm²	7.8	37	92
201094	10x0.50 mm²	8.4	42	96
201096	12x0.50 mm²	8.7	50	110
201098	14x0.50 mm²	9.7	58	136
201100	16x0.50 mm²	10.2	67	152
201103	19x0.50 mm²	10.5	79	172

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
201104	2x0.75 mm²	5.2	12	35
201105	3x0.75 mm²	5.6	19	44
201106	4x0.75 mm²	6.0	25	54
201107	5x0.75 mm²	6.8	31	71
201108	6x0.75 mm²	7.3	37	84
201109	7x0.75 mm²	7.3	43	89
201110	8x0.75 mm²	7.9	50	103
201111	9x0.75 mm²	8.6	56	120
201112	10x0.75 mm²	9.6	62	133
201114	12x0.75 mm²	9.9	75	152
201116	14x0.75 mm²	10.6	87	175
201118	16x0.75 mm²	11.2	100	199
201121	19x0.75 mm²	11.5	119	224

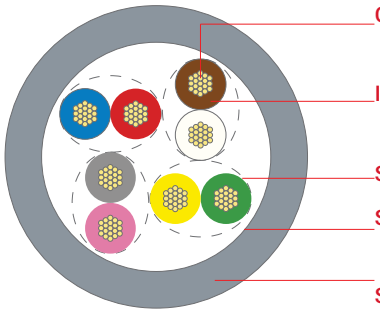
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
201122	2x1 mm²	5.5	17	41
201123	3x1 mm²	5.9	25	52
201124	4x1 mm²	6.4	33	65
201125	5x1 mm²	7.2	41	85
201126	6x1 mm²	7.8	50	102
201127	7x1 mm²	7.8	58	108
201128	8x1 mm²	8.4	66	125
201129	9x1 mm²	9.5	75	152
201130	10x1 mm²	10.2	83	159
201132	12x1 mm²	10.6	100	186
201134	14x1 mm²	11.3	116	212
201136	16x1 mm²	11.9	133	240
201139	19x1 mm²	12.5	158	280

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
201140	2x1.5 mm²	6.6	25	60
201141	3x1.5 mm²	7.1	37	76
201142	4x1.5 mm²	7.7	49	95
201143	5x1.5 mm²	8.4	62	119
201144	6x1.5 mm²	9.5	74	151
201145	7x1.5 mm²	9.5	87	160
201146	8x1.5 mm²	10.3	99	187
201147	9x1.5 mm²	11.2	111	217
201148	10x1.5mm²	12.2	124	230
201150	12x1.5mm²	12.6	149	267
201152	14x1.5mm²	13.5	174	308
201154	16x1.5mm²	14.2	199	347
201157	19x1.5mm²	14.7	236	399

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
201158	2x2.5 mm²	7.5	41	85
201159	3x2.5 mm²	8.0	62	107
201160	4x2.5 mm²	8.8	82	138
201161	5x2.5 mm²	10.0	103	181
201162	6x2.5 mm²	10.9	124	219
201163	7x2.5 mm²	10.9	144	235
201164	8x2.5 mm²	11.8	165	273
201165	9x2.5 mm²	13.0	186	320
201166	10x2.5mm²	14.0	207	335
201168	12x2.5mm²	14.5	248	393
201170	14x2.5mm²	15.5	290	452
201172	16x2.5mm²	16.6	332	523
201175	19x2.5mm²	17.2	394	603

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire
Class 5, IEC 60228

PVC, in compliance with DIN 47100 insulation colour coding
TI52 EN 50290-2-21, YI2 DIN VDE 0207-4

Pairs are bundled together in stranded layers

Polyester tape min. 100% coverage

PVC - RAL 7001 Grey
TM51 EN 50290-2-22, YM1 DIN VDE 0207-5

Application

PVC insulated and sheathed range is used for signal transmission in interior installations. Flexible and slim design provides installation advantages in confined spaces. Used in industrial electronics, computers and office equipment, indoor communication, audio and security systems.

Upon demand, following customised types with numeric codes can be manufactured.
LIYY-OZ: black core with white number codes
LIYY-JZ: ground protection conductor (yellow/green), black & white number coded cores

Standards TSE K 353, DIN VDE 0812

Fire performance
Vertical flame propagation EN 60332-1-2

EU Declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range		
fixed		-30°C ...+70°C
flexing		0°C ...+50°C
Bending radius		
fixed min.		7.5 x D
flexing	min.	15 x D
Conductor resistance		
0.22 mm²	max.	96.0 Ω/km
0.50 mm²	max.	39.0 Ω/km
0.75 mm²	max.	26.0 Ω/km
1.0 mm²	max.	19.5 Ω/km
1.5 mm²	max.	13.2 Ω/km
2.5 mm²	max.	7.98 Ω/km
Insulation resistance	min.	200 MΩ x km
Test voltage		
0.22 mm²		1200 V
0.50 mm²		1200 V
0.75 mm²		1200 V
1.0 mm²		1200 V
1.5 mm²		2500 V
2.5 mm²		2500 V
Operating voltage	max.	300 V

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
209050	2x2x0.22 mm²	5.5	8	29
209051	3x2x0.22 mm²	5.8	12	36
209052	4x2x0.22 mm²	6.3	16	45
209053	5x2x0.22 mm²	7.1	20	57
209054	6x2x0.22 mm²	7.7	24	65
209056	8x2x0.22 mm²	8.2	32	80
209058	10x2x0.22 mm²	9.7	40	106
209060	12x2x0.22 mm²	10.1	48	121

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
209086	2x2x0.50 mm²	7.4	17	52
209087	3x2x0.50 mm²	7.8	25	66
209088	4x2x0.50 mm²	8.6	33	83
209089	5x2x0.50 mm²	9.8	42	108
209090	6x2x0.50 mm²	10.7	50	126
209092	8x2x0.50 mm²	11.4	67	156
209094	10x2x0.50 mm²	13.1	83	196
209096	12x2x0.50 mm²	13.7	100	226

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
209104	2x2x0.75 mm²	8.1	25	64
209105	3x2x0.75 mm²	8.5	37	84
209106	4x2x0.75 mm²	9.8	50	115
209107	5x2x0.75 mm²	10.7	62	138
209108	6x2x0.75 mm²	11.7	75	161
209110	8x2x0.75 mm²	12.7	100	207
209112	10x2x0.75 mm²	14.4	125	253
209114	12x2x0.75 mm²	15.0	150	293

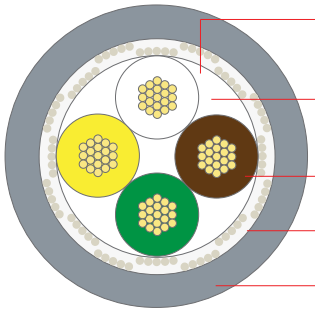
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
209122	2x2x1 mm²	8.6	33	76
209123	3x2x1 mm²	9.5	50	109
209124	4x2x1 mm²	10.4	66	137
209125	5x2x1 mm²	11.4	83	165
209126	6x2x1 mm²	12.7	100	199
209128	8x2x1 mm²	13.5	133	249
209130	10x2x1 mm²	15.3	166	305
209132	12x2x1 mm²	16.0	200	355

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
209140	2x2x1.5 mm²	10.5	50	114
209141	3x2x1.5 mm²	11.1	74	151
209142	4x2x1.5 mm²	12.5	99	197
209143	5x2x1.5 mm²	13.7	124	238
209144	6x2x1.5 mm²	15.0	149	279
209146	8x2x1.5 mm²	16.0	199	354
209148	10x2x1.5 mm²	18.4	249	443
209150	12x2x1.5 mm²	19.3	298	517

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
209158	2x2x2.5 mm²	12.2	83	165
209159	3x2x2.5 mm²	13.0	124	222
209160	4x2x2.5 mm²	14.3	166	283
209161	5x2x2.5 mm²	15.8	207	344
209162	6x2x2.5 mm²	17.4	249	414
209164	8x2x2.5 mm²	18.6	331	528
209166	10x2x2.5 mm²	21.3	414	651
209168	12x2x2.5 mm²	22.3	497	764

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Stranded copper wire Class 5, IEC 60228
Insulation	PVC, in compliance with DIN 47100 insulation colour coding TI52 EN 50290-2-21, YI2 DIN VDE 0207-4
Separator tape	Pet tape min. 100% coverage
Screen	Tinned braided copper wire
Sheath	PVC - RAL 7001 Grey TM51 EN 50290-2-22, YM1 DIN VDE 0207-5

Application

PVC insulated and sheathed range is used for signal transmission in interior installations. Flexible and slim design provides installation advantages in confined spaces. Used in industrial electronics, computers and office equipment, indoor communication, audio and security systems. The cable is protected against ambient electromagnetic interference by its braided screen.

Upon demand, following customised types with numeric codes can be manufactured.
LIYCY-OZ: black core with white number codes
LIYCY-JZ: ground protection conductor (yellow/green), black & white number coded cores

Standards TSE K 353, DIN VDE 0812

Fire performance
Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range		
fixed		-30°C ...+70°C
flexing		0°C ...+50°C
Bending radius		
fixed min.		7.5 x D
flexing	min.	15 x D
Conductor resistance		
0.22 mm²	max.	96.0 Ω/km
0.50 mm²	max.	39.0 Ω/km
0.75 mm²	max.	26.0 Ω/km
1.0 mm²	max.	19.5 Ω/km
1.5 mm²	max.	13.3 Ω/km
2.5 mm²	max.	7.98 Ω/km
Insulation resistance	min.	200 MΩ x km
Test voltage		
0.22 mm²		1200 V
0.50 mm²		1200 V
0.75 mm²		1200 V
1.0 mm²		1200 V
1.5 mm²		2500 V
2.5 mm²		2500 V
Operating voltage	max.	300 V

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
203050	2x0.22 mm²	4.2	9	23
203051	3x0.22 mm²	4.4	11	27
203052	4x0.22 mm²	4.7	13	31
203053	5x0.22 mm²	5.1	16	38
203054	6x0.22 mm²	5.4	18	43
203055	7x0.22 mm²	5.4	20	44
203056	8x0.22 mm²	5.8	23	51
203057	9x0.22 mm²	6.2	25	57
203058	10x0.22 mm²	6.8	28	64
203060	12x0.22 mm²	7.0	33	71
203062	14x0.22 mm²	7.4	38	80
203064	16x0.22 mm²	7.8	42	90
203067	19x0.22 mm²	8.0	48	99

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
203086	2x0.50 mm²	5.2	14	35
203087	3x0.50 mm²	5.5	18	42
203088	4x0.50 mm²	5.9	24	51
203089	5x0.50 mm²	6.6	29	65
203090	6x0.50 mm²	7.1	33	75
203091	7x0.50 mm²	7.1	37	79
203092	8x0.50 mm²	7.6	43	91
203093	9x0.50 mm²	8.2	48	104
203094	10x0.50 mm²	8.8	53	108
203096	12x0.50 mm²	9.1	61	123
203098	14x0.50 mm²	10.1	72	151
203100	16x0.50 mm²	10.6	80	168
203103	19x0.50 mm²	10.9	93	187

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
203104	2x0.75 mm²	5.6	19	43
203105	3x0.75 mm²	6.0	26	53
203106	4x0.75 mm²	6.6	33	67
203107	5x0.75 mm²	7.2	39	81
203108	6x0.75 mm²	7.7	47	95
203109	7x0.75 mm²	7.7	53	100
203110	8x0.75 mm²	8.3	61	116
203111	9x0.75 mm²	9.0	67	133
203112	10x0.75 mm²	10.0	75	147
203114	12x0.75 mm²	10.3	88	167
203116	14x0.75 mm²	11.0	101	191
203118	16x0.75 mm²	11.6	116	217
203121	19x0.75 mm²	11.9	135	243

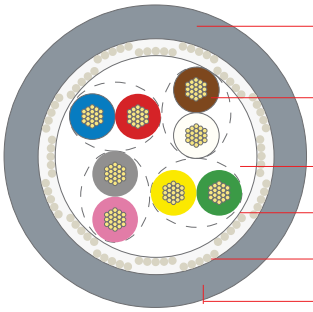
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
203122	2x1 mm²	5.9	24	49
203123	3x1 mm²	6.3	32	61
203124	4x1 mm²	7.0	41	78
203125	5x1 mm²	7.6	51	96
203126	6x1 mm²	8.2	60	113
203127	7x1 mm²	8.2	68	119
203128	8x1 mm²	8.8	77	137
203129	9x1 mm²	9.9	87	167
203130	10x1 mm²	10.6	97	175
203132	12x1 mm²	11.0	113	201
203134	14x1 mm²	11.7	132	231
203136	16x1 mm²	12.5	149	264
203139	19x1 mm²	12.9	175	299

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
203140	2x1.5 mm²	7.0	33	70
203141	3x1.5 mm²	7.5	47	87
203142	4x1.5 mm²	8.1	59	107
203143	5x1.5 mm²	8.8	73	131
203144	6x1.5 mm²	9.9	87	165
203145	7x1.5 mm²	9.9	99	175
203146	8x1.5 mm²	10.7	113	203
203147	9x1.5 mm²	11.6	127	235
203148	10x1.5 mm²	12.6	141	249
203150	12x1.5 mm²	13.0	166	286
203152	14x1.5 mm²	13.9	193	329
203154	16x1.5 mm²	14.6	219	369
203157	19x1.5 mm²	15.1	256	421

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
203158	2x2.5 mm²	7.9	51	96
203159	3x2.5 mm²	8.4	73	120
203160	4x2.5 mm²	9.6	94	160
203161	5x2.5 mm²	10.4	116	196
203162	6x2.5 mm²	11.3	138	235
203163	7x2.5 mm²	11.3	158	251
203164	8x2.5 mm²	12.4	181	297
203165	9x2.5 mm²	13.4	205	341
203166	10x2.5 mm²	14.4	226	357
203168	12x2.5 mm²	14.9	268	415
203170	14x2.5 mm²	15.9	313	477
203172	16x2.5 mm²	17.0	355	548
203175	19x2.5 mm²	17.6	418	629

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Stranded copper wire Class 5, IEC 60228
Insulation	PVC, in compliance with DIN 47100 insulation colour coding TI52 EN 50290-2-21, YI2 DIN VDE 0207-4
Strand	Pairs are bundled together in stranded layers
Separator tape	Pet tape min. 100% coverage
Screen	Tinned braided copper wire
Sheath	PVC - RAL 7001 Grey TM51 EN 50290-2-22, YM1 DIN VDE 0207-5

Application

Halogen-free insulated and sheathed, twisted-pair cable range is used for signal transmission in interior installations. Flexible and slim design provides installation advantages in confined spaces. Used in industrial electronics, computers and office equipment, indoor communication, audio and security systems. The cable is protected against ambient electromagnetic interference by its braided screen.

Standards TSE K 353, DIN VDE 0812

Fire performance

Vertical flame propagation EN 60332-1-2

EU Declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range			
	fixed		-30°C ...+70°C
	flexing		0°C ...+50°C
Bending radius			
	fixed min.		7.5 x D
	flexing	min.	15 x D
Conductor resistance			
	0.22 mm²	max.	96.0 Ω/km
	0.50 mm²	max.	39.0 Ω/km
	0.75 mm²	max.	26.0 Ω/km
	1.0 mm²	max.	19.5 Ω/km
	1.5 mm²	max.	13.3 Ω/km
	2.5 mm²	max.	7.98 Ω/km
Insulation resistance		min.	200 MΩ x km
Test voltage			
	0.22 mm²		1200 V
	0.50 mm²		1200 V
	0.75 mm²		1200 V
	1.0 mm²		1200 V
	1.5 mm²		2500 V
	2.5 mm²		2500 V
Operating voltage		max.	300 V

Specifications may vary depending on technical

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
211050	2x2x0.22 mm²	6.0	15	38
211051	3x2x0.22 mm²	6.3	20	47
211052	4x2x0.22 mm²	7.0	24	58
211053	5x2x0.22 mm²	7.6	30	68
211054	6x2x0.22 mm²	8.2	35	79
211056	8x2x0.22 mm²	8.7	43	94
211058	10x2x0.22 mm²	10.2	54	123
211060	12x2x0.22 mm²	10.6	62	138

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
211086	2x2x0.50 mm²	7.9	26	64
211087	3x2x0.50 mm²	8.3	36	80
211088	4x2x0.50 mm²	9.1	45	96
211089	5x2x0.50 mm²	10.3	54	124
211090	6x2x0.50 mm²	11.2	64	143
211092	8x2x0.50 mm²	11.9	83	175
211094	10x2x0.50 mm²	13.6	102	219
211096	12x2x0.50 mm²	14.2	119	249

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
211104	2x2x0.75 mm²	8.6	36	78
211105	3x2x0.75 mm²	9.0	49	98
211106	4x2x0.75 mm²	10.3	63	131
211107	5x2x0.75 mm²	11.2	76	155
211108	6x2x0.75 mm²	12.4	87	182
211110	8x2x0.75 mm²	13.2	112	223
211112	10x2x0.75 mm²	14.9	139	272
211114	12x2x0.75 mm²	15.5	165	312

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
211122	2x2x1 mm²	9.1	45	89
211123	3x2x1 mm²	10.0	63	125
211124	4x2x1 mm²	10.9	80	154
211125	5x2x1 mm²	11.9	99	184
211126	6x2x1 mm²	13.2	119	221
211128	8x2x1 mm²	14.0	152	272
211130	10x2x1 mm²	15.8	189	332
211132	12x2x1 mm²	16.7	223	391

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
211140	2x2x1.5 mm²	11.0	63	131
211141	3x2x1.5 mm²	11.6	90	170
211142	4x2x1.5 mm²	13.0	116	217
211143	5x2x1.5 mm²	14.2	144	261
211144	6x2x1.5 mm²	15.5	169	303
211146	8x2x1.5 mm²	16.7	222	389
211148	10x2x1.5 mm²	19.0	281	480
211150	12x2x1.5 mm²	19.9	332	556

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
211158	2x2x2.5 mm²	12.7	99	185
211159	3x2x2.5 mm²	13.5	141	243
211160	4x2x2.5 mm²	14.8	185	307
211161	5x2x2.5 mm²	16.5	230	379
211162	6x2x2.5 mm²	17.9	273	442
211164	8x2x2.5 mm²	19.2	364	566
211166	10x2x2.5 mm²	21.9	450	692
211168	12x2x2.5 mm²	23.5	535	839

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
205050	2x0.22 mm²	3.7	6	19
205051	3x0.22 mm²	4.1	8	24
205052	4x0.22 mm²	4.4	10	28
205053	5x0.22 mm²	4.7	12	33
205054	6x0.22 mm²	5.1	14	39
205055	7x0.22 mm²	5.1	16	40
205056	8x0.22 mm²	5.4	18	45
205057	9x0.22 mm²	5.9	20	53
205058	10x0.22 mm²	6.3	22	55
205060	12x0.22 mm²	6.7	26	65
205062	14x0.22 mm²	7.1	30	73
205064	16x0.22 mm²	7.4	34	81
205067	19x0.22 mm²	7.7	40	92

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
205086	2x0.50 mm²	4.9	10	31
205087	3x0.50 mm²	5.2	14	38
205088	4x0.50 mm²	5.6	18	46
205089	5x0.50 mm²	6.1	23	56
205090	6x0.50 mm²	6.8	27	69
205091	7x0.50 mm²	6.8	31	72
205092	8x0.50 mm²	7.3	35	84
205093	9x0.50 mm²	7.9	39	96
205094	10x0.50 mm²	8.5	43	100
205096	12x0.50 mm²	8.7	52	113
205098	14x0.50 mm²	9.7	60	138
205100	16x0.50 mm²	10.3	68	157
205103	19x0.50 mm²	10.6	81	176

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
205104	2x0.75 mm²	5.3	17	41
205105	3x0.75 mm²	5.6	23	49
205106	4x0.75 mm²	6.1	29	60
205107	5x0.75 mm²	6.8	36	76
205108	6x0.75 mm²	7.4	42	91
205109	7x0.75 mm²	7.4	48	95
205110	8x0.75 mm²	7.9	54	108
205111	9x0.75 mm²	8.6	61	125
205112	10x0.75 mm²	9.7	67	140
205114	12x0.75 mm²	10.0	79	160
205116	14x0.75 mm²	10.6	92	180
205118	16x0.75 mm²	11.2	104	203
205121	19x0.75 mm²	11.6	123	232

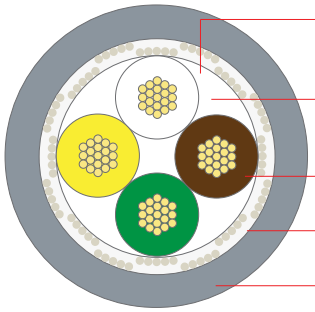
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
205122	2x1 mm²	5.6	21	47
205123	3x1 mm²	5.9	29	57
205124	4x1 mm²	6.6	38	73
205125	5x1 mm²	7.2	46	90
205126	6x1 mm²	7.8	54	107
205127	7x1 mm²	7.8	62	113
205128	8x1 mm²	8.4	71	130
205129	9x1 mm²	9.6	79	160
205130	10x1 mm²	10.3	88	166
205132	12x1 mm²	10.6	104	190
205134	14x1 mm²	11.3	121	217
205136	16x1 mm²	12.0	137	247
205139	19x1 mm²	12.6	163	288

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
205140	2x1.5 mm²	6.7	29	66
205141	3x1.5 mm²	7.1	42	81
205142	4x1.5 mm²	7.7	54	100
205143	5x1.5 mm²	8.4	66	124
205144	6x1.5 mm²	9.6	79	158
205145	7x1.5 mm²	9.6	91	168
205146	8x1.5 mm²	10.4	104	194
205147	9x1.5 mm²	11.2	116	221
205148	10x1.5 mm²	12.3	129	237
205150	12x1.5 mm²	12.7	153	275
205152	14x1.5 mm²	13.5	178	313
205154	16x1.5 mm²	14.3	203	356
205157	19x1.5 mm²	14.8	241	407

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
205158	2x2.5 mm²	7.6	46	91
205159	3x2.5 mm²	8.1	66	114
205160	4x2.5 mm²	8.8	87	143
205161	5x2.5 mm²	10.0	108	186
205162	6x2.5 mm²	11.0	128	226
205163	7x2.5 mm²	11.0	149	242
205164	8x2.5 mm²	11.8	169	278
205165	9x2.5 mm²	13.1	190	328
205166	10x2.5 mm²	14.1	211	343
205168	12x2.5 mm²	14.6	253	401
205170	14x2.5 mm²	15.6	294	460
205172	16x2.5 mm²	16.7	336	532
205175	19x2.5 mm²	17.3	398	612

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Stranded copper wire Class 5, IEC 60228
Insulation	PVC, in compliance with DIN 47100 insulation colour coding TI52 EN 50290-2-21, YI2 DIN VDE 0207-4
Separator tape	Pet tape min. 100% coverage
Screen	Tinned braided copper wire
Sheath	PVC - RAL 7001 Grey TM51 EN 50290-2-22, YM1 DIN VDE 0207-5

Application

PVC insulated and sheathed range is used for signal transmission in interior installations. Flexible and slim design provides installation advantages in confined spaces. Used in industrial electronics, computers and office equipment, indoor communication, audio and security systems. The cable is protected against signals from outside by its static screen.

Standards TSE K 353, DIN VDE 0812

Fire performance

Vertical flame propagation EN 60332-1-2

EU Declaration of conformity

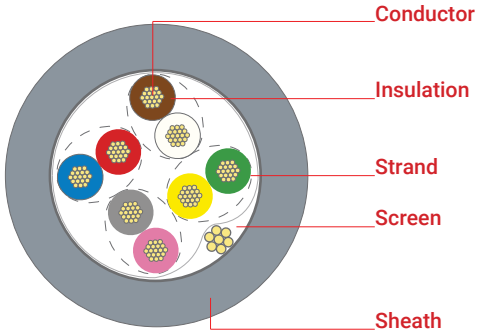
LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range		
fixed		-30°C ...+70°C
flexing		0°C ...+50°C
Bending radius		
fixed min.		7.5 x D
flexing	min.	15 x D
Conductor resistance		
0.22 mm²	max.	96.0 Ω/km
0.50 mm²	max.	39.0 Ω/km
0.75 mm²	max.	26.0 Ω/km
1.0 mm²	max.	19.5 Ω/km
1.5 mm²	max.	13.3 Ω/km
2.5 mm²	max.	7.98 Ω/km
Insulation resistance	min.	200 MΩ x km
Test voltage		
0.22 mm²		1200 V
0.50 mm²		1200 V
0.75 mm²		1200 V
1.0 mm²		1200 V
1.5 mm²		2500 V
2.5 mm²		2500 V
Operating voltage	max.	300 V

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire
Class 5, IEC 60228

PVC, in compliance with DIN 47100 insulation colour coding
TI52 EN 50290-2-21, YI2 DIN VDE 0207-4

Pairs are bundled together in stranded layers

Pet tape min. 100% coverage
Stranded tinned copper drain wire
Al-Pet tape min. 100% coverage

PVC - RAL 7001 Grey
TM51 EN 50290-2-22, YM1 DIN VDE 0207-5

Application

PVC insulated and sheathed, twisted-pair range is used for signal transmission in interior installations. Flexible and slim design provides installation advantages in confined spaces. Used in industrial electronics, computers and office equipment, indoor communication, audio and security systems. The cable is protected against signals from outside by its static screen.

Specifications

Temperature range			
	fixed		-30°C ...+70°C
	flexing		0°C ...+50°C
Bending radius			
	fixed min.		7.5 x D
	flexing	min.	15 x D
Conductor resistance			
	0.22 mm²	max.	96.0 Ω/km
	0.50 mm²	max.	39.0 Ω/km
	0.75 mm²	max.	26.0 Ω/km
	1.0 mm²	max.	19.5 Ω/km
	1.5 mm²	max.	13.3 Ω/km
	2.5 mm²	max.	7.98 Ω/km
Insulation resistance		min.	200 MΩ x km
Test voltage			
	0.22 mm²		1200 V
	0.50 mm²		1200 V
	0.75 mm²		1200 V
	1.0 mm²		1200 V
	1.5 mm²		2500 V
	2.5 mm²		2500 V
Operating voltage		max.	300 V

Standards TSE K 353, DIN VDE 0812

Fire performance
Vertical flame propagation EN 60332-1-2

EU Declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
213050	2x2x0.22 mm²	5.6	10	32
213051	3x2x0.22 mm²	5.9	14	40
213052	4x2x0.22 mm²	6.4	18	48
213053	5x2x0.22 mm²	7.2	22	61
213054	6x2x0.22 mm²	7.8	26	69
213056	8x2x0.22 mm²	8.3	34	85
213058	10x2x0.22 mm²	9.8	42	111
213060	12x2x0.22 mm²	10.2	50	126

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
213086	2x2x0.50 mm²	7.5	18	56
213087	3x2x0.50 mm²	7.9	27	71
213088	4x2x0.50 mm²	8.7	35	87
213089	5x2x0.50 mm²	9.9	43	113
213090	6x2x0.50 mm²	10.8	52	131
213092	8x2x0.50 mm²	11.5	68	161
213094	10x2x0.50 mm²	13.2	85	201
213096	12x2x0.50 mm²	13.8	102	231

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
213104	2x2x0.75 mm²	8.2	29	71
213105	3x2x0.75 mm²	8.6	42	91
213106	4x2x0.75 mm²	9.9	54	122
213107	5x2x0.75 mm²	10.8	67	145
213108	6x2x0.75 mm²	11.8	79	168
213110	8x2x0.75 mm²	12.8	104	215
213112	10x2x0.75 mm²	14.5	129	261
213114	12x2x0.75 mm²	15.1	154	301

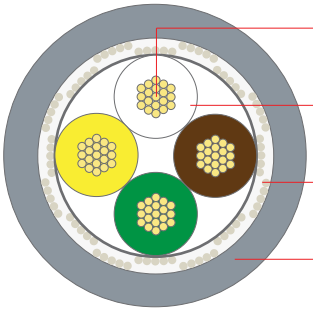
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
213122	2x2x1 mm²	8.7	38	83
213123	3x2x1 mm²	9.6	54	117
213124	4x2x1 mm²	10.5	71	144
213125	5x2x1 mm²	11.5	88	172
213126	6x2x1 mm²	12.8	104	207
213128	8x2x1 mm²	13.6	137	257
213130	10x2x1 mm²	15.4	171	314
213132	12x2x1 mm²	16.1	204	364

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
213140	2x2x1.5 mm²	10.6	54	121
213141	3x2x1.5 mm²	11.2	79	158
213142	4x2x1.5 mm²	12.6	104	205
213143	5x2x1.5 mm²	13.8	129	246
213144	6x2x1.5 mm²	15.1	154	287
213146	8x2x1.5 mm²	16.1	203	363
213148	10x2x1.5 mm²	18.5	253	452
213150	12x2x1.5 mm²	19.4	303	526

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
213158	2x2x2.5 mm²	12.3	87	172
213159	3x2x2.5 mm²	13.1	129	230
213160	4x2x2.5 mm²	14.4	170	291
213161	5x2x2.5 mm²	15.9	212	353
213162	6x2x2.5 mm²	17.5	253	423
213164	8x2x2.5 mm²	18.7	336	537
213166	10x2x2.5 mm²	21.4	419	660
213168	12x2x2.5 mm²	23.0	502	805

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire
Class 5, IEC 60228

PVC, in compliance with DIN 47100 insulation colour coding
TI52 EN 50290-2-21, YI2 DIN VDE 0207-4

Al-Pet tape min. 100% coverage
Tinned braided copper wire

PVC - RAL 7001 Grey
TM51 EN 50290-2-22, YM1 DIN VDE 0207-5

Application

PVC insulated and sheathed range is used for signal transmission in interior installations. Flexible and slim design provides installation advantages in confined spaces. Used in industrial electronics, computers and office equipment, indoor communication, audio and security systems. The cable is protected against ambient electromagnetic interference by its foil and braided screen.

Specifications

Temperature range			
	fixed		-30°C ...+70°C
	flexing		0°C ...+50°C
Bending radius			
	fixed min.		7.5 x D
	flexing	min.	15 x D
Conductor resistance			
	0.22 mm²	max.	96.0 Ω/km
	0.50 mm²	max.	39.0 Ω/km
	0.75 mm²	max.	26.0 Ω/km
	1.0 mm²	max.	19.5 Ω/km
	1.5 mm²	max.	13.3 Ω/km
	2.5 mm²	max.	7.98 Ω/km
Insulation resistance		min.	200 MΩ x km
Test voltage			
	0.22 mm²		1200 V
	0.50 mm²		1200 V
	0.75 mm²		1200 V
	1.0 mm²		1200 V
	1.5 mm²		2500 V
	2.5 mm²		2500 V
Operating voltage		max.	300 V

Standards

TSE K 353, DIN VDE 0812

Fire performance

Vertical flame propagation EN 60332-1-2

EU Declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
207050	2x0.22 mm²	4.3	7	23
207051	3x0.22 mm²	4.5	9	26
207052	4x0.22 mm²	4.8	13	31
207053	5x0.22 mm²	5.1	15	36
207054	6x0.22 mm²	5.5	18	43
207055	7x0.22 mm²	5.5	20	45
207056	8x0.22 mm²	5.9	22	55
207057	9x0.22 mm²	6.3	24	59
207058	10x0.22 mm²	6.9	27	63
207060	12x0.22 mm²	7.1	31	71
207062	14x0.22 mm²	7.5	35	83
207064	16x0.22 mm²	7.9	40	88
207067	19x0.22 mm²	8.1	46	98

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
207086	2x0.50 mm²	5.3	13	35
207087	3x0.50 mm²	5.6	17	41
207088	4x0.50 mm²	6.0	22	50
207089	5x0.50 mm²	6.7	27	63
207090	6x0.50 mm²	7.2	32	75
207091	7x0.50 mm²	7.2	36	78
207092	8x0.50 mm²	7.7	42	97
207093	9x0.50 mm²	8.3	46	106
207094	10x0.50 mm²	8.9	50	106
207096	12x0.50 mm²	9.6	60	131
207098	14x0.50 mm²	10.1	68	155
207100	16x0.50 mm²	10.7	78	164
207103	19x0.50 mm²	11.0	91	184

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
207104	2x0.75 mm²	5.7	18	43
207105	3x0.75 mm²	6.0	24	51
207106	4x0.75 mm²	6.7	32	66
207107	5x0.75 mm²	7.2	38	78
207108	6x0.75 mm²	7.8	46	94
207109	7x0.75 mm²	7.8	52	99
207110	8x0.75 mm²	8.4	60	123
207111	9x0.75 mm²	9.0	66	134
207112	10x0.75 mm²	10.1	73	144
207114	12x0.75 mm²	10.4	85	164
207116	14x0.75 mm²	11.0	99	197
207118	16x0.75 mm²	11.6	112	207
207121	19x0.75 mm²	12.0	132	238

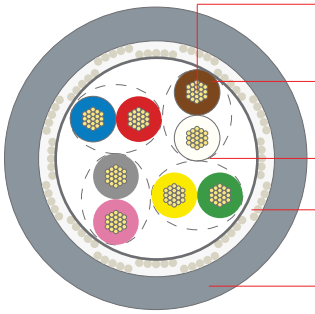
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
207122	2x1 mm²	6.0	22	48
207123	3x1 mm²	6.3	30	58
207124	4x1 mm²	7.1	40	77
207125	5x1 mm²	7.6	48	92
207126	6x1 mm²	8.2	58	110
207127	7x1 mm²	8.2	66	116
207128	8x1 mm²	10.0	76	158
207129	9x1 mm²	10.0	84	169
207130	10x1 mm²	10.7	94	172
207132	12x1 mm²	11.0	110	196
207134	14x1 mm²	10.0	125	226
207136	16x1 mm²	10.7	143	240
207139	19x1 mm²	11.0	168	275

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
207140	2x1.5 mm²	7.1	32	69
207141	3x1.5 mm²	7.5	44	83
207142	4x1.5 mm²	8.1	58	104
207143	5x1.5 mm²	8.8	72	128
207144	6x1.5 mm²	10.0	85	162
207145	7x1.5 mm²	10.0	97	172
207146	8x1.5 mm²	10.7	111	213
207147	9x1.5 mm²	11.6	123	235
207148	10x1.5 mm²	12.7	138	244
207150	12x1.5 mm²	13.1	163	281
207152	14x1.5 mm²	13.9	188	337
207154	16x1.5 mm²	14.7	214	358
207157	19x1.5 mm²	15.2	254	414

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
207158	2x2.5 mm²	8.0	49	95
207159	3x2.5 mm²	8.5	70	117
207160	4x2.5 mm²	9.6	92	155
207161	5x2.5 mm²	10.5	112	192
207162	6x2.5 mm²	11.3	135	228
207163	7x2.5 mm²	11.3	155	244
207164	8x2.5 mm²	13.5	178	319
207165	9x2.5 mm²	13.5	198	345
207166	10x2.5 mm²	14.5	220	349
207168	12x2.5 mm²	15.0	261	405
207170	14x2.5 mm²	13.5	301	476
207172	16x2.5 mm²	14.5	343	506
207175	19x2.5 mm²	15.0	405	589

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire
Class 5, IEC 60228

PVC, in compliance with DIN 47100 insulation colour coding
TI52 EN 50290-2-21, YI2 DIN VDE 0207-4

Pairs are bundled together in stranded layers

Al-Pet tape min. 100% coverage
Tinned braided copper wire

PVC - RAL 7001 Grey
TM51 EN 50290-2-22, YM1 DIN VDE 0207-5

Application

PVC insulated and sheathed range is used for signal transmission in interior installations. Flexible and slim design provides installation advantages in confined spaces. Used in industrial electronics, computers and office equipment, indoor communication, audio and security systems. The cable is protected against ambient electromagnetic interference by its foil and braided screen.

Standards TSE K 353, DIN VDE 0812

Fire performance

Vertical flame propagation EN 60332-1-2

EU Declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range		
fixed		-30°C ...+70°C
flexing		0°C ...+50°C
Bending radius		
fixed min.		7.5 x D
flexing	min.	15 x D
Conductor resistance		
0.22 mm²	max.	96.0 Ω/km
0.50 mm²	max.	39.0 Ω/km
0.75 mm²	max.	26.0 Ω/km
1.0 mm²	max.	19.5 Ω/km
1.5 mm²	max.	13.3 Ω/km
2.5 mm²	max.	7.98 Ω/km
Insulation resistance	min.	200 MΩ x km
Test voltage		
0.22 mm²		1200 V
0.50 mm²		1200 V
0.75 mm²		1200 V
1.0 mm²		1200 V
1.5 mm²		2500 V
2.5 mm²		2500 V
Operating voltage	max.	300 V
Standards		TSE K 353, DIN VDE 0812

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
215050	2x2x0.22 mm²	6.0	14	37
215051	3x2x0.22 mm²	6.3	18	45
215052	4x2x0.22 mm²	7.0	23	58
215053	5x2x0.22 mm²	7.6	27	66
215054	6x2x0.22 mm²	8.2	33	77
215056	8x2x0.22 mm²	8.7	41	92
215058	10x2x0.22 mm²	10.2	51	121
215060	12x2x0.22 mm²	10.6	59	136

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
215086	2x2x0.50 mm²	7.9	25	63
215087	3x2x0.50 mm²	8.3	34	78
215088	4x2x0.50 mm²	9.1	43	96
215089	5x2x0.50 mm²	10.3	52	122
215090	6x2x0.50 mm²	11.2	62	142
215092	8x2x0.50 mm²	11.9	79	172
215094	10x2x0.50 mm²	13.6	98	215
215096	12x2x0.50 mm²	14.2	115	245

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
215104	2x2x0.75 mm²	8.6	34	76
215105	3x2x0.75 mm²	9.0	47	97
215106	4x2x0.75 mm²	10.3	60	129
215107	5x2x0.75 mm²	11.2	74	153
215108	6x2x0.75 mm²	12.4	87	183
215110	8x2x0.75 mm²	13.2	114	226
215112	10x2x0.75 mm²	14.9	140	273
215114	12x2x0.75 mm²	15.5	168	316

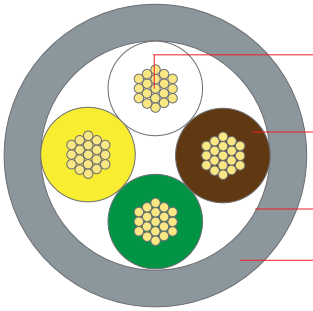
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
215122	2x2x1 mm²	9.1	43	89
215123	3x2x1 mm²	10.0	60	123
215124	4x2x1 mm²	10.9	78	152
215125	5x2x1 mm²	11.9	95	181
215126	6x2x1 mm²	13.2	114	218
215128	8x2x1 mm²	14.0	148	269
215130	10x2x1 mm²	15.8	185	328
215132	12x2x1 mm²	16.7	218	387

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
215140	2x2x1.5 mm²	11.0	61	129
215141	3x2x1.5 mm²	11.6	86	167
215142	4x2x1.5 mm²	13.0	114	216
215143	5x2x1.5 mm²	14.2	139	257
215144	6x2x1.5 mm²	15.5	167	302
215146	8x2x1.5 mm²	16.7	217	385
215148	10x2x1.5 mm²	18.9	269	468
215150	12x2x1.5 mm²	19.8	322	546

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
215158	2x2x2.5 mm²	12.7	97	183
215159	3x2x2.5 mm²	13.5	139	242
215160	4x2x2.5 mm²	14.8	181	303
215161	5x2x2.5 mm²	16.5	226	376
215162	6x2x2.5 mm²	17.9	268	438
215164	8x2x2.5 mm²	19.1	352	554
215166	10x2x2.5 mm²	21.8	439	682
215168	12x2x2.5 mm²	23.4	523	829

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire
Class 5, IEC 60228

HFFR, in compliance with DIN 47100 insulation colour coding
70°C EN 50290-2-26, HJ2 DIN VDE 0207-23

Pet tape min. 100% coverage

HFFR, RAL 7001 Grey
70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

Halogen-free insulated and sheathed range is used for signal transmission in interior installations. Flexible and slim design provides installation advantages in confined spaces. Used in industrial electronics, computers and office equipment, indoor communication, audio and security systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance.

Upon demand, following customized types with numeric codes can be manufactured.
LIHH-OZ: black core with white number codes
LIHH-JZ: ground protection conductor (yellow/green), black & white number coded cores

Standards

TSE K 353, DIN VDE 0812

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU Declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range		
fixed		-30°C ...+70°C
flexing		0°C ...+50°C
Bending radius		
fixed min.		7.5 x D
flexing	min.	15 x D
Conductor resistance		
0.22 mm²	max.	96.0 Ω/km
0.50 mm²	max.	39.0 Ω/km
0.75 mm²	max.	26.0 Ω/km
1.0 mm²	max.	19.5 Ω/km
1.5 mm²	max.	13.3 Ω/km
2.5 mm²	max.	7.98 Ω/km
Insulation resistance	min.	200 MΩ x km
Test voltage		
0.22 mm²		1200 V
0.50 mm²		1200 V
0.75 mm²		1200 V
1.0 mm²		1200 V
1.5 mm²		2500 V
2.5 mm²		2500 V
Operating voltage	max.	300 V

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
202050	2x0.22 mm²	3.6	4	16
202051	3x0.22 mm²	4.0	6	21
202052	4x0.22 mm²	4.3	8	26
202053	5x0.22 mm²	4.7	10	31
202054	6x0.22 mm²	5.0	12	36
202055	7x0.22 mm²	5.0	14	38
202056	8x0.22 mm²	5.4	16	44
202057	9x0.22 mm²	5.8	18	51
202058	10x0.22 mm²	6.2	20	52
202060	12x0.22 mm²	6.6	24	63
202062	14x0.22 mm²	7.0	28	71
202064	16x0.22 mm²	7.4	32	81
202067	19x0.22 mm²	7.6	38	90

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
202086	2x0.50 mm²	4.8	8	29
202087	3x0.50 mm²	5.1	12	35
202088	4x0.50 mm²	5.5	17	43
202089	5x0.50 mm²	6.0	21	54
202090	6x0.50 mm²	6.7	25	67
202091	7x0.50 mm²	6.7	29	70
202092	8x0.50 mm²	7.2	33	82
202093	9x0.50 mm²	7.8	37	94
202094	10x0.50 mm²	8.4	42	98
202096	12x0.50 mm²	8.7	50	113
202098	14x0.50 mm²	9.7	58	139
202100	16x0.50 mm²	10.2	67	156
202103	19x0.50 mm²	10.5	79	176

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
202104	2x0.75 mm²	5.2	12	36
202105	3x0.75 mm²	5.6	19	45
202106	4x0.75 mm²	6.0	25	55
202107	5x0.75 mm²	6.8	31	72
202108	6x0.75 mm²	7.3	37	86
202109	7x0.75 mm²	7.3	43	91
202110	8x0.75 mm²	7.9	50	106
202111	9x0.75 mm²	8.6	56	123
202112	10x0.75 mm²	9.6	62	135
202114	12x0.75 mm²	9.9	75	156
202116	14x0.75 mm²	10.6	87	179
202118	16x0.75 mm²	11.2	100	203
202121	19x0.75 mm²	11.5	119	229

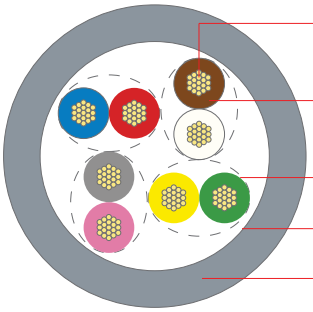
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
202122	2x1 mm²	5.5	17	42
202123	3x1 mm²	5.9	25	53
202124	4x1 mm²	6.4	33	67
202125	5x1 mm²	7.2	41	86
202126	6x1 mm²	7.8	50	104
202127	7x1 mm²	7.8	58	110
202128	8x1 mm²	8.4	66	128
202129	9x1 mm²	9.5	75	156
202130	10x1 mm²	10.2	83	162
202132	12x1 mm²	10.6	100	189
202134	14x1 mm²	11.3	116	217
202136	16x1 mm²	11.9	133	245
202139	19x1 mm²	12.5	158	286

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
202140	2x1.5 mm²	6.6	25	61
202141	3x1.5 mm²	7.1	37	78
202142	4x1.5 mm²	7.7	49	97
202143	5x1.5 mm²	8.4	62	121
202144	6x1.5 mm²	9.5	74	154
202145	7x1.5 mm²	9.5	87	164
202146	8x1.5 mm²	10.3	99	191
202147	9x1.5 mm²	11.2	111	222
202148	10x1.5 mm²	12.2	124	235
202150	12x1.5 mm²	12.6	149	272
202152	14x1.5 mm²	13.5	174	314
202154	16x1.5 mm²	14.2	199	354
202157	19x1.5 mm²	14.7	236	407

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
202158	2x2.5 mm²	7.5	41	86
202159	3x2.5 mm²	8.0	62	109
202160	4x2.5 mm²	8.8	82	140
202161	5x2.5 mm²	10.0	103	184
202162	6x2.5 mm²	10.9	124	222
202163	7x2.5 mm²	10.9	144	239
202164	8x2.5 mm²	11.8	165	278
202165	9x2.5 mm²	13.0	186	327
202166	10x2.5 mm²	14.0	207	341
202168	12x2.5 mm²	14.5	248	399
202170	14x2.5 mm²	15.5	290	460
202172	16x2.5 mm²	16.6	332	531
202175	19x2.5 mm²	17.2	394	613

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire
Class 5, IEC 60228

HFFR, in compliance with DIN 47100 insulation colour coding
70°C EN 50290-2-26, HJ2 DIN VDE 0207-23

Pairs are bundled together in stranded layers

Polyester tape min. 100% coverage

HFFR, RAL 7001 Grey
70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

Halogen-free insulated and sheathed, twisted-pair cable range is used for signal transmission in interior installations. Flexible and slim design provides installation advantages in confined spaces. Used in industrial electronics, computers and office equipment, indoor communication, audio and security systems. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance.

Standards

TSE K 353, DIN VDE 0812

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU Declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range		
fixed		-30°C ...+70°C
flexing		0°C ...+50°C
Bending radius		
fixed min.		7.5 x D
flexing	min.	15 x D
Conductor resistance		
0.22 mm²	max.	96.0 Ω/km
0.50 mm²	max.	39.0 Ω/km
0.75 mm²	max.	26.0 Ω/km
1.0 mm²	max.	19.5 Ω/km
1.5 mm²	max.	13.3 Ω/km
2.5 mm²	max.	7.98 Ω/km
Insulation resistance	min.	200 MΩ x km
Test voltage		
0.22 mm²		1200 V
0.50 mm²		1200 V
0.75 mm²		1200 V
1.0 mm²		1200 V
1.5 mm²		2500 V
2.5 mm²		2500 V
Operating voltage	max.	300 V

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
210050	2x2x0.22 mm²	5.5	8	30
210051	3x2x0.22 mm²	5.8	12	37
210052	4x2x0.22 mm²	6.3	16	46
210053	5x2x0.22 mm²	7.1	20	58
210054	6x2x0.22 mm²	7.7	24	67
210056	8x2x0.22 mm²	8.2	32	82
210058	10x2x0.22 mm²	9.7	40	109
210060	12x2x0.22 mm²	10.1	48	124

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
210086	2x2x0.50 mm²	7.4	17	53
210087	3x2x0.50 mm²	7.8	25	68
210088	4x2x0.50 mm²	8.6	33	85
210089	5x2x0.50 mm²	9.8	42	111
210090	6x2x0.50 mm²	10.7	50	129
210092	8x2x0.50 mm²	11.4	67	160
210094	10x2x0.50 mm²	13.1	83	201
210096	12x2x0.50 mm²	13.7	100	231

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
210104	2x2x0.75 mm²	8.1	25	66
210105	3x2x0.75 mm²	8.5	37	86
210106	4x2x0.75 mm²	9.8	50	117
210107	5x2x0.75 mm²	10.7	62	141
210108	6x2x0.75 mm²	11.7	75	164
210110	8x2x0.75 mm²	12.7	100	212
210112	10x2x0.75 mm²	14.4	125	259
210114	12x2x0.75 mm²	15.0	150	299

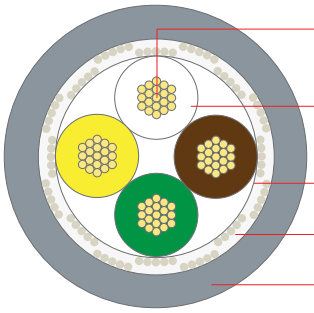
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
210122	2x2x1 mm²	8.6	33	77
210123	3x2x1 mm²	9.5	50	112
210124	4x2x1 mm²	10.4	66	140
210125	5x2x1 mm²	11.4	83	168
210126	6x2x1 mm²	12.7	100	203
210128	8x2x1 mm²	13.5	133	254
210130	10x2x1 mm²	15.3	166	311
210132	12x2x1 mm²	16.0	200	363

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
210140	2x2x1.5 mm²	10.5	50	116
210141	3x2x1.5 mm²	11.1	74	154
210142	4x2x1.5 mm²	12.5	99	201
210143	5x2x1.5 mm²	13.7	124	242
210144	6x2x1.5 mm²	15.0	149	285
210146	8x2x1.5 mm²	16.0	199	361
210148	10x2x1.5 mm²	18.4	249	452
210150	12x2x1.5 mm²	19.3	298	527

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
210158	2x2x2.5 mm²	12.2	83	167
210159	3x2x2.5 mm²	13.0	124	226
210160	4x2x2.5 mm²	14.3	166	288
210161	5x2x2.5 mm²	15.8	207	350
210162	6x2x2.5 mm²	17.4	249	421
210164	8x2x2.5 mm²	18.6	331	537
210166	10x2x2.5 mm²	21.3	414	662
210168	12x2x2.5 mm²	22.3	497	777

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire
Class 5, IEC 60228

HFFR, in compliance with DIN 47100 insulation colour coding
70°C EN 50290-2-26, HJ2 DIN VDE 0207-23

Pet tape min. 100% coverage

Tinned braided copper wire

HFFR, RAL 7001 Grey
70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

Halogen-free insulated and sheathed range is used for signal transmission in interior installations. Flexible and slim design provides installation advantages in confined spaces. Used in industrial electronics, computers and office equipment, indoor communication, audio and security systems. The cable is protected against ambient electromagnetic interference by its braided screen. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance.

Upon demand, following customized types with numeric codes can be manufactured.
LIHCH-OZ: black core with white number codes
LIHCH-JZ: ground protection conductor (yellow/green), black & white number coded cores

Standards

TSE K 353, DIN VDE 0812

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU Declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range		
fixed		-30°C ...+70°C
flexing		0°C ...+50°C
Bending radius		
fixed min.		7.5 x D
flexing	min.	15 x D
Conductor resistance		
0.22 mm²	max.	96.0 Ω/km
0.50 mm²	max.	39.0 Ω/km
0.75 mm²	max.	26.0 Ω/km
1.0 mm²	max.	19.5 Ω/km
1.5 mm²	max.	13.3 Ω/km
2.5 mm²	max.	7.98 Ω/km
Insulation resistance	min.	200 MΩ x km
Test voltage		
0.22 mm²		1200 V
0.50 mm²		1200 V
0.75 mm²		1200 V
1.0 mm²		1200 V
1.5 mm²		2500 V
2.5 mm²		2500 V
Operating voltage	max.	300 V

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
204050	2x0.22 mm²	4.2	9	23
204051	3x0.22 mm²	4.4	11	27
204052	4x0.22 mm²	4.7	13	31
204053	5x0.22 mm²	5.1	16	39
204054	6x0.22 mm²	5.4	18	43
204055	7x0.22 mm²	5.4	20	45
204056	8x0.22 mm²	5.8	23	53
204057	9x0.22 mm²	6.2	25	59
204058	10x0.22 mm²	6.8	28	65
204060	12x0.22 mm²	7.0	33	73
204062	14x0.22 mm²	7.4	38	82
204064	16x0.22 mm²	7.8	42	92
204067	19x0.22 mm²	8.0	48	101

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
204086	2x0.50 mm²	5.2	14	36
204087	3x0.50 mm²	5.5	18	42
204088	4x0.50 mm²	5.9	24	52
204089	5x0.50 mm²	6.6	29	66
204090	6x0.50 mm²	7.1	33	77
204091	7x0.50 mm²	7.1	37	80
204092	8x0.50 mm²	7.6	43	93
204093	9x0.50 mm²	8.2	48	107
204094	10x0.50 mm²	8.8	53	111
204096	12x0.50 mm²	9.1	61	126
204098	14x0.50 mm²	10.1	72	155
204100	16x0.50 mm²	10.6	80	172
204103	19x0.50 mm²	10.9	93	192

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
204104	2x0.75 mm²	5.6	19	44
204105	3x0.75 mm²	6.0	26	54
204106	4x0.75 mm²	6.6	33	68
204107	5x0.75 mm²	7.2	39	82
204108	6x0.75 mm²	7.7	47	97
204109	7x0.75 mm²	7.7	53	102
204110	8x0.75 mm²	8.3	61	118
204111	9x0.75 mm²	9.0	67	136
204112	10x0.75 mm²	10.0	75	150
204114	12x0.75 mm²	10.3	88	170
204116	14x0.75 mm²	11.0	101	195
204118	16x0.75 mm²	11.6	116	221
204121	19x0.75 mm²	11.9	135	248

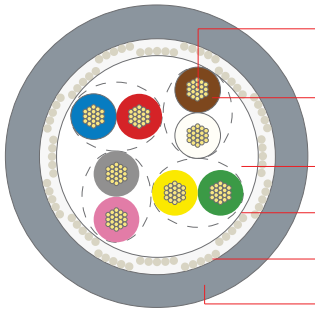
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
204122	2x1 mm²	5.9	24	50
204123	3x1 mm²	6.3	32	62
204124	4x1 mm²	7.0	41	80
204125	5x1 mm²	7.6	51	97
204126	6x1 mm²	8.2	60	115
204127	7x1 mm²	8.2	68	121
204128	8x1 mm²	8.8	77	140
204129	9x1 mm²	9.9	87	170
204130	10x1 mm²	10.6	97	178
204132	12x1 mm²	11.0	113	205
204134	14x1 mm²	11.7	132	235
204136	16x1 mm²	12.5	149	269
204139	19x1 mm²	12.9	175	305

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
204140	2x1.5 mm²	7.0	33	71
204141	3x1.5 mm²	7.5	47	89
204142	4x1.5 mm²	8.1	59	109
204143	5x1.5 mm²	8.8	73	134
204144	6x1.5 mm²	9.9	87	168
204145	7x1.5 mm²	9.9	99	178
204146	8x1.5 mm²	10.7	113	207
204147	9x1.5 mm²	11.6	127	240
204148	10x1.5 mm²	12.6	141	254
204150	12x1.5 mm²	13.0	166	291
204152	14x1.5 mm²	13.9	193	336
204154	16x1.5 mm²	14.6	219	376
204157	19x1.5 mm²	15.1	256	429

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
204158	2x2.5 mm²	7.9	51	97
204159	3x2.5 mm²	8.4	73	121
204160	4x2.5 mm²	9.6	94	162
204161	5x2.5 mm²	10.4	116	199
204162	6x2.5 mm²	11.3	138	239
204163	7x2.5 mm²	11.3	158	255
204164	8x2.5 mm²	12.4	181	302
204165	9x2.5 mm²	13.4	205	348
204166	10x2.5 mm²	14.4	226	363
204168	12x2.5 mm²	14.9	268	422
204170	14x2.5 mm²	15.9	313	485
204172	16x2.5 mm²	17.0	355	558
204175	19x2.5 mm²	17.6	418	640

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire
Class 5, IEC 60228

HFFR, in compliance with DIN 47100 insulation colour coding
70°C EN 50290-2-26, HJ2 DIN VDE 0207-23

Pairs are bundled together in stranded layers

Pet tape min. 100% coverage

Tinned braided copper wire

HFFR, RAL 7001 Grey
70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

Halogen-free insulated and sheathed, twisted-pair cable range is used for signal transmission in interior installations. Flexible and slim design provides installation advantages in confined spaces. Used in industrial electronics, computers and office equipment, indoor communication, audio and security systems. The cable is protected against ambient electromagnetic interference by its braided screen. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance.

Standards TSE K 353, DIN VDE 0812

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU Declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range		
fixed		-30°C ...+70°C
flexing		0°C ...+50°C
Bending radius		
fixed min.		7.5 x D
flexing	min.	15 x D
Conductor resistance		
0.22 mm²	max.	96.0 Ω/km
0.50 mm²	max.	39.0 Ω/km
0.75 mm²	max.	26.0 Ω/km
1.0 mm²	max.	19.5 Ω/km
1.5 mm²	max.	13.3 Ω/km
2.5 mm²	max.	7.98 Ω/km
Insulation resistance	min.	200 MΩ x km
Test voltage		
0.22 mm²		1200 V
0.50 mm²		1200 V
0.75 mm²		1200 V
1.0 mm²		1200 V
1.5 mm²		2500 V
2.5 mm²		2500 V
Operating voltage	max.	300 V

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
212050	2x2x0.22 mm²	6.0	15	39
212051	3x2x0.22 mm²	6.3	20	47
212052	4x2x0.22 mm²	7.0	24	59
212053	5x2x0.22 mm²	7.6	30	70
212054	6x2x0.22 mm²	8.2	35	80
212056	8x2x0.22 mm²	8.7	43	96
212058	10x2x0.22 mm²	10.2	54	125
212060	12x2x0.22 mm²	10.6	62	141

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
212086	2x2x0.50 mm²	7.9	26	65
212087	3x2x0.50 mm²	8.3	36	81
212088	4x2x0.50 mm²	9.1	45	99
212089	5x2x0.50 mm²	10.3	54	126
212090	6x2x0.50 mm²	11.2	64	146
212092	8x2x0.50 mm²	11.9	83	179
212094	10x2x0.50 mm²	13.6	102	223
212096	12x2x0.50 mm²	14.2	119	255

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
212104	2x2x0.75 mm²	8.6	36	79
212105	3x2x0.75 mm²	9.0	49	100
212106	4x2x0.75 mm²	10.3	63	133
212107	5x2x0.75 mm²	11.2	76	158
212108	6x2x0.75 mm²	12.4	87	186
212110	8x2x0.75 mm²	13.2	112	228
212112	10x2x0.75 mm²	14.9	139	277
212114	12x2x0.75 mm²	15.5	165	319

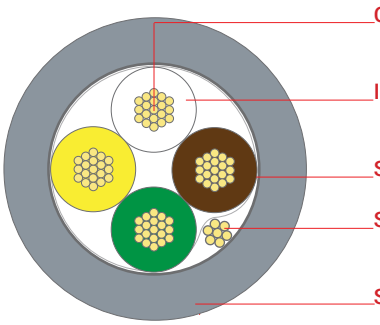
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
212122	2x2x1 mm²	9.1	45	91
212123	3x2x1 mm²	10.0	63	127
212124	4x2x1 mm²	10.9	80	156
212125	5x2x1 mm²	11.9	99	187
212126	6x2x1 mm²	13.2	119	225
212128	8x2x1 mm²	14.0	152	278
212130	10x2x1 mm²	15.8	189	338
212132	12x2x1 mm²	16.7	223	398

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
212140	2x2x1.5 mm²	11.0	63	133
212141	3x2x1.5 mm²	11.6	90	173
212142	4x2x1.5 mm²	13.0	116	221
212143	5x2x1.5 mm²	14.2	144	266
212144	6x2x1.5 mm²	15.5	169	309
212146	8x2x1.5 mm²	16.7	222	396
212148	10x2x1.5 mm²	19.0	281	489
212150	12x2x1.5 mm²	19.9	332	566

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
212158	2x2x2.5 mm²	12.7	99	187
212159	3x2x2.5 mm²	13.5	141	247
212160	4x2x2.5 mm²	14.8	185	312
212161	5x2x2.5 mm²	16.5	230	385
212162	6x2x2.5 mm²	17.9	273	450
212164	8x2x2.5 mm²	19.2	364	575
212166	10x2x2.5 mm²	21.9	450	703
212168	12x2x2.5 mm²	23.5	535	853

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire
Class 5, IEC 60228

HFFR, in compliance with DIN 47100 insulation colour coding
70°C EN 50290-2-26, HJ2 DIN VDE 0207-23

Pet tape min. 100% coverage

Stranded tinned copper drain wire
Al-Pet tape min. 100% coverage

HFFR, RAL 7001 Grey
70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

Halogen-free insulated and sheathed range is used for signal transmission in interior installations. Flexible and slim design provides installation advantages in confined spaces. Used in industrial electronics, computers and office equipment, indoor communication, audio and security systems. The cable is protected against signals from outside by its static screen. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance.

Upon demand, following customized types with numeric codes can be manufactured.
LIH(St)H-OZ: black core with white number codes
LIH(St)H-JZ: black core with white number codes, ground protection conductor (yellow/green)

Standards

TSE K 353, DIN VDE 0812

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range		
fixed		-30°C ...+70°C
flexing		0°C ...+50°C
Bending radius		
fixed min.		7.5 x D
flexing	min.	15 x D
Conductor resistance		
0.22 mm²	max.	96.0 Ω/km
0.50 mm²	max.	39.0 Ω/km
0.75 mm²	max.	26.0 Ω/km
1.0 mm²	max.	19.5 Ω/km
1.5 mm²	max.	13.3 Ω/km
2.5 mm²	max.	7.98 Ω/km
Insulation resistance	min.	200 MΩ x km
Test voltage		
0.22 mm²		1200 V
0.50 mm²		1200 V
0.75 mm²		1200 V
1.0 mm²		1200 V
1.5 mm²		2500 V
2.5 mm²		2500 V
Operating voltage	max.	300 V

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
206050	2x0.22 mm²	3.7	6	19
206051	3x0.22 mm²	4.1	8	24
206052	4x0.22 mm²	4.4	10	29
206053	5x0.22 mm²	4.7	12	33
206054	6x0.22 mm²	5.1	14	40
206055	7x0.22 mm²	5.1	16	41
206056	8x0.22 mm²	5.4	18	46
206057	9x0.22 mm²	5.9	20	54
206058	10x0.22 mm²	6.3	22	56
206060	12x0.22 mm²	6.7	26	67
206062	14x0.22 mm²	7.1	30	75
206064	16x0.22 mm²	7.4	34	83
206067	19x0.22 mm²	7.7	40	94

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
206086	2x0.50 mm²	4.9	10	32
206087	3x0.50 mm²	5.2	14	39
206088	4x0.50 mm²	5.6	18	47
206089	5x0.50 mm²	6.1	23	57
206090	6x0.50 mm²	6.8	27	71
206091	7x0.50 mm²	6.8	31	74
206092	8x0.50 mm²	7.3	35	86
206093	9x0.50 mm²	7.9	39	99
206094	10x0.50 mm²	8.5	43	102
206096	12x0.50 mm²	8.7	52	116
206098	14x0.50 mm²	9.7	60	141
206100	16x0.50 mm²	10.3	68	161
206103	19x0.50 mm²	10.6	81	181

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
206104	2x0.75 mm²	5.3	17	42
206105	3x0.75 mm²	5.6	23	50
206106	4x0.75 mm²	6.1	29	62
206107	5x0.75 mm²	6.8	36	77
206108	6x0.75 mm²	7.4	42	92
206109	7x0.75 mm²	7.4	48	97
206110	8x0.75 mm²	7.9	54	111
206111	9x0.75 mm²	8.6	61	128
206112	10x0.75 mm²	9.7	67	143
206114	12x0.75 mm²	10.0	79	163
206116	14x0.75 mm²	10.6	92	184
206118	16x0.75 mm²	11.2	104	208
206121	19x0.75 mm²	11.6	123	237

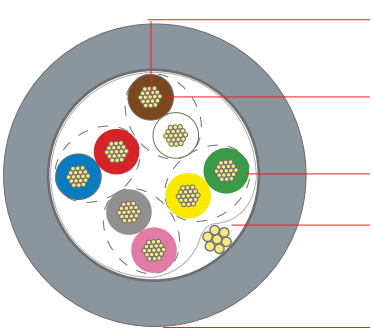
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
206122	2x1 mm²	5.6	21	48
206123	3x1 mm²	5.9	29	58
206124	4x1 mm²	6.6	38	75
206125	5x1 mm²	7.2	46	91
206126	6x1 mm²	7.8	54	108
206127	7x1 mm²	7.8	62	115
206128	8x1 mm²	8.4	71	133
206129	9x1 mm²	9.6	79	163
206130	10x1 mm²	10.3	88	169
206132	12x1 mm²	10.6	104	194
206134	14x1 mm²	11.3	121	222
206136	16x1 mm²	12.0	137	252
206139	19x1 mm²	12.6	163	294

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
206140	2x1.5 mm²	6.7	29	67
206141	3x1.5 mm²	7.1	42	8 3
206142	4x1.5 mm²	7.7	54	102
206143	5x1.5 mm²	8.4	66	126
206144	6x1.5 mm²	9.6	79	161
206145	7x1.5 mm²	9.6	91	171
206146	8x1.5 mm²	10.4	104	198
206147	9x1.5 mm²	11.2	116	226
206148	10x1.5 mm²	12.3	129	242
206150	12x1.5 mm²	12.7	153	280
206152	14x1.5 mm²	13.5	178	319
206154	16x1.5 mm²	14.3	203	363
206157	19x1.5 mm²	14.8	241	415

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
206158	2x2.5 mm²	7.6	46	93
206159	3x2.5 mm²	8.1	66	116
206160	4x2.5 mm²	8.8	87	145
206161	5x2.5 mm²	10.0	108	189
206162	6x2.5 mm²	11.0	128	230
206163	7x2.5 mm²	11.0	149	246
206164	8x2.5 mm²	11.8	169	283
206165	9x2.5 mm²	13.1	190	335
206166	10x2.5 mm²	14.1	211	349
206168	12x2.5 mm²	14.6	253	408
206170	14x2.5 mm²	15.6	294	468
206172	16x2.5 mm²	16.7	336	541
206175	19x2.5 mm²	17.3	398	622

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire
Class 5, IEC 60228

HFFR, in compliance with DIN 47100 insulation colour coding
70°C EN 50290-2-26, HJ2 DIN VDE 0207-23

Pairs are bundled together in stranded layers

Pet tape min. 100% coverage
Stranded tinned copper drain wire
Al-Pet tape min. 100% coverage

HFFR, RAL 7001 Grey
70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

Halogen-free insulated and sheathed, twisted-pair cable range is used for signal transmission in interior installations. Flexible and slim design provides installation advantages in confined spaces. Used in industrial electronics, computers and office equipment, indoor communication, audio and security systems. The cable is protected against signals from outside by its static screen. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance.

Specifications

Temperature range			
	fixed		-30°C ...+70°C
	flexing		0°C ...+50°C
Bending radius			
	fixed min.		7.5 x D
	flexing	min.	15 x D
Conductor resistance			
	0.22 mm²	max.	96.0 Ω/km
	0.50 mm²	max.	39.0 Ω/km
	0.75 mm²	max.	26.0 Ω/km
	1.0 mm²	max.	19.5 Ω/km
	1.5 mm²	max.	13.3 Ω/km
	2.5 mm²	max.	7.98 Ω/km
Insulation resistance		min.	200 MΩ x km
Test voltage			
	0.22 mm²		1200 V
	0.50 mm²		1200 V
	0.75 mm²		1200 V
	1.0 mm²		1200 V
	1.5 mm²		2500 V
	2.5 mm²		2500 V
Operating voltage		max.	300 V

Standards TSE K 353, DIN VDE 0812

Fire performance

Vertical flame propagation EN 60332-1-2
Corrosive gas EN 60754-1/2
Smoke density EN 61034-2

EU Declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
214050	2x2x0.22 mm²	5.6	10	33
214051	3x2x0.22 mm²	5.9	14	41
214052	4x2x0.22 mm²	6.4	18	49
214053	5x2x0.22 mm²	7.2	22	62
214054	6x2x0.22 mm²	7.8	26	71
214056	8x2x0.22 mm²	8.3	34	87
214058	10x2x0.22 mm²	9.8	42	114
214060	12x2x0.22 mm²	10.2	50	129

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
214086	2x2x0.50 mm²	7.5	18	57
214087	3x2x0.50 mm²	7.9	27	72
214088	4x2x0.50 mm²	8.7	35	89
214089	5x2x0.50 mm²	9.9	43	115
214090	6x2x0.50 mm²	10.8	52	134
214092	8x2x0.50 mm²	11.5	68	164
214094	10x2x0.50 mm²	13.2	85	206
214096	12x2x0.50 mm²	13.8	102	237

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
214104	2x2x0.75 mm²	8.2	29	73
214105	3x2x0.75 mm²	8.6	42	93
214106	4x2x0.75 mm²	9.9	54	125
214107	5x2x0.75 mm²	10.8	67	148
214108	6x2x0.75 mm²	11.8	79	172
214110	8x2x0.75 mm²	12.8	104	220
214112	10x2x0.75 mm²	14.5	129	267
214114	12x2x0.75 mm²	15.1	154	308

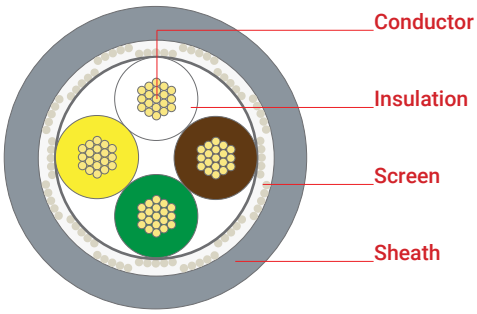
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
214122	2x2x1 mm²	8.7	38	84
214123	3x2x1 mm²	9.6	54	119
214124	4x2x1 mm²	10.5	71	147
214125	5x2x1 mm²	11.5	88	175
214126	6x2x1 mm²	12.8	104	211
214128	8x2x1 mm²	13.6	137	262
214130	10x2x1 mm²	15.4	171	320
214132	12x2x1 mm²	16.1	204	372

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
214140	2x2x1.5 mm²	10.6	54	123
214141	3x2x1.5 mm²	11.2	79	161
214142	4x2x1.5 mm²	12.6	104	209
214143	5x2x1.5 mm²	13.8	129	250
214144	6x2x1.5 mm²	15.1	154	293
214146	8x2x1.5 mm²	16.1	203	370
214148	10x2x1.5 mm²	18.5	253	461
214150	12x2x1.5 mm²	19.4	303	537

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
214158	2x2x2.5 mm²	12.3	87	175
214159	3x2x2.5 mm²	13.1	129	234
214160	4x2x2.5 mm²	14.4	170	296
214161	5x2x2.5 mm²	15.9	212	359
214162	6x2x2.5 mm²	17.5	253	430
214164	8x2x2.5 mm²	18.7	336	546
214166	10x2x2.5 mm²	21.4	419	671
214168	12x2x2.5 mm²	23.0	502	819

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire
Class 5, IEC 60228

HFFR, in compliance with DIN 47100 insulation colour coding
70°C EN 50290-2-26, HJ2 DIN VDE 0207-23

Al-Pet tape min. 100% coverage
Tinned braided copper wire

HFFR, RAL 7001 Grey
70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

Halogen-free insulated and sheathed range is used for signal transmission in interior installations. Flexible and slim design provides installation advantages in confined spaces. Used in industrial electronics, computers and office equipment, indoor communication, audio and security systems. The cable is protected against ambient electromagnetic interference by its foil and braided screen. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance.

Upon demand, following customized types with numeric codes can be manufactured.
LIH(St)CH-OZ: black core with white number codes
LIH(St)CH-JZ: black core with white number codes, ground protection conductor (yellow/green)

Standards TSE K 353, DIN VDE 0812

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU Declaration of conformity

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU Declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range		
fixed		-30°C ...+70°C
flexing		0°C ...+50°C
Bending radius		
fixed min.		7.5 x D
flexing	min.	15 x D
Conductor resistance		
0.22 mm²	max.	96.0 Ω/km
0.50 mm²	max.	39.0 Ω/km
0.75 mm²	max.	26.0 Ω/km
1.0 mm²	max.	19.5 Ω/km
1.5 mm²	max.	13.3 Ω/km
2.5 mm²	max.	7.98 Ω/km
Insulation resistance	min.	200 MΩ x km
Test voltage		
0.22 mm²		1200 V
0.50 mm²		1200 V
0.75 mm²		1200 V
1.0 mm²		1200 V
1.5 mm²		2500 V
2.5 mm²		2500 V
Operating voltage	max.	300 V

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
208050	2x0.22 mm²	4.3	7	23
208051	3x0.22 mm²	4.5	9	27
208052	4x0.22 mm²	4.8	13	32
208053	5x0.22 mm²	5.1	15	37
208054	6x0.22 mm²	5.5	18	44
208055	7x0.22 mm²	5.5	20	46
208056	8x0.22 mm²	5.9	22	56
208057	9x0.22 mm²	6.3	24	60
208058	10x0.22 mm²	6.9	27	64
208060	12x0.22 mm²	7.1	31	72
208062	14x0.22 mm²	7.5	34	84
208064	16x0.22 mm²	7.9	39	89
208067	19x0.22 mm²	8.1	45	99

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
208086	2x0.50 mm²	5.3	13	35
208087	3x0.50 mm²	5.6	17	42
208088	4x0.50 mm²	6.0	22	51
208089	5x0.50 mm²	6.7	28	66
208090	6x0.50 mm²	7.2	32	76
208091	7x0.50 mm²	7.2	36	80
208092	8x0.50 mm²	7.7	41	99
208093	9x0.50 mm²	8.3	46	108
208094	10x0.50 mm²	8.9	50	108
208096	12x0.50 mm²	9.6	58	132
208098	14x0.50 mm²	10.1	67	157
208100	16x0.50 mm²	10.7	75	166
208103	19x0.50 mm²	11.0	87	187

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
208104	2x0.75 mm²	5.7	18	43
208105	3x0.75 mm²	6.0	24	52
208106	4x0.75 mm²	6.7	32	67
208107	5x0.75 mm²	7.2	38	80
208108	6x0.75 mm²	7.8	45	96
208109	7x0.75 mm²	7.8	51	101
208110	8x0.75 mm²	8.4	59	126
208111	9x0.75 mm²	9.0	65	136
208112	10x0.75 mm²	10.1	72	147
208114	12x0.75 mm²	10.4	84	168
208116	14x0.75 mm²	11.0	97	200
208118	16x0.75 mm²	11.6	109	210
208121	19x0.75 mm²	12.0	128	241

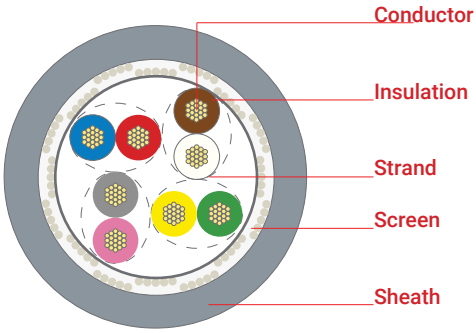
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
208122	2x1 mm²	6.0	22	50
208123	3x1 mm²	6.3	30	59
208124	4x1 mm²	7.1	40	79
208125	5x1 mm²	7.6	48	93
208126	6x1 mm²	8.2	58	112
208127	7x1 mm²	8.2	66	118
208128	8x1 mm²	8.9	76	149
208129	9x1 mm²	10.0	84	172
208130	10x1 mm²	10.7	94	175
208132	12x1 mm²	11.0	110	199
208134	14x1 mm²	11.7	126	239
208136	16x1 mm²	12.5	144	258
208139	19x1 mm²	12.9	169	295

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
208140	2x1.5 mm²	7.1	32	70
208141	3x1.5 mm²	7.5	44	85
208142	4x1.5 mm²	8.1	58	106
208143	5x1.5 mm²	8.8	71	130
208144	6x1.5 mm²	10.0	84	165
208145	7x1.5 mm²	10.0	96	175
208146	8x1.5 mm²	10.7	110	216
208147	9x1.5 mm²	11.6	122	238
208148	10x1.5 mm²	12.7	137	249
208150	12x1.5 mm²	13.1	161	286
208152	14x1.5 mm²	13.9	185	343
208154	16x1.5 mm²	14.7	211	364
208157	19x1.5 mm²	15.2	249	419

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
208158	2x2.5 mm²	8.0	49	96
208159	3x2.5 mm²	8.5	70	119
208160	4x2.5 mm²	9.6	92	158
208161	5x2.5 mm²	10.5	112	195
208162	6x2.5 mm²	11.3	135	232
208163	7x2.5 mm²	11.3	155	248
208164	8x2.5 mm²	12.4	177	315
208165	9x2.5 mm²	13.5	198	350
208166	10x2.5 mm²	14.5	220	354
208168	12x2.5 mm²	15.0	261	412
208170	14x2.5 mm²	15.9	302	495
208172	16x2.5 mm²	17.1	345	538
208175	19x2.5 mm²	17.6	407	619

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire
Class 5, IEC 60228

HFFR, in compliance with DIN 47100 insulation colour coding
70°C EN 50290-2-26, HJ2 DIN VDE 0207-23

Pairs are bundled together in stranded layers

Al-Pet tape min. 100% coverage
Tinned braided copper wire

HFFR, RAL 7001 Grey
70°C EN 50290-2-27, HM2 DIN VDE 0207-24

Application

Halogen-free insulated and sheathed, twisted-pair cable range is used for signal transmission in interior installations. Flexible and slim design provides installation advantages in confined spaces. Used in industrial electronics, computers and office equipment, indoor communication, audio and security systems. The cable is protected against ambient electromagnetic interference by its foil and braided screen. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance.

Specifications

Temperature range			
	fixed		-30°C ...+70°C
	flexing		0°C ...+50°C
Bending radius			
	fixed min.		7.5 x D
	flexing	min.	15 x D
Conductor resistance			
	0.22 mm²	max.	96.0 Ω/km
	0.50 mm²	max.	39.0 Ω/km
	0.75 mm²	max.	26.0 Ω/km
	1.0 mm²	max.	19.5 Ω/km
	1.5 mm²	max.	13.3 Ω/km
	2.5 mm²	max.	7.98 Ω/km
Insulation resistance		min.	200 MΩ x km
Test voltage			
	0.22 mm²		1200 V
	0.50 mm²		1200 V
	0.75 mm²		1200 V
	1.0 mm²		1200 V
	1.5 mm²		2500 V
	2.5 mm²		2500 V
Operating voltage		max.	300 V

Standards TSE K 353, DIN VDE 0812

Fire performance

Vertical flame propagation EN 60332-1-2
Corrosive gas EN 60754-1/2
Smoke density EN 61034-2

EU Declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
216050	2x2x0.22 mm²	6.0	14	38
216051	3x2x0.22 mm²	6.3	18	46
216052	4x2x0.22 mm²	7.0	23	59
216053	5x2x0.22 mm²	7.6	27	68
216054	6x2x0.22 mm²	8.2	33	78
216056	8x2x0.22 mm²	8.7	41	94
216058	10x2x0.22 mm²	10.2	51	123
216060	12x2x0.22 mm²	10.6	59	139

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
216086	2x2x0.50 mm²	7.9	25	64
216087	3x2x0.50 mm²	8.3	34	80
216088	4x2x0.50 mm²	9.1	43	98
216089	5x2x0.50 mm²	10.3	52	125
216090	6x2x0.50 mm²	11.2	62	145
216092	8x2x0.50 mm²	11.9	79	176
216094	10x2x0.50 mm²	13.6	98	220
216096	12x2x0.50 mm²	14.2	115	251

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
216104	2x2x0.75 mm²	8.6	34	77
216105	3x2x0.75 mm²	9.0	47	99
216106	4x2x0.75 mm²	10.3	60	132
216107	5x2x0.75 mm²	11.2	74	156
216108	6x2x0.75 mm²	12.4	87	186
216110	8x2x0.75 mm²	13.2	114	231
216112	10x2x0.75 mm²	14.9	140	279
216114	12x2x0.75 mm²	15.5	168	322

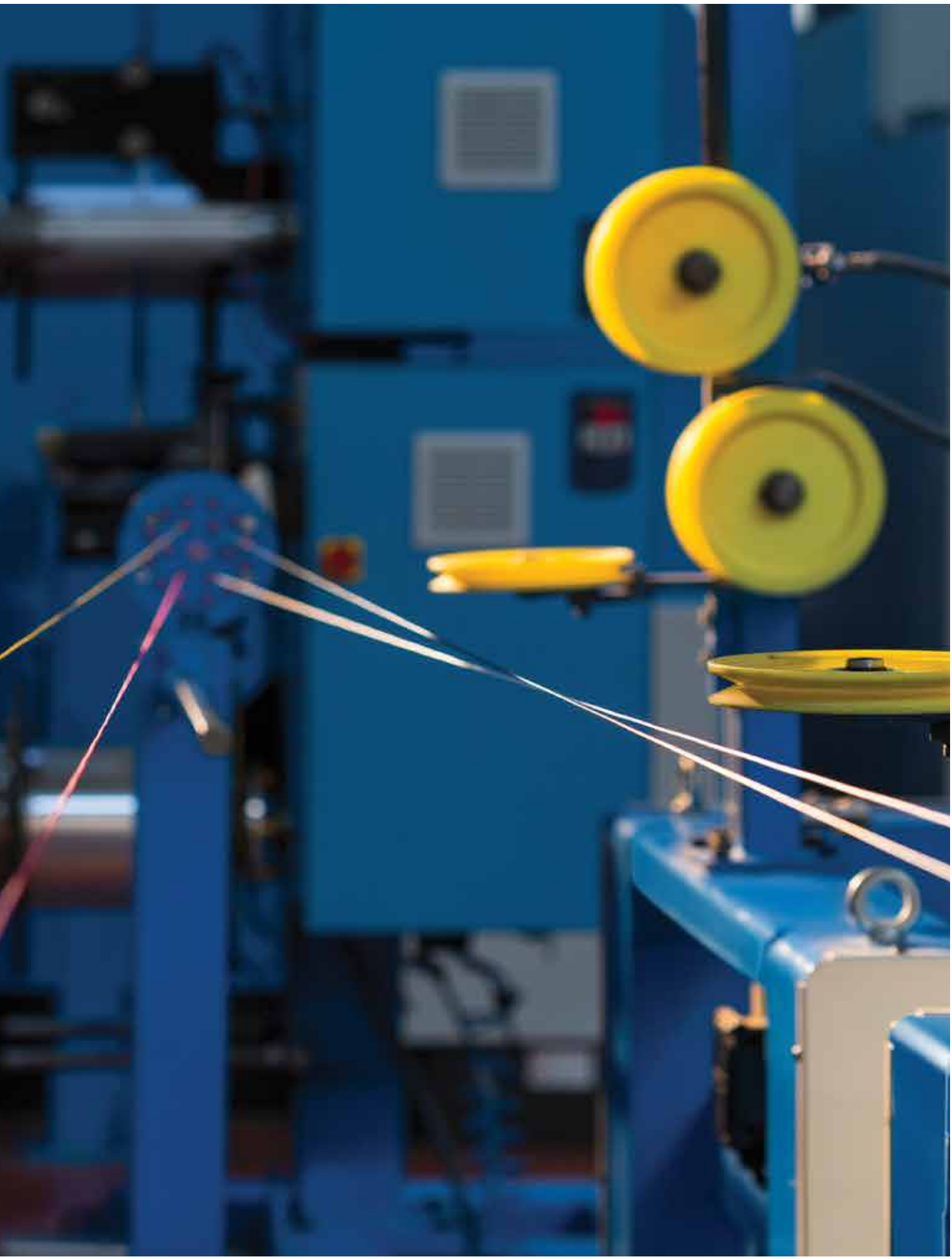
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
216122	2x2x1 mm²	9.1	43	90
216123	3x2x1 mm²	10.0	60	125
216124	4x2x1 mm²	10.9	78	155
216125	5x2x1 mm²	11.9	95	184
216126	6x2x1 mm²	13.2	114	222
216128	8x2x1 mm²	14.0	148	274
216130	10x2x1 mm²	15.8	185	334
216132	12x2x1 mm²	16.7	218	394

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
216140	2x2x1.5 mm²	11.0	61	132
216141	3x2x1.5 mm²	11.6	86	170
216142	4x2x1.5 mm²	13.0	114	220
216143	5x2x1.5 mm²	14.2	139	262
216144	6x2x1.5 mm²	15.5	167	307
216146	8x2x1.5 mm²	16.7	217	392
216148	10x2x1.5 mm²	18.9	269	477
216150	12x2x1.5 mm²	19.8	322	556

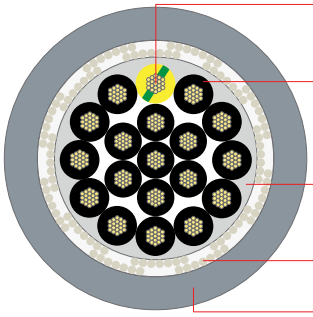
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
216158	2x2x2.5 mm²	12.7	97	186
216159	3x2x2.5 mm²	13.5	139	245
216160	4x2x2.5 mm²	14.8	181	308
216161	5x2x2.5 mm²	16.5	226	382
216162	6x2x2.5 mm²	17.9	268	446
216164	8x2x2.5 mm²	19.1	352	563
216166	10x2x2.5 mm²	21.8	439	693
216168	12x2x2.5 mm²	23.4	523	842

Specifications may vary depending on technical modifications.

Control Cables



Cable structure



Stranded copper wire
Class 5, IEC 60228

PVC, in compliance with EN 50334 insulation colour coding, black core with white number codes
TI2 EN 50363-3

PVC
TM2 EN 50363-4-1

Braided screen made of tinned copper wires

PVC - RAL 7001 Grey
TM2 EN 50363-4-1

Application

It is a flexible PVC insulated and sheathed control cable with number-coded cores and braided, tinned copper screen. Used in dry or wet interior areas not exposed to mechanical strain. Preferred for mobile installations and confined spaces thanks to its flexible and thin design. Used for measurement and control functions in electronic control systems, production and assembly lines and engineering projects.

YSLYCY-OZ: black core with white number codes
YSLYCYJZ: ground protection conductor (yellow/green), black core with white number codes

Standards TSE K 373, EN 50525-2-51

Fire performance
Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range			
	fixed		-30°C ...+70°C
	flexing		0°C ...+50°C
Bending radius			
	fixed	min.	7.5 x D
	flexing	min.	15 x D
Conductor resistance			
	0.50 mm²	max.	39.0 Ω/km
	0.75 mm²	max.	26.0 Ω/km
	1.0 mm²	max.	19.5 Ω/km
	1.5 mm²	max.	13.3 Ω/km
	2.5 mm²	max.	7.98 Ω/km
Insulation resistance		min.	20 MΩ x km
Test voltage			2500 V
Operating voltage		max.	300/500 V

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
219002	2x0.50 mm²	6.8	19	69
219003	3x0.50 mm²	7.1	24	74
219004	4x0.50 mm²	7.7	29	85
219005	5x0.50 mm²	8.2	35	101
219006	6x0.50 mm²	8.9	41	119
219007	7x0.50 mm²	8.9	45	122
219010	10x0.50 mm²	10.1	61	152
219012	12x0.50 mm²	11.0	72	179
219014	14x0.50 mm²	11.9	82	208
219016	16x0.50 mm²	12.4	92	226
219018	18x0.50 mm²	13.0	107	256
219019	19x0.50 mm²	13.0	111	260
219024	24x0.50 mm²	14.7	137	324
219027	27x0.50 mm²	15.3	152	352
219030	30x0.50 mm²	15.9	168	382
219033	33x0.50 mm²	16.6	183	417
219036	36x0.50 mm²	17.0	197	446
219037	37x0.50 mm²	17.0	202	449

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
233102	219062	7.2	24	80
233103	219063	7.7	32	90
233104	219064	8.2	40	101
233105	219065	8.9	47	124
233106	219066	9.5	55	143
233107	219067	9.5	62	148
233110	219070	11.1	86	193
233112	219072	12.2	101	230
233114	219074	12.8	116	256
233116	219076	13.6	131	287
233118	219078	14.2	150	324
233119	219079	14.2	157	329
233124	219084	15.9	195	405
233127	219087	16.7	217	447
233130	219090	17.6	239	495
233133	219093	18.4	262	543
233136	219096	18.8	283	579
233137	219097	18.8	290	584

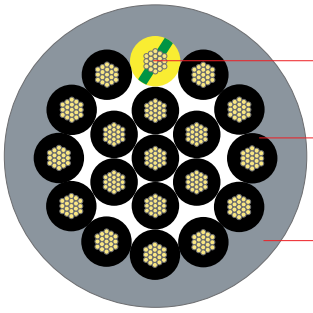
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
219122	2x1 mm²	7.8	29	95
219123	3x1 mm²	8.2	39	105
219124	4x1 mm²	8.9	50	121
219125	5x1 mm²	9.5	60	146
219126	6x1 mm²	10.1	70	167
219127	7x1 mm²	10.1	79	175
219130	10x1 mm²	12.2	110	239
219132	12x1 mm²	13.0	130	272
219134	14x1 mm²	14.0	154	317
219136	16x1 mm²	14.8	174	353
219138	18x1 mm²	15.4	194	394
219139	19x1 mm²	15.4	203	401
219144	24x1 mm²	17.2	252	492
219147	27x1 mm²	18.4	282	558
219150	30x1 mm²	19.4	324	625
219153	33x1 mm²	20.0	354	672
219156	36x1 mm²	20.7	383	730
219157	37x1 mm²	20.7	392	737

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
219182	2x1.5 mm²	9.0	40	128
219183	3x1.5 mm²	9.4	54	140
219184	4x1.5 mm²	10.1	69	159
219185	5x1.5 mm²	11.0	84	199
219186	6x1.5 mm²	12.2	99	242
219187	7x1.5 mm²	12.2	112	252
219190	10x1.5 mm²	14.4	161	336
219192	12x1.5 mm²	15.5	190	389
219194	14x1.5 mm²	16.6	219	446
219196	16x1.5 mm²	17.6	247	498
219198	18x1.5 mm²	18.5	276	565
219199	19x1.5 mm²	18.5	290	576
219204	24x1.5 mm²	21.0	375	729
219207	27x1.5 mm²	22.1	418	807
219210	30x1.5 mm²	23.0	462	879
219213	33x1.5 mm²	24.2	505	973
219216	36x1.5 mm²	25.0	548	1056
219217	37x1.5 mm²	25.0	561	1066

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
219242	2x2.5 mm²	9.8	59	163
219243	3x2.5 mm²	10.5	82	187
219244	4x2.5 mm²	11.2	106	212
219245	5x2.5 mm²	12.5	131	275
219246	6x2.5 mm²	13.6	154	327
219247	7x2.5 mm²	13.6	176	344
219250	10x2.5 mm²	16.3	253	468
219252	12x2.5 mm²	17.6	300	546
219254	14x2.5 mm²	19.1	360	645
219256	16x2.5 mm²	20.0	408	710
219258	18x2.5 mm²	21.0	455	804
219259	19x2.5 mm²	21.0	477	821
219264	24x2.5 mm²	23.7	596	1022
219267	27x2.5 mm²	25.2	668	1148
219270	30x2.5 mm²	26.4	738	1264
219273	33x2.5 mm²	27.3	808	1367
219276	36x2.5 mm²	28.2	876	1485
219277	37x2.5 mm²	28.2	899	1502

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire
Class 5, IEC 60228

PVC, in compliance with EN 50334 insulation colour coding, black core with white number codes
TI2 EN 50363-3

PVC - RAL 7001 Grey
TM2 EN 50363-4-1

Application

It is a flexible PVC insulated and sheathed control cable with number-coded cores. Used in dry or wet interior areas not exposed to mechanical strain. Preferred for mobile installations and confined spaces thanks to its flexible and thin design. Used for measurement and control functions in electronic control systems, production and assembly lines and engineering projects.

YSLY-OZ: black core with white number codes
YSLY-JZ: ground protection conductor (yellow/green), black core with white number codes

Standards TSE K 373, EN 50525-2-51

Fire performance
Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications

Temperature range			
	fixed		-30°C ...+70°C
	flexing		0°C ...+50°C
Bending radius			
	fixed	min.	7.5 x D
	flexing	min.	15 x D
Conductor resistance			
	0.50 mm²	max.	39.0 Ω/km
	0.75 mm²	max.	26.0 Ω/km
	1.0 mm²	max.	19.5 Ω/km
	1.5 mm²	max.	13.3 Ω/km
	2.5 mm²	max.	7.98 Ω/km
Insulation resistance		min.	20 MΩ x km
Test voltage			2500 V
Operating voltage		max.	300/500 V

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
217002	2x0.50 mm²	4.8	9	37
217003	3x0.50 mm²	5.1	14	40
217004	4x0.50 mm²	5.5	18	45
217005	5x0.50 mm²	6.2	23	61
217006	6x0.50 mm²	6.7	27	72
217007	7x0.50 mm²	6.7	32	75
217010	10x0.50 mm²	8.1	45	102
217012	12x0.50 mm²	9.0	55	123
217014	14x0.50 mm²	9.5	64	139
217016	16x0.50 mm²	10.0	73	153
217018	18x0.50 mm²	10.7	82	180
217019	19x0.50 mm²	10.7	87	184
217024	24x0.50 mm²	12.2	109	231
217027	27x0.50 mm²	12.8	123	255
217030	30x0.50 mm²	13.6	137	287
217033	33x0.50 mm²	14.1	151	311
217036	36x0.50 mm²	14.7	164	344
217037	37x0.50 mm²	14.7	169	347

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
217062	2x0.75 mm²	5.2	14	45
217063	3x0.75 mm²	5.5	20	51
217064	4x0.75 mm²	6.2	27	61
217065	5x0.75 mm²	6.7	34	77
217066	6x0.75 mm²	7.5	41	96
217067	7x0.75 mm²	7.5	48	101
217070	10x0.75 mm²	9.1	68	137
217072	12x0.75 mm²	9.8	82	159
217074	14x0.75 mm²	10.6	96	186
217076	16x0.75 mm²	11.2	109	206
217078	18x0.75 mm²	11.9	123	240
217079	19x0.75 mm²	11.9	130	245
217084	24x0.75 mm²	13.6	164	310
217087	27x0.75 mm²	14.2	185	340
217090	30x0.75 mm²	15.1	206	382
217093	33x0.75 mm²	15.7	226	417
217096	36x0.75 mm²	16.3	247	458
217097	37x0.75 mm²	16.3	253	463

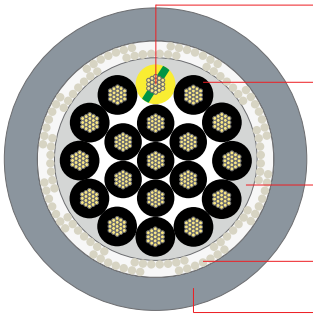
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
217122	2x1 mm²	5.6	18	55
217123	3x1 mm²	6.2	27	65
217124	4x1 mm²	6.7	36	75
217125	5x1 mm²	7.5	45	99
217126	6x1 mm²	8.1	55	117
217127	7x1 mm²	8.1	64	124
217130	10x1 mm²	9.8	91	167
217132	12x1 mm²	10.8	109	201
217134	14x1 mm²	11.5	127	230
217136	16x1 mm²	12.3	146	259
217138	18x1 mm²	12.9	164	297
217139	19x1 mm²	12.9	173	304
217144	24x1 mm²	14.9	219	389
217147	27x1 mm²	15.7	247	432
217150	30x1 mm²	16.6	274	482
217153	33x1 mm²	17.2	301	524
217156	36x1 mm²	17.9	329	577
217157	37x1 mm²	17.9	338	584

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
217182	2x1.5 mm²	6.8	27	81
217183	3x1.5 mm²	7.4	40	94
217184	4x1.5 mm²	8.1	53	109
217185	5x1.5 mm²	9.0	66	143
217186	6x1.5 mm²	9.8	80	171
217187	7x1.5 mm²	9.8	93	181
217190	10x1.5 mm²	12.1	133	251
217192	12x1.5 mm²	13.2	160	297
217194	14x1.5 mm²	14.1	187	341
217196	16x1.5 mm²	15.1	214	386
217198	18x1.5 mm²	15.8	240	439
217199	19x1.5 mm²	15.8	254	449
217204	24x1.5 mm²	18.2	321	573
217207	27x1.5 mm²	19.3	361	642
217210	30x1.5 mm²	20.2	401	707
217213	33x1.5 mm²	21.2	442	782
217216	36x1.5 mm²	22.0	482	858
217217	37x1.5 mm²	22.0	495	868

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
217242	2x2.5 mm²	7.8	44	114
217243	3x2.5 mm²	8.3	66	131
217244	4x2.5 mm²	9.2	88	156
217245	5x2.5 mm²	10.1	111	202
217246	6x2.5 mm²	11.2	133	246
217247	7x2.5 mm²	11.2	155	264
217250	10x2.5 mm²	13.8	222	365
217252	12x2.5 mm²	15.1	267	434
217254	14x2.5 mm²	16.3	311	505
217256	16x2.5 mm²	17.2	356	562
217258	18x2.5 mm²	18.2	400	648
217259	19x2.5 mm²	18.2	423	665
217264	24x2.5 mm²	20.9	535	845
217267	27x2.5 mm²	22.2	601	949
217270	30x2.5 mm²	23.4	669	1054
217273	33x2.5 mm²	24.3	735	1149
217276	36x2.5 mm²	25.2	802	1260
217277	37x2.5 mm²	25.2	824	1277

Specifications may vary depending on technical modifications.

Cable structure



Conductor	Stranded copper wire Class 5, IEC 60228
Insulation	HFFR, in compliance with EN 50334 insulation colour coding, black core with white number codes TI6 EN 50363-7
Inner Sheath	HFFR TM7 EN 50363-8
Screen	Braided screen made of tinned copper wires
Sheath	HFFR - RAL 7001 Grey TM7 EN 50363-8

Application

It is a flexible halogen-free insulated and sheathed control cable with number-coded cores and braided, tinned copper screen. Used in dry or wet interior areas not exposed to mechanical strain. Preferred for mobile installations and confined spaces thanks to its flexible and thin design. Used for measurement and control functions in electronic control systems, production and assembly lines and engineering projects. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance.

HSLHCH-OZ: black core with white number codes
HSLHCHJZ: ground protection conductor (yellow/green), black core with white number codes

Specifications

Temperature range			
	fixed		-30°C ...+70°C
	flexing		0°C ...+50°C
Bending radius			
	fixed	min.	7.5 x D
	flexing	min.	15 x D
Conductor resistance			
	0.50 mm²	max.	39.0 Ω/km
	0.75 mm²	max.	26.0 Ω/km
	1.0 mm²	max.	19.5 Ω/km
	1.5 mm²	max.	13.3 Ω/km
	2.5 mm²	max.	7.98 Ω/km
Insulation resistance		min.	20 MΩ x km
Test voltage			2500 V
Operating voltage		max.	300/500 V

Standards EN 50525-2-51

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
220002	2x0.50 mm²	6.8	19	70
220003	3x0.50 mm²	7.1	24	76
220004	4x0.50 mm²	7.7	29	87
220005	5x0.50 mm²	8.2	35	104
220006	6x0.50 mm²	8.9	41	122
220007	7x0.50 mm²	8.9	45	126
220010	10x0.50 mm²	10.1	61	156
220012	12x0.50 mm²	11.0	72	184
220014	14x0.50 mm²	11.9	82	214
220016	16x0.50 mm²	12.4	92	236
220018	18x0.50 mm²	13.0	107	264
220019	19x0.50 mm²	13.0	111	267
220024	24x0.50 mm²	14.7	137	333
220027	27x0.50 mm²	15.3	152	362
220030	30x0.50 mm²	15.9	168	393
220033	33x0.50 mm²	16.6	183	430
220036	36x0.50 mm²	17.0	197	459
220037	37x0.50 mm²	17.0	202	463

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
220062	2x0.75 mm²	7.2	24	82
220063	3x0.75 mm²	7.7	32	93
220064	4x0.75 mm²	8.2	40	104
220065	5x0.75 mm²	8.9	47	127
220066	6x0.75 mm²	9.5	55	147
220067	7x0.75 mm²	9.5	62	152
220070	10x0.75 mm²	11.1	86	198
220072	12x0.75 mm²	12.2	101	236
220074	14x0.75 mm²	12.8	116	263
220076	16x0.75 mm²	13.6	131	299
220078	18x0.75 mm²	14.2	150	333
220079	19x0.75 mm²	14.2	157	338
220084	24x0.75 mm²	15.9	195	416
220087	27x0.75 mm²	16.7	217	459
220090	30x0.75 mm²	17.6	239	508
220093	33x0.75 mm²	18.4	262	557
220096	36x0.75 mm²	18.8	283	595
220097	37x0.75 mm²	18.8	290	600

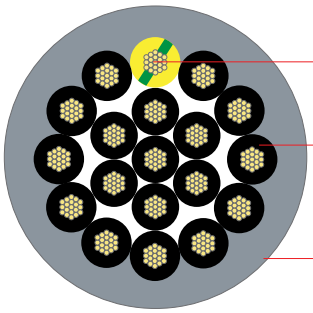
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
220122	2x1 mm²	7.8	29	97
220123	3x1 mm²	8.2	39	108
220124	4x1 mm²	8.9	50	124
220125	5x1 mm²	9.5	60	150
220126	6x1 mm²	10.1	70	172
220127	7x1 mm²	10.1	79	179
220130	10x1 mm²	12.2	110	245
220132	12x1 mm²	13.0	130	279
220134	14x1 mm²	14.0	154	326
220136	16x1 mm²	14.8	174	367
220138	18x1 mm²	15.4	194	404
220139	19x1 mm²	15.4	203	411
220144	24x1 mm²	17.2	252	504
220147	27x1 mm²	18.4	282	572
220150	30x1 mm²	19.4	324	641
220153	33x1 mm²	20.0	354	689
220156	36x1 mm²	20.7	383	749
220157	37x1 mm²	20.7	392	756

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
220182	2x1.5 mm²	9.0	40	132
220183	3x1.5 mm²	9.4	54	144
220184	4x1.5 mm²	10.1	69	163
220185	5x1.5 mm²	11.0	84	204
220186	6x1.5 mm²	12.2	99	249
220187	7x1.5 mm²	12.2	112	259
220190	10x1.5 mm²	14.4	161	345
220192	12x1.5 mm²	15.5	190	399
220194	14x1.5 mm²	16.6	219	458
220196	16x1.5 mm²	17.6	247	520
220198	18x1.5 mm²	18.5	276	580
220199	19x1.5 mm²	18.5	290	591
220204	24x1.5 mm²	21.0	375	748
220207	27x1.5 mm²	22.1	418	828
220210	30x1.5 mm²	23.0	462	902
220213	33x1.5 mm²	24.2	505	998
220216	36x1.5 mm²	25.0	548	1084
220217	37x1.5 mm²	25.0	561	1094

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
220242	2x2.5 mm²	9.8	59	167
220243	3x2.5 mm²	10.5	82	192
220244	4x2.5 mm²	11.2	106	217
220245	5x2.5 mm²	12.5	131	281
220246	6x2.5 mm²	13.6	154	334
220247	7x2.5 mm²	13.6	176	352
220250	10x2.5 mm²	16.3	253	479
220252	12x2.5 mm²	17.6	300	558
220254	14x2.5 mm²	19.1	360	660
220256	16x2.5 mm²	20.0	408	737
220258	18x2.5 mm²	21.0	455	822
220259	19x2.5 mm²	21.0	477	839
220264	24x2.5 mm²	23.7	596	1045
220267	27x2.5 mm²	25.2	668	1174
220270	30x2.5 mm²	26.4	738	1292
220273	33x2.5 mm²	27.3	808	1397
220276	36x2.5 mm²	28.2	876	1517
220277	37x2.5 mm²	28.2	899	1535

Specifications may vary depending on technical modifications.

Cable structure



Stranded copper wire
Class 5, IEC 60228

HFFR, in compliance with EN 50334 insulation colour coding, black core with white number codes
TI6 EN 50363-7

HFFR - RAL 7001 Grey
TM7 EN 50363-8

Application

It is a flexible halogen-free insulated and sheathed control cable with number-coded cores. Used in dry or wet interior areas not exposed to mechanical strain. Preferred for mobile installations and confined spaces thanks to its flexible and thin design. Used for measurement and control functions in electronic control systems, production and assembly lines and engineering projects. Cables are composed of halogen-free materials (flame retardant materials that do not emit toxic gas or black dense smoke that lowers visibility). They are primarily used in highly populated areas that should have fire resistance.

HSLH-OZ: black core with white number codes
HSLHJZ: ground protection conductor (yellow/green), black core with white number codes

Specifications

Temperature range			
	fixed		-30°C ...+70°C
	flexing		0°C ...+50°C
Bending radius			
	fixed	min.	7.5 x D
	flexing	min.	15 x D
Conductor resistance	0.50 mm²	max.	39.0 Ω/km
	0.75 mm²	max.	26.0 Ω/km
	1.0 mm²	max.	19.5 Ω/km
	1.5 mm²	max.	13.3 Ω/km
	2.5 mm²	max.	7.98 Ω/km
Insulation resistance		min.	20 MΩ x km
Test voltage			2500 V
Operating voltage		max.	300/500 V

Standards EN 50525-2-51

Fire performance

Vertical flame propagation	EN 60332-1-2
Corrosive gas	EN 60754-1/2
Smoke density	EN 61034-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
218002	2x0.50 mm²	4.8	9	38
218003	3x0.50 mm²	5.1	14	42
218004	4x0.50 mm²	5.5	18	47
218005	5x0.50 mm²	6.2	23	63
218006	6x0.50 mm²	6.7	27	74
218007	7x0.50 mm²	6.7	32	78
218010	10x0.50 mm²	8.1	45	105
218012	12x0.50 mm²	9.0	55	127
218014	14x0.50 mm²	9.5	64	143
218016	16x0.50 mm²	10.0	73	173
218018	18x0.50 mm²	10.7	82	186
218019	19x0.50 mm²	10.7	87	189
218024	24x0.50 mm²	12.2	109	239
218027	27x0.50 mm²	12.8	123	263
218030	30x0.50 mm²	13.6	137	296
218033	33x0.50 mm²	14.1	151	321
218036	36x0.50 mm²	14.7	164	355
218037	37x0.50 mm²	14.7	169	358

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
218062	2x0.75 mm²	5.2	14	46
218063	3x0.75 mm²	5.5	20	52
218064	4x0.75 mm²	6.2	27	63
218065	5x0.75 mm²	6.7	34	79
218066	6x0.75 mm²	7.5	41	98
218067	7x0.75 mm²	7.5	48	104
218070	10x0.75 mm²	9.1	68	141
218072	12x0.75 mm²	9.8	82	163
218074	14x0.75 mm²	10.6	96	191
218076	16x0.75 mm²	11.2	109	231
218078	18x0.75 mm²	11.9	123	247
218079	19x0.75 mm²	11.9	130	252
218084	24x0.75 mm²	13.6	164	319
218087	27x0.75 mm²	14.2	185	349
218090	30x0.75 mm²	15.1	206	393
218093	33x0.75 mm²	15.7	226	429
218096	36x0.75 mm²	16.3	247	470
218097	37x0.75 mm²	16.3	253	476

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
218122	2x1 mm²	5.6	18	57
218123	3x1 mm²	6.2	27	67
218124	4x1 mm²	6.7	36	77
218125	5x1 mm²	7.5	45	102
218126	6x1 mm²	8.1	55	120
218127	7x1 mm²	8.1	64	127
218130	10x1 mm²	9.8	91	172
218132	12x1 mm²	10.8	109	206
218134	14x1 mm²	11.5	127	236
218136	16x1 mm²	12.3	146	289
218138	18x1 mm²	12.9	164	304
218139	19x1 mm²	12.9	173	311
218144	24x1 mm²	14.9	219	399
218147	27x1 mm²	15.7	247	443
218150	30x1 mm²	16.6	274	494
218153	33x1 mm²	17.2	301	537
218156	36x1 mm²	17.9	329	591
218157	37x1 mm²	17.9	338	599

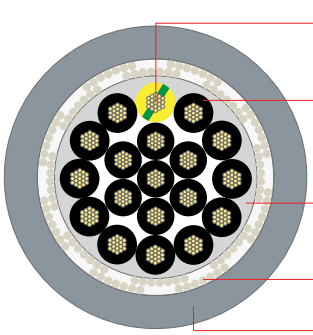
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
218182	2x1.5 mm²	6.8	27	83
218183	3x1.5 mm²	7.4	40	97
218184	4x1.5 mm²	8.1	53	112
218185	5x1.5 mm²	9.0	66	147
218186	6x1.5 mm²	9.8	80	176
218187	7x1.5 mm²	9.8	93	186
218190	10x1.5 mm²	12.1	133	258
218192	12x1.5 mm²	13.2	160	305
218194	14x1.5 mm²	14.1	187	350
218196	16x1.5 mm²	15.1	214	431
218198	18x1.5 mm²	15.8	240	451
218199	19x1.5 mm²	15.8	254	461
218204	24x1.5 mm²	18.2	321	589
218207	27x1.5 mm²	19.3	361	660
218210	30x1.5 mm²	20.2	401	726
218213	33x1.5 mm²	21.2	442	802
218216	36x1.5 mm²	22.0	482	881
218217	37x1.5 mm²	22.0	495	891

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
218242	2x2.5 mm²	7.8	44	117
218243	3x2.5 mm²	8.3	66	134
218244	4x2.5 mm²	9.2	88	159
218245	5x2.5 mm²	10.1	111	206
218246	6x2.5 mm²	11.2	133	252
218247	7x2.5 mm²	11.2	155	269
218250	10x2.5 mm²	13.8	222	373
218252	12x2.5 mm²	15.1	267	443
218254	14x2.5 mm²	16.3	311	516
218256	16x2.5 mm²	17.2	356	621
218258	18x2.5 mm²	18.2	400	662
218259	19x2.5 mm²	18.2	423	680
218264	24x2.5 mm²	20.9	535	863
218267	27x2.5 mm²	22.2	601	969
218270	30x2.5 mm²	23.4	669	1077
218273	33x2.5 mm²	24.3	735	1174
218276	36x2.5 mm²	25.2	802	1287
218277	37x2.5 mm²	25.2	824	1305

Specifications may vary depending on technical modifications.

H05VVC4V5-K
NYSLYCYÖ

Cable structure



Stranded copper wire
Class 5, IEC 60228

PVC, in compliance with EN 50334 insulation colour coding, black core with white number codes
TI2 EN 50363-3

PVC
TM2 EN 50363-4-1

Braided screen made of tinned copper wires

PVC - RAL 7001 Grey
TM5 EN 50363-4-1

Application

It is an oil-resistant flexible PVC insulated and sheathed control cable with number-coded cores, braided, tinned copper screen. Used in dry or wet interior areas not exposed to mechanical strain. Preferred for mobile installations and confined spaces thanks to its flexible design. Used for measurement and control functions in electronic control systems, production and assembly lines and engineering projects.

NYSLYCYÖ-OZ: black core with white number codes
NYSLYCYÖJZ: ground protection conductor (yellow/green), black core with white number codes

Specifications

Temperature range		
fixed		-30°C ...+70°C
flexing		0°C ...+50°C
Bending radius		
fixed	min.	7.5 x D
flexing	min.	15 x D
Oil resistance		EN 60811-404

Conductor resistance

0.50 mm²	max.	39.0 Ω/km
0.75 mm²	max.	26.0 Ω/km
1.0 mm²	max.	19.5 Ω/km
1.5 mm²	max.	13.3 Ω/km
2.5 mm²	max.	7.98 Ω/km

Insulation resistance	min.	20 MΩ x km
Test voltage		2500 V
Operating voltage	max.	300/500 V

Standards

EN 50525-2-51

Fire performance

Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
223002	2x0.50 mm²	8.0	34	102
223003	3x0.50 mm²	8.4	38	108
223004	4x0.50 mm²	9.1	47	124
223005	5x0.50 mm²	9.7	52	144
223006	6x0.50 mm²	10.5	62	170
223007	7x0.50 mm²	10.5	66	173
223010	10x0.50 mm²	12.4	86	225
223012	12x0.50 mm²	13.6	113	274
223014	14x0.50 mm²	14.3	123	300
223016	16x0.50 mm²	15.1	142	337
223018	18x0.50 mm²	15.7	153	371
223019	19x0.50 mm²	15.7	157	374
223024	24x0.50 mm²	17.7	184	455
223027	27x0.50 mm²	18.7	210	511
223030	30x0.50 mm²	19.6	226	557
223033	33x0.50 mm²	20.2	242	593
223036	36x0.50 mm²	20.9	257	640
223037	37x0.50 mm²	20.9	262	644

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
223062	2x0.75 mm²	8.4	38	113
223063	3x0.75 mm²	9.0	45	125
223064	4x0.75 mm²	9.5	57	138
223065	5x0.75 mm²	10.4	64	169
223066	6x0.75 mm²	11.1	76	195
223067	7x0.75 mm²	11.1	83	200
223070	10x0.75 mm²	13.6	126	287
223072	12x0.75 mm²	14.4	142	318
223074	14x0.75 mm²	15.4	166	368
223076	16x0.75 mm²	16.3	181	404
223078	18x0.75 mm²	16.9	196	444
223079	19x0.75 mm²	16.9	203	449
223084	24x0.75 mm²	19.3	253	570
223087	27x0.75 mm²	20.1	276	615
223090	30x0.75 mm²	21.1	299	673
223093	33x0.75 mm²	22.0	322	731
223096	36x0.75 mm²	22.5	344	777
223097	37x0.75 mm²	22.5	351	782

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
223122	2x1 mm²	9.0	47	133
223123	3x1 mm²	9.4	57	142
223124	4x1 mm²	10.0	66	155
223125	5x1 mm²	11.0	80	196
223126	6x1 mm²	12.1	95	237
223127	7x1 mm²	12.1	104	244
223130	10x1 mm²	14.3	151	324
223132	12x1 mm²	15.4	179	379
223134	14x1 mm²	16.5	200	429
223136	16x1 mm²	17.2	220	461
223138	18x1 mm²	18.3	250	538
223139	19x1 mm²	18.3	259	545
223144	24x1 mm²	20.7	311	670
223147	27x1 mm²	21.5	341	722
223150	30x1 mm²	22.6	371	793
223153	33x1 mm²	23.6	401	865
223156	36x1 mm²	24.3	443	942
223157	37x1 mm²	24.3	452	948

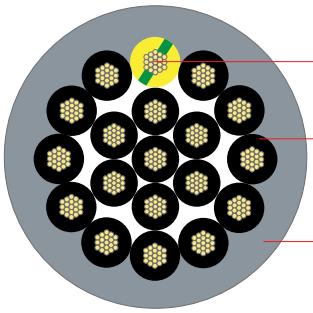
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
223182	2x1.5 mm²	10.0	56	165
223183	3x1.5 mm²	10.7	75	186
223184	4x1.5 mm²	11.4	89	203
223185	5x1.5 mm²	12.7	108	262
223186	6x1.5 mm²	14.0	139	324
223187	7x1.5 mm²	14.0	152	334
223190	10x1.5 mm²	16.6	206	440
223192	12x1.5 mm²	17.9	235	503
223194	14x1.5 mm²	19.3	275	588
223196	16x1.5 mm²	20.2	305	637
223198	18x1.5 mm²	21.2	334	718
223199	19x1.5 mm²	21.2	347	728
223204	24x1.5 mm²	23.9	422	893
223207	27x1.5 mm²	25.6	508	1042
223210	30x1.5 mm²	26.8	553	1137
223213	33x1.5 mm²	27.9	597	1233
223216	36x1.5 mm²	28.6	641	1319
223217	37x1.5 mm²	28.6	654	1329

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
223242	2x2.5 mm²	11.4	80	220
223243	3x2.5 mm²	12.4	107	256
223244	4x2.5 mm²	13.7	147	308
223245	5x2.5 mm²	14.9	171	377
223246	6x2.5 mm²	16.2	205	450
223247	7x2.5 mm²	16.2	227	467
223250	10x2.5 mm²	19.4	311	624
223252	12x2.5 mm²	20.9	359	716
223254	14x2.5 mm²	22.3	408	812
223256	16x2.5 mm²	23.6	456	899
223258	18x2.5 mm²	25.0	516	1041
223259	19x2.5 mm²	25.0	538	1058
223264	24x2.5 mm²	28.4	693	1337
223267	27x2.5 mm²	29.9	766	1475
223270	30x2.5 mm²	31.5	819	1607
223273	33x2.5 mm²	32.8	890	1748
223276	36x2.5 mm²	33.8	961	1889
223277	37x2.5 mm²	33.8	983	1906

Specifications may vary depending on technical modifications.

H05VV5-F
NYSLYÖ

Cable structure



Stranded copper wire
Class 5, IEC 60228

PVC, in compliance with EN 50334 insulation colour coding, black core with white number codes
TI2 EN 50363-3

PVC - RAL 7001 Grey
TM5 EN 50363-4-1

Application

It is an oil-resistant flexible PVC insulated and sheathed control cable with number-coded cores. Used in dry or wet interior areas not exposed to mechanical strain. Preferred for mobile installations and confined spaces thanks to its flexible design. Used for measurement and control functions in electronic control systems, production and assembly lines and engineering projects.

NYSLYÖ-OZ: black core with white number codes
NYSLYÖ-JZ: ground protection conductor (yellow/green), black core with white number codes

Specifications

Temperature range		
fixed		-30°C ...+70°C
flexing		0°C ...+50°C
Bending radius		
fixed	min.	7.5 x D
flexing	min.	15 x D
Oil resistance		EN 60811-404

Conductor resistance

0.50 mm²	max.	39.0 Ω/km
0.75 mm²	max.	26.0 Ω/km
1.0 mm²	max.	19.5 Ω/km
1.5 mm²	max.	13.3 Ω/km
2.5 mm²	max.	7.98 Ω/km

Insulation resistance	min.	20 MΩ x km
Test voltage		2500 V
Operating voltage	max.	300/500 V

Standards EN 50525-2-51

Fire performance
Vertical flame propagation EN 60332-1-2

EU declaration of conformity

LVD	Low Voltage Directive	2014/35/EU
RoHS	Restriction of Hazardous Substances	2011/65/EU

Specifications may vary depending on technical modifications.

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
221002	2x0.50 mm²	5.6	9	48
221003	3x0.50 mm²	6.2	14	54
221004	4x0.50 mm²	6.7	18	60
221005	5x0.50 mm²	7.5	23	81
221006	6x0.50 mm²	8.1	27	95
221007	7x0.50 mm²	8.1	32	98
221010	10x0.50 mm²	9.8	45	131
221012	12x0.50 mm²	10.8	55	157
221014	14x0.50 mm²	11.5	64	178
221016	16x0.50 mm²	12.3	73	201
221018	18x0.50 mm²	12.9	82	231
221019	19x0.50 mm²	12.9	87	234
221024	24x0.50 mm²	14.9	109	301
221027	27x0.50 mm²	15.7	123	333
221030	30x0.50 mm²	16.6	137	372
221033	33x0.50 mm²	17.2	151	402
221036	36x0.50 mm²	17.9	164	445
221037	37x0.50 mm²	17.9	169	448

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
221062	2x0.75 mm²	6.2	14	60
221063	3x0.75 mm²	6.6	20	66
221064	4x0.75 mm²	7.1	27	72
221065	5x0.75 mm²	8.0	34	99
221066	6x0.75 mm²	8.9	41	121
221067	7x0.75 mm²	8.9	48	126
221070	10x0.75 mm²	10.8	68	170
221072	12x0.75 mm²	11.8	82	201
221074	14x0.75 mm²	12.6	96	230
221076	16x0.75 mm²	13.5	109	260
221078	18x0.75 mm²	14.1	123	296
221079	19x0.75 mm²	14.1	130	301
221084	24x0.75 mm²	16.3	164	387
221087	27x0.75 mm²	17.1	185	425
221090	30x0.75 mm²	18.1	206	476
221093	33x0.75 mm²	18.8	226	518
221096	36x0.75 mm²	19.5	247	568
221097	37x0.75 mm²	19.5	253	573

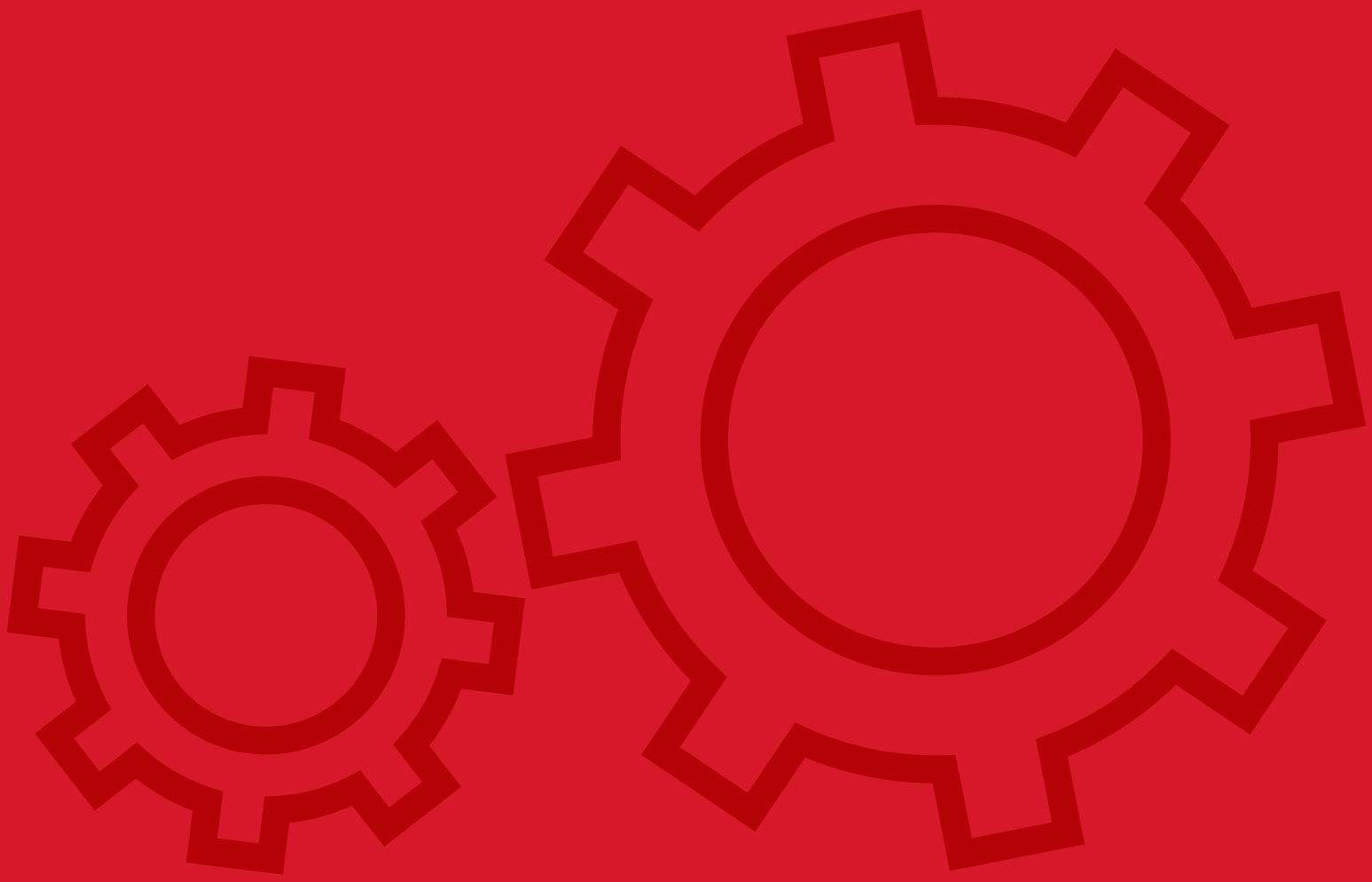
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
221122	2x1 mm²	6.6	18	70
221123	3x1 mm²	7.0	27	77
221124	4x1 mm²	7.8	36	90
221125	5x1 mm²	8.6	45	118
221126	6x1 mm²	9.5	55	144
221127	7x1 mm²	9.5	64	151
221130	10x1 mm²	11.5	91	202
221132	12x1 mm²	12.6	109	240
221134	14x1 mm²	13.7	127	283
221136	16x1 mm²	14.4	146	311
221138	18x1 mm²	15.3	164	363
221139	19x1 mm²	15.3	173	370
221144	24x1 mm²	17.7	219	476
221147	27x1 mm²	18.5	247	521
221150	30x1 mm²	19.6	274	584
221153	33x1 mm²	20.6	301	647
221156	36x1 mm²	21.1	329	697
221157	37x1 mm²	21.1	338	704

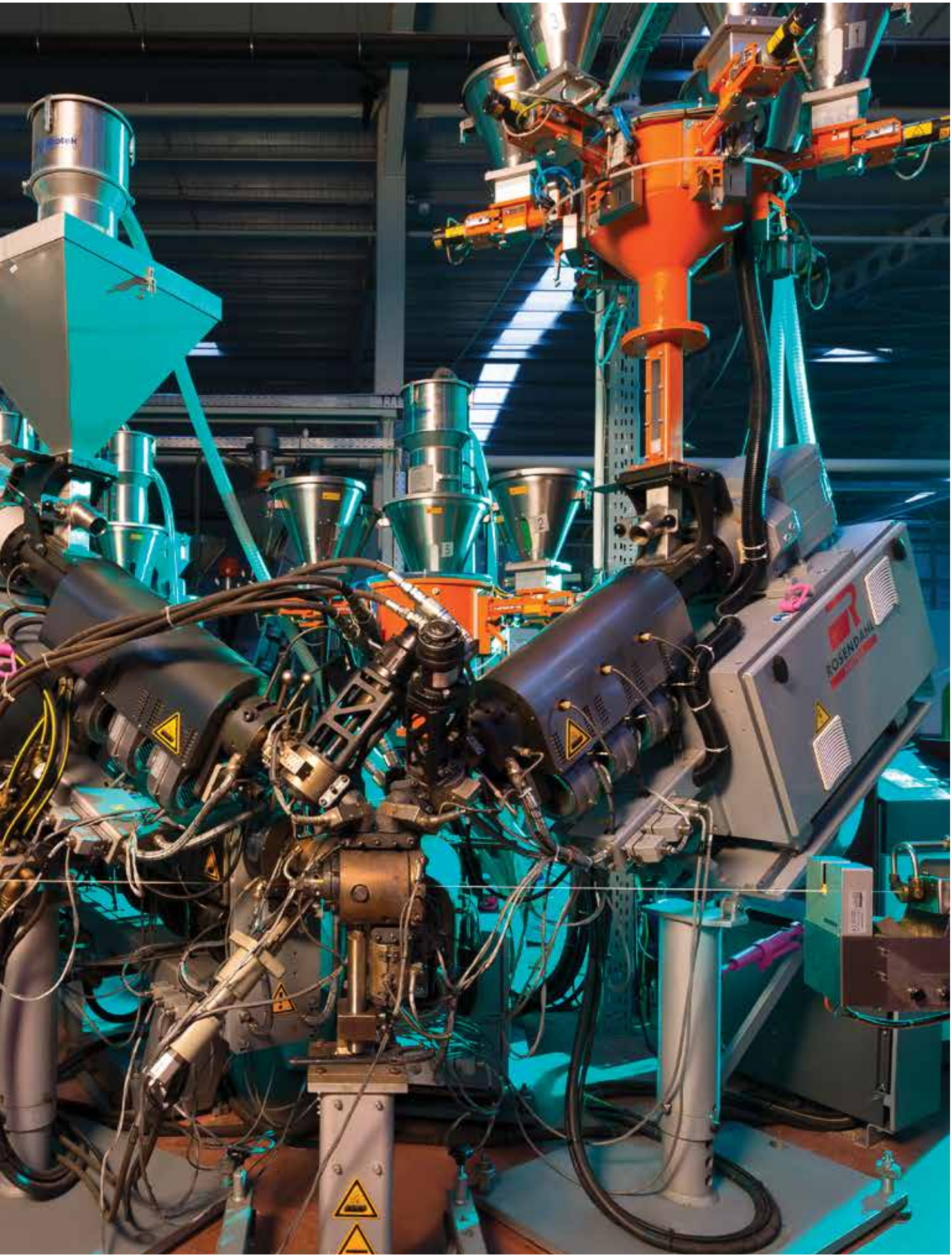
Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
221182	2x1.5 mm²	7.8	27	100
221183	3x1.5 mm²	8.3	40	110
221184	4x1.5 mm²	9.2	53	127
221185	5x1.5 mm²	10.1	66	166
221186	6x1.5 mm²	11.2	80	204
221187	7x1.5 mm²	11.2	93	214
221190	10x1.5 mm²	13.8	133	293
221192	12x1.5 mm²	15.1	160	348
221194	14x1.5 mm²	16.3	187	405
221196	16x1.5 mm²	17.2	214	447
221198	18x1.5 mm²	18.2	240	520
221199	19x1.5 mm²	18.2	254	530
221204	24x1.5 mm²	20.9	321	673
221207	27x1.5 mm²	22.2	361	755
221210	30x1.5 mm²	23.4	401	839
221213	33x1.5 mm²	24.3	442	913
221216	36x1.5 mm²	25.2	482	1002
221217	37x1.5 mm²	25.2	495	1012

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
221242	2x2.5 mm²	9.2	44	144
221243	3x2.5 mm²	9.8	66	162
221244	4x2.5 mm²	10.9	88	189
221245	5x2.5 mm²	12.1	111	251
221246	6x2.5 mm²	13.4	133	307
221247	7x2.5 mm²	13.4	155	324
221250	10x2.5 mm²	16.4	222	440
221252	12x2.5 mm²	17.9	267	521
221254	14x2.5 mm²	19.3	311	605
221256	16x2.5 mm²	20.6	356	681
221258	18x2.5 mm²	21.6	400	780
221259	19x2.5 mm²	21.6	423	797
221264	24x2.5 mm²	25.0	535	1023
221267	27x2.5 mm²	26.5	601	1145
221270	30x2.5 mm²	27.9	669	1270
221273	33x2.5 mm²	29.2	735	1398
221276	36x2.5 mm²	30.0	802	1515
221277	37x2.5 mm²	30.0	824	1532

Specifications may vary depending on technical modifications.

Technical Data



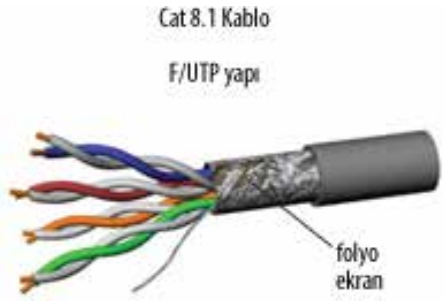

ROSENDAHL

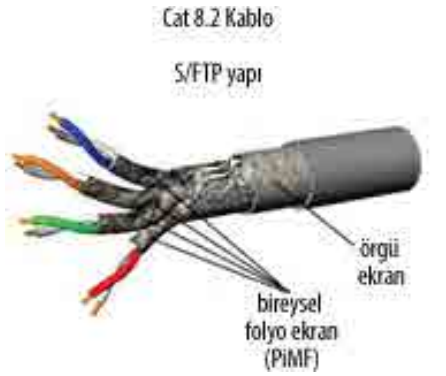
Fibre Performance with Copper Cable

Due to the growing use of mobile smart devices, demand for higher transmission rates is increasing with each passing day. This induces a gradually higher pressure on network and service providers. The 10 gigabit/s data rate offered by the Ethernet 10GBASE-T technology is now insufficient for many cases. Shorter alternatives can be obtained with twinax or fibre optic cables, however the connection length permitted by twinax is very limited. On the other hand, fibre optic solution is very expensive.Linking multiple 10GBASE-T nodes to a single logic connection is possible through appropriate protocols, however this requires too many ports and hence a gigantic space in data centres.

To meet this demand, IEEE (Institute of Electrical and Electronics Engineers) of United States has developed the 40GBASE-T technology. Twisted-pair cables could offer a transmission rate of 40 Gbit/s. Then the 25GBASE-T extension was introduced to offer 25 GB/s.Both technologies are based on 10GBASE-T approach, however the attenuation rates limit the maximum connection length to 30 meters. The maximum connection length of 30 meters is achieved with a 24-m horizontal cable with 3-meter patch cords at both ends that establish a channel connection. Hence, it is primarily suitable for data centres and connections between server rooms.

However, actual requirements go well beyond the current capacity, requiring a novel component category for modern network cabling design.In United States, the standardisation body, ANSI/TIA specifies the Category 8 components. According to ANSI/TIA-568-C.2, Category 5e, 6 and 6A can be terminated with RJ45 connectors.International standardisation bodies ISO and IEC generally specify two universal classes.ISO/IEC Category 8.1 components are used to establish a Class I connection. Category 5e, 6 and 6A specified in ISO/IEC 11801 and EN 50173 can be terminated with RJ45 connectors.ISO/IEC Category 8.2 components are used to establish a Class II connection. Category 8.2 components can be terminated with Category 7 and 7A components. All three categories have a maximum frequency specification of 2 GHz.





Category	Class	Bandwidth	Standard	Validity	25GBASE-T	40GBASE-T	RJ45 Compatibility
Category 8	Category 8	2 GHz	ANSI/TIA	USA	Yes	Yes	Yes
Category 8.1	I	2 GHz	ISO/IEC	International	Yes	Yes	Yes
Category 8.2	II	2 GHz	ISO/IEC	International	Yes	Yes	No

In the IEC 61156-9 Edition 1.0 2016-02 final draft standard, NEXT & PS-NEXT and ACR-F & PS-ACR-F specifications differentiate in terms of Cat 8.1 and Cat 8.2 transmission performance requirements.

Table 5 – NEXT and PS NEXT requirements

Cable designation	Frequency range MHz	NEXT requirement dB	PS NEXT requirement dB
Category 8.1	1 to 2 000	$75{,}3 - 15 \log_{10}(f)$; f in MHz	$72{,}3 - 15 \log_{10}(f)$; f in MHz
Category 8.2	1 to 2 000	$105{,}4 - 15 \log_{10}(f)$; f in MHz	$102{,}4 - 15 \log_{10}(f)$; f in MHz

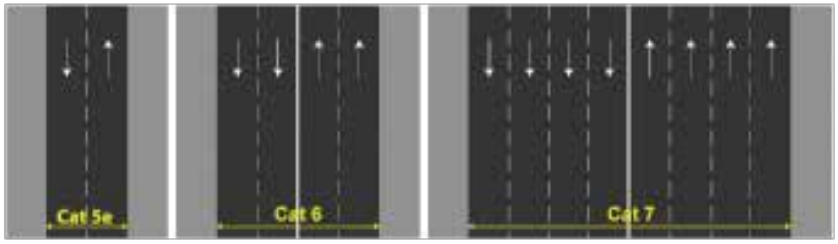
Table 6 – ACR-F and PS ACR-F requirements

Cable designation	Frequency range MHz	ACR-F requirement dB	PS ACR-F requirement dB
Category 8.1	1 to 2 000	$79{,}0 - 20 \log_{10}(f)$; f in MHz	$76{,}0 - 20 \log_{10}(f)$; f in MHz
Category 8.2	1 to 2 000	$100{,}6 - 20 \log_{10}(f)$; f in MHz	$97{,}6 - 20 \log_{10}(f)$; f in MHz
NOTE If FEXT loss is greater than 90 dB up to 1 000 MHz and greater than 80 dB up to 2 000 MHz, ACR-F loss may not be calculated.			

Overview of Data Cables According to ISO/IEC 11801 and EN 50173;

Category	Class	Frequency (max.)	Data Rate (max.)	Channel Length (max.)	Cabling Screened/ Unscreened	Connector
Category 5e	Class D	100 MHz	1 GBit/s	100 m.	Both	RJ45
Category 6	Class E	250 MHz	1 GBit/s	100 m.	Both	RJ45
Category 6_A	Class E_A	500 MHz	10 GBit/s	100 m.	Both	RJ45
Category 7	Class F	600 MHz	10 GBit/s	100 m.	Screened	GG45, TERA, ARJ45
Category 7_A	Class F_A	1 GHz	10 GBit/s	100 m.	Screened	GG45, TERA, ARJ45
Category 8.1	Class I	2 GHz	25/40 GBit/s	30 m.	Screened	RJ45
Category 8.2	Class II	2 GHz	25/40 GBit/s	30 m.	Screened	GG45, TERA, ARJ45

A higher cable category does not imply a higher cable installation length.In other words, installation lengths of Cat 5e, Cat 6, Cat 6A, Cat 7 and Cat 7A cables are the same. As specified in ISO/IEC 11801, EN 50173 and ANSI/TIA-568-C.2 structural cabling standards, a maximum 100-m connection is achieved with a 90-m horizontal cable with 5-meter patch cords at both ends that establish a channel connection.
In the standards, cables are classified by transmission performance requirements. Higher bandwidth in a specific cable category offers faster data transmission and shorter transaction time.In other words, Cat 5e is like a double-lane secondary road while Cat7 is like a motorway with four lanes on each side. Components in the line other than the cable should be capable of delivering the expected channel performance, otherwise desired performance cannot be achieved.

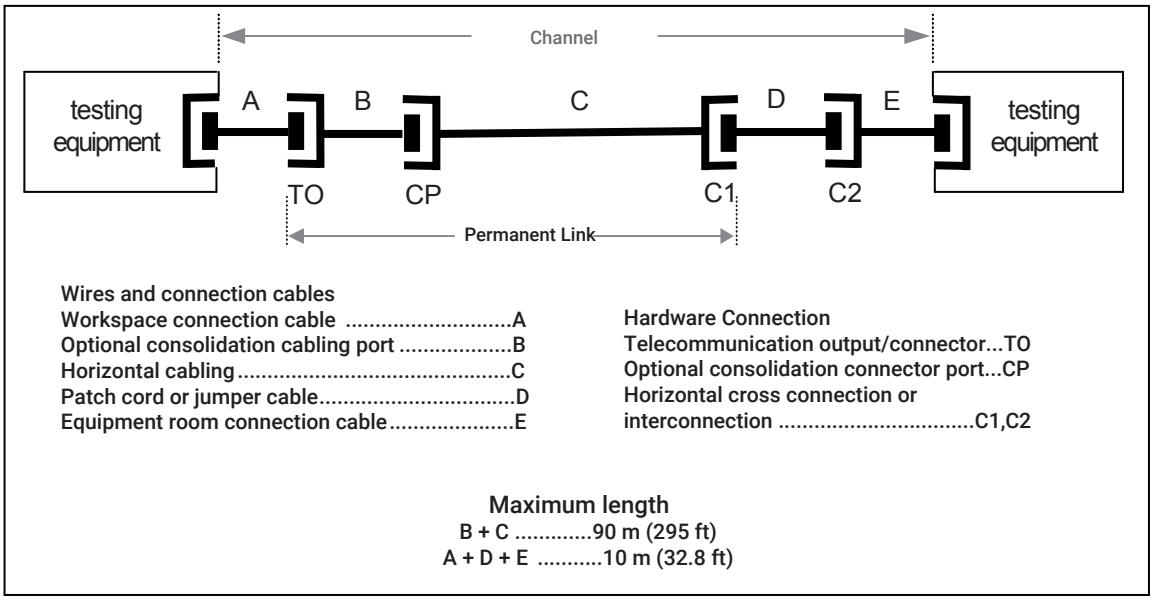


Channel Transmission Performance

Total transmission performance of the line between active device and user is measured.

Permanent Link Transmission Performance

Performance of the cable is measured without additional equipment and interconnecting cables required to establish the structural cabling system.



Wires and connection cables
Workspace connection cable .....A
Optional consolidation cabling port .....B
Horizontal cabling.....C
Patch cord or jumper cable.....D
Equipment room connection cable.....E

Hardware Connection
Telecommunication output/connector...TO
Optional consolidation connector port...CP
Horizontal cross connection or interconnection C1,C2

Maximum length
B + C .....90 m (295 ft)
A + D + E .....10 m (32.8 ft)

Standards

IEC : International Electrotechnical Commission
EN : European Norms
CEN : European Committee for Standardisation
CENELEC : The European Committee for Electrotechnical Standardization
ETSI : European Telecommunications Standards Institute
ISO : International Organization for Standardization
ANSI : American National Standards Institute
TIA : Telecommunications Industry Association

ISO/IEC 11801

Information technology - Generic cabling for customer premises

EN 50173

Information technology - Generic cabling systems

ANSI/TIA-568-C.2

Balanced Twisted-Pair Telecommunications Cabling and Components Standards

IEC 61156-5 (Cat 5e, Cat 6, Cat 6A, Cat 7, Cat 7A)

Cables-Multicore and symmetrical pair/quad cables for digital communications-Section 5: Symmetrical pair/quad cables with transmission characteristics up to 1000 MHz-Horizontal floor wiring-Sectional specifications

IEC 61156-7 (Cat 7A+)

Cables - Multicore and symmetrical pair/quad cables for digital communications - Section 7: Symmetrical pair cables with transmission characteristics up to 1200 MHz - Sectional specification standard for digital and analogue communication cables

IEC 61156-9 (Cat 8.1, Cat 8.2)

Cables - Multicore and symmetrical pair/quad cables for digital communications - Section 9: Cables with transmission characteristics up to 2 GHz - Sectional specification

EN 50288-3-1 (Cat 5e U/UTP)

Multi-component metallic cables used in analogue and digital communication and control - Section 3-1: Sectional specification standard for unscreened cables characterised up to 100 MHz; Horizontal and building backbone cables

EN 50288-2-1 (Cat 5e F/UTP, SF/UTP..)

Multi-component metallic cables used in analogue and digital communication and control circuits - Section 2-1: Sectional specification for screened cables characterised up to 100 MHz - Horizontal and building cables

EN 50288-5-1 (Cat 6 F/UTP, SF/UTP..)

Multi-component metallic cables used in analogue and digital communication and control - Section 5-1: Sectional specification standard for screened cables characterised up to 250 MHz; Horizontal and building backbone cables

EN 50288-6-1 (Cat 6 U/UTP)

Multi-component metallic cables used in analogue and digital communication and control - Section 6-1: Sectional specification standard for unscreened cables characterised up to 250 MHz; Horizontal and building backbone cables

EN 50288-10-1 (Cat 6A S/FTP..)

Multi-component metallic cables used in analogue and digital communication and control - Section 10-1: Sectional specification standard for screened cables characterised up to 500 MHz - Horizontal and building backbone cables

EN 50288-11-1 (Cat 6A U/UTP)

Cables - Multi-component metallic cables used in analogue and digital communication and control - Section 11-1: Sectional specification standard for screened cables characterised up to 500 MHz - Horizontal and building cables.

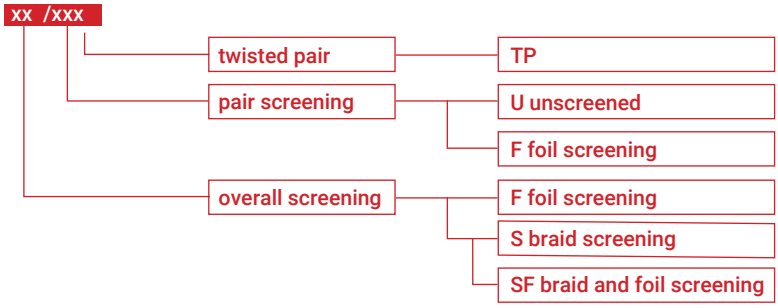
EN 50288-4-1 (Cat 7 S/FTP..)

Multi-component metallic cables used in analogue and digital communication and control - Section 4-1: Sectional specification standard for screened cables characterised up to 600 MHz; Horizontal and building backbone cables

EN 50288-9-1 (Cat 7A S/FTP..)

Cables - Multi-component metallic cables used in analogue and digital communication and control - Section 9-1: Sectional specification standard for screened cables characterised up to 1000 MHz - Horizontal and building cables.

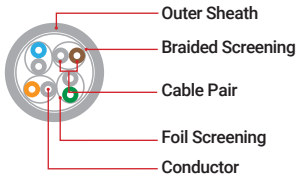
Type Classification according to ISO/IEC 11801 and IEC 61156



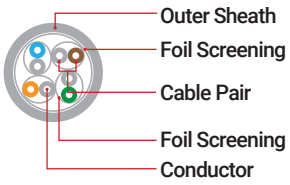
Identification of Cores

Identification	Colour code
1st Pair	White-Blue Blue
2nd Pair	White-Orange Orange
3rd Pair	White-Green Green
4th Pair	White-Brown Brown

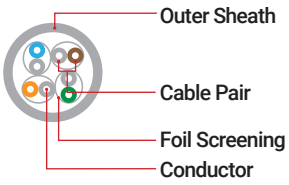
S/FTP (pair and common screening)



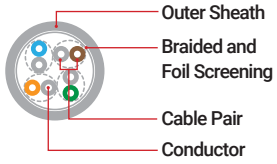
F/FTP



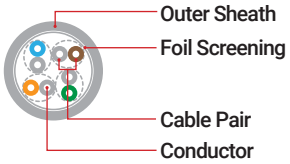
U/FTP



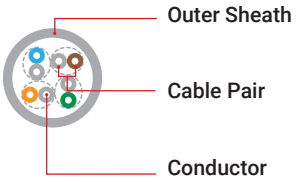
SF/UTP



F/UTP



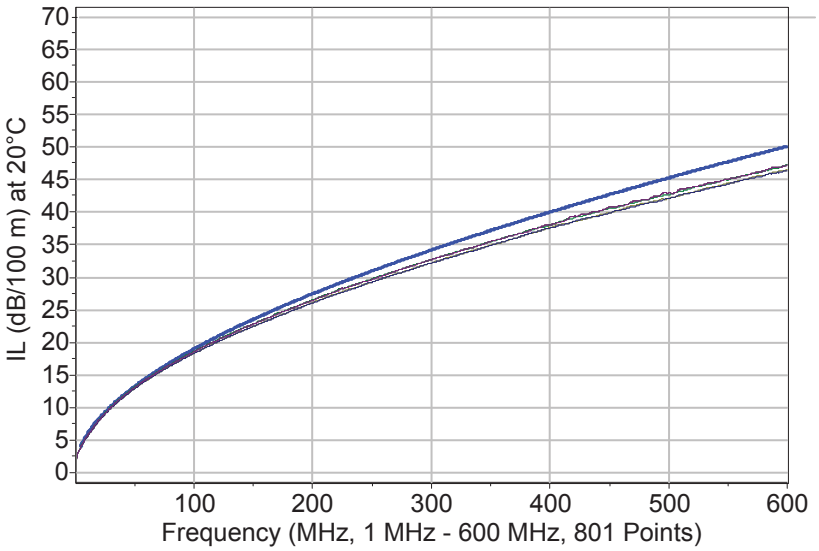
U/UTP



Identification of Old and New Codes

Identification of New Codes	Identification of Old Codes	Description
U/UTP	UTP	Unscreened
F/UTP	FTP	Common foil screen
SF/UTP	SFTP	Common foil and braid screen
U/FTP	-	Individual foil screen
F/FTP	-	Common foil and individual foil screen
S/FTP	STP	Common braid and individual foil screen

Category 7 S/FTP Performance Test Graphs

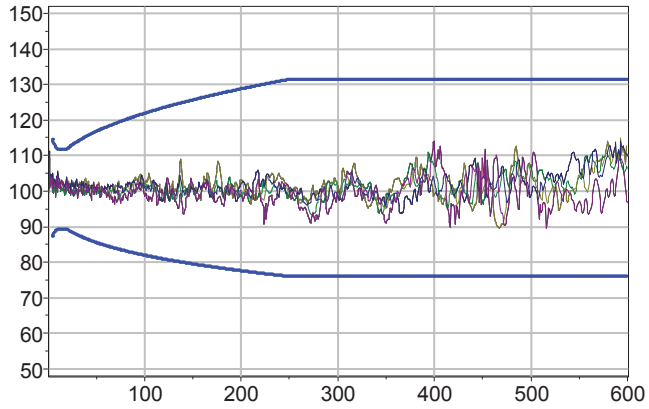


#507001
SL900 S/F23 LSZH Category 7 S/FTP 4x2x23AWG

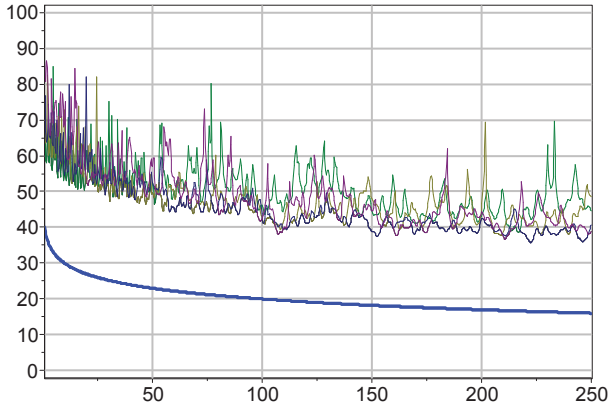
Frequency [MHz]	Attenuation [dB/ 100 m]	
	typical	max.
1	1.9	2.0
4	3.6	3.7
8	4.9	5.2
10	5.6	5.9
16	7.1	7.4
25	9.1	9.3
62.5	14.7	14.9
100	18.6	19.0
250	29.7	31.0
500	42.9	45.2
600	47.3	50.1

ref. standard IEC 61156-5

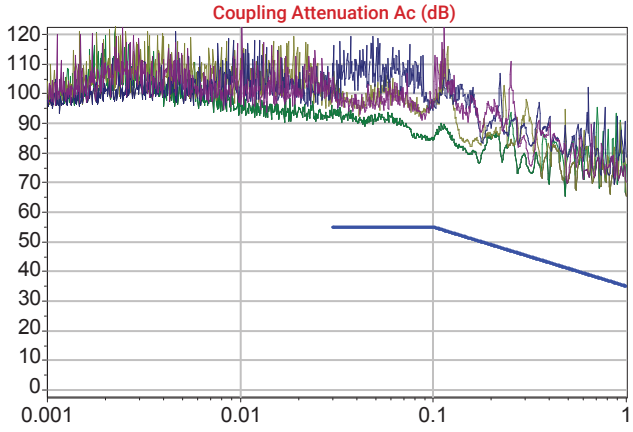
Rated Impedance (Case B) ZIN (Ohm)



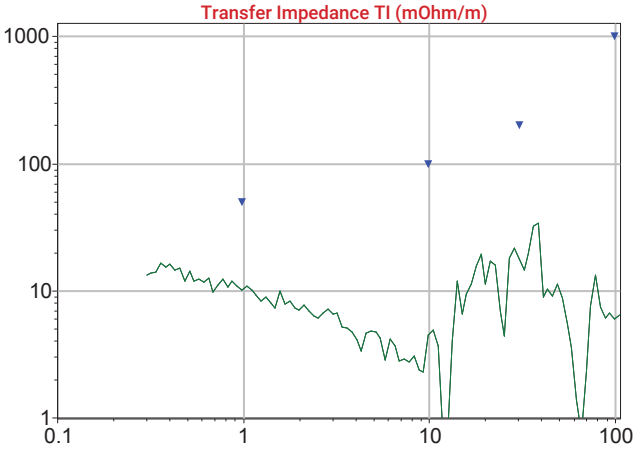
Unbalance Attenuation TCL (dB)



Coupling Attenuation Ac (dB)



Transfer Impedance TI (mOhm/m)



T568A and T568B Connector Connection Colour Order

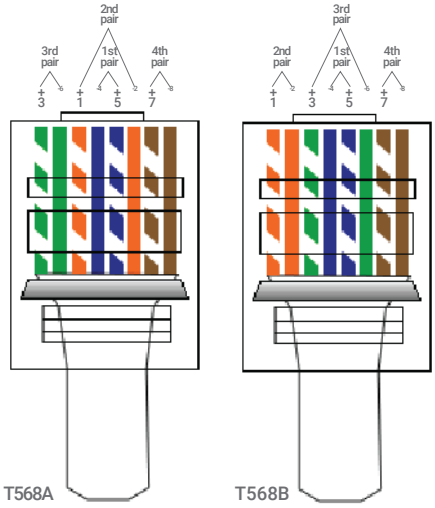
Cross Cable

One end of the cable is terminated according to T568A and the other end according to T568B. Cross cables are used to interconnect devices of the same type; e.g. computer - computer, switch - switch etc.

Straight-Through Cable

Both ends of the cable are terminated according to the T568A or T568B standards. Straight-through cables are used in different types of device connections; e.g. computer - hub, etc.

In general, T568B standard is favoured over T568A.
White-Blue and Blue are used for telephone telecommunication, White-Brown and Brown for backup, and other colours for network.



Construction Products Regulation 305/2011/EU CPR

This Regulation lays down rules for placement and availability on the market of construction products by establishing harmonised rules on declarations of performance for construction products in relation to their essential characteristics and CE marking rules for those products.

Fires breaking out in buildings lead to a great number deaths due to gas and smoke intoxication. Average time from the start of fire up to flashover (ignition of pyrolysis gases) has dramatically declined over the last several decades. With this time dropping from 15 minutes in 1950s down to 5 minutes in 1985 and 3 minutes in 2010, time needed to evacuate the building on fire has decreased substantially. These trends have urged the construction product manufacturers to make technological advancements and enhance fire performances.

Cables are one of the most widely used materials in modern constructions. On March 9, 2011, the European Parliament and European Council decided that power, control and communication cables used in establishment of fixed installations in constructions including buildings and infrastructures would be governed by CPR in order to limit the formation and propagation of flame and smoke in case of fire in a building, minimize loss of life and property, evacuate building occupants in safety and safely respond to fire.

Instead of introducing a criteria for performance levels to be fulfilled by cables used in constructions, CPR leaves it to each country to establish the performance and safety class for cables.In this respect, the regulatory and supervisory body is the Ministry of Environment and Urbanization. Fire reaction performance of cables is regulated by the local regulatory body. This body determines the minimum cable requirements according to EN 13501-6 based on construction type, characteristics and application. CPR does not prescribe a statutory performance class for cables.It only specifies the fire reaction performance criteria that should be satisfied by cables. Moreover, the directive requires the statement of fire reaction performance and CE marking for cables used in constructions.

The regulatory transition process began on July 1, 2016, and final effective date of the directive will be July 1, 2017 at the latest. The directive leaves it to authorized agencies of each country to manage the transitional process. In other words, such agency may optionally issue a circular and set an effective date earlier than July 1, 2017 for its country. Suppliers intending to export cables to EU countries must legally request from the manufacturer to issue a Declaration of Performance (DoP) and affix a CE mark as described in EN 50575 to the product or the product's label. Providers failing to satisfy this procedure may not put their products on the market.

Fire Reaction Performance Requirements for Cables Used in Constructions

The standard published in September 2014 specifies requirements for the fire reaction performance as well as methods for testing and assessment and compliance assessment criteria for power, control and communication cables used in a building. EN 50575 standard does not specify any electrical, mechanical and environmental requirement for the cables, and does not override other standards. The standard only relates to fire reaction classes of cables. Requirements for CE marking must be satisfied for cables covered by this standard and CE marking of such cables is mandatory. Electrical, communication, fire detection and alarm cables that require uninterrupted line supply in buildings and other constructions as well as cables used in security facilities requiring uninterrupted signal supply, such as firefighting systems, are outside the scope of EN 50575 standard. EN 50575 standard relates to Construction Products Regulation (305/2011/EU) and mandatory CE marking.

Test Standards for the Classification of Fire Reaction Performance

Euroclass	EN ISO 1716	EN 50399	EN 60332-1-2	EN 61034-2	EN 60754-2
A_{ca}	X	-	-	-	-
$B1_{ca}$	-	X	X	X	X
$B2_{ca}$	-	X	X	X	X
C_{ca}	-	X	X	X	X
D_{ca}	-	X	X	X	X
E_{ca}	-	-	X	-	-
F_{ca}	Not established				

the "ca" index denotes the cable.

Cables are classified according to the Assessment and Verification of Constancy of Performance (AVCP) System as follows.

High Performance
Non-combustible (mineral insulation)
Low Fire Hazard Cables
Standard Cable
Low Performance

Euroclass	Classification Criteria	Additional Classification Criteria	Assessment and Verification of Constancy of Performance (AVCP)
A_{ca}	EN ISO 1716		"System 1+" • establishing and implementing the FPC system • FPC audit by the notified body • notified laboratory's test report • notified body's certificate of performance constancy • issuing DoP • CE marking
$B1_{ca}$	EN 50399 Measuring the heat release and smoke production in a fire EN 60332-1-2 flame propagation	EN 50399/EN 61034-2 smoke density (s1, s1a, s1b, s2b, s3) EN 60754-2 determination of acidity and measurement of conductivity (a1, a2, a3) EN 50399 dripping characteristic during burning (d0, d1, d2)	
$B2_{ca}$			
C_{ca}			
D_{ca}			"System 3" • establishing and implementing the FPC system • notified laboratory's test report • issuing DoP • CE marking
E_{ca}	EN 60332-1-2 flame propagation		
F_{ca}	performance not specified		"System 4" • establishing and implementing the FPC system • issuing DoP • CE marking

System 1+

These cables are classified in Aca, B1ca, B2ca and Cca categories. The manufacturer carries out the factory production checks (FPC) and class determination tests. The notified body carries out the initial type test to determine fire reaction performance, determines the product class based on this test, audits the place of production and initial FPC, and constantly monitors and assesses FPC.Based on the certificate of performance constancy issued by the notified body, manufacturer draws up the declaration of performance (DoP) and affixes CE mark according to EN 50575.

System 3

These cables are classified in Dca and Eca categories. The manufacturer carries out the factory production checks (FPC) for these cables, but it is the responsibility of the accredited test laboratory to take samples to determine the fire reaction performance, carry out the initial test and identify the product type accordingly.Based on the test report issued by the notified laboratory, manufacturer draws up the declaration of performance (DoP) and affixes CE mark according to EN 50575.

System 4

These cables are classified in the Fca category. The manufacturer carries out the factory production checks (FPC),and also draws up the declaration of performance (DoP) and affixes CE mark according to EN 50575.

Classification of Fire Reaction Performance according to EN 13501-6

Test Standard	Test Parameter	A_{ca}	$B1_{ca}$	$B2_{ca}$	C_{ca}	D_{ca}	E_{ca}	F_{ca}
EN ISO 1716	PCS (MJ/kg) H	≤ 2.0	-	-	-	-	-	-
EN 60332-1-2	(mm)	-	≤425	≤ 425	≤ 425	≤ 425	≤ 425	-
EN 50399	Flame Source	-	30	20.5	20.5	20.5	-	-
EN 50399	(kW) FS (m)	-	≤ 1.75	≤ 1.5	≤ 2.0	-	-	-
EN 50399	THR (MJ)	-	≤ 10	≤ 15	≤ 30	≤ 70	-	-
EN 50399	max. HRR (kW)	-	≤ 20	≤ 30	≤ 60	≤ 400	-	-
EN 50399	FIGRA (W/s)	-	≤ 120	≤ 150	≤ 300	≤ 1300	-	-

PCS - Gross Calorific Value
H - Flame Propagation EN 60332-1-2
FS - Flame Propagation EN 50399

HRR – Heat Release Rate
THR - Total Heat Release
SPR - Smoke Production Rate

TSP - Total Smoke Production
FIGRA - Fire Growth Rate Index

Additional Classification								
Test Standard	Test Parameter Smoke	A_{ca}	$B1_{ca}$	$B2_{ca}$	C_{ca}	D_{ca}	E_{ca}	F_{ca}
EN 50399/EN	Production	-	s1, s1a, s1b, s2b,				-	-
61034-2 EN 60754-2	Determination of Acidity	-	s3 a1, a2, a3 d0,				-	-
EN 50399	and Conductivity Dripping	-	d1, d2				-	-

Additional Classification Details

s1 : TSP ≤ 50 m^2 and max. SPR ≤ 0.25 m^2/s according to EN 50399
s1a : **s1** and smoke density ≥ 80% according to EN 61034-2
s1b : **s1** and smoke density ≥ 60% and <80% according to EN 61034-2 s2TSP ≤ 400 m^2 and max. SPR ≤ 1.5 m^2/s according to EN 50399
s3 : not s1 or s2

d0 : no flaming droplets within 1200 s
d1 : no flaming droplets persisting longer than 10 s within 1200 s
d2 : not d0 or d1

a1 : conductivity according to EN 60754-2 < 2.5 µS/mm and pH > 4.3
a2 : conductivity according to EN 60754-2< 10 µS/mm and pH > 4.3
a3 : not a1 or a2

Declaration of Performance (DoP) for cables according to EN 50575

Principles of drawing up a Declaration of Performance (DoP) necessary for affixing the CE mark to the product label are clearly detailed in EN 50575. Accordingly, a manufacturer must statutorily draw up a DoP containing the code, intended use and fire reaction performance of a product governed by EN 50575 before marketing that product.

DECLARATION OF PERFORMANCE

No. CPR 01.01.2017 DoP 001

1. Product type and code:

506007

2. Type, lot or batch number or any other element enabling the identification of the product. Article 11 (4):

SL400 U23 LSZH Cat 6 U/UTP

3. Intended application of the product assumed by the manufacturer according to the applicable harmonised technical specification:

Used in constructions as a communication cable to limit fire and smoke generation and propagation.

4. Name, the proprietary trade name or the proprietary brand and contact address of the manufacturer. Article 11 (5):

REÇBER KABLO Sanayi ve Ticaret Limited Şti.

Türkgücü Organize Sanayi Bölgesi Yılmaz Alpaslan Caddesi No:73 59850 Çorlu Tekirdağ - TURKEY +90 282 681 86 86 info@recber.com.tr

5. If appropriate, the name and contact address of the authorised representative whose authority includes the tasks listed in Article 12(2):

as above

6. System(s) for the assessment and verification of the performance constancy of the building product as described in CPR, Annex 5

System 3

7. Where declaration of performance relates to a building product covered by the harmonised standard:

Harmonised Standard EN 50575: 2014+A1:2016
Notified Laboratory: NB xxxx

8. Declaration of performance:

Basic Characteristics	Performance	Harmonised Technical Specifications
Fire Reaction	E_{ca}	EN 50575:2014+A1:2016
Hazardous Substances	None	

9. The performance of the product identified in articles no. 1 and 2 are in accordance with the performance declared in point 8. This declaration of performance is issued on exclusive responsibility of the manufacturer identified in article no. 4.

Signed and stamped on behalf of the manufacturer:

.....

01/01/2017

signature

CE Marking in Cables According to EN 50575

Principles for affixing the CE mark to the product label are clearly detailed in EN 50575.

- The product or label may not contain CE marking unless a declaration of performance (DoP) is issued for the product.
- CE mark shall be prepared by the manufacturer in line with the format and content prescribed by the standard and affixed visibly, legibly and indelibly to the product labels on reels or coils.
- CE marking signifies compliance with applicable legislation and serves as a passport for free circulation of the product within the European marketplace.
- CE marking under the Low Voltage Directive (LVD) is based on the manufacturer's own statement, however in CE marking under CPR, a more efficient system involving the concepts of "Notified Body and Notified Laboratory" has been established.

CE

XXXX

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Ticaret Limited Şti.

Türkgücü Organize Sanayi Bölgesi Yılmaz
Alpaslan Caddesi No:73 59850 Çorlu
Tekirdağ - TURKEY

17
CPR 01.01.2017 DoP 001

EN 50575:2014+A1:2016

506007
SL400 U23 LSZH Cat 6 U/UTP

Used in constructions as a communication cable to limit fire and smoke generation and propagation.

Fire Reaction Performance
E_{ca}

Hazardous substances:None

EN 50399 Heat Release and Smoke Generation Measurement On Cables During Flame Propagation Test

As fire propagation, smoke generation and flaming droplets substantially affect fire safety, performing fire tests as per EN 50339 to avoid loss of life and property in case of fire, plays an important role in selecting fire-safe cables.

The EN 50399 test apparatus is used to measure the fire reaction of cables mounted on a ladder in the vertical plane.In addition to the rig in EN 60332-3-10, the test system also allows the measurement of heat produced, smoke released, oxygen consumed and carbon dioxide produced during the test. Hence, while recording the data generated since the cable first flamed, measurement of the flame propagation and heat release helps to determine the influence of the fire to the surrounding area, and smoke measurement helps to identify the effect of smoke on visibility reduction.

Number of cables mounted to the ladder is determined based on cable diameter. Cables must be mounted tightly to the ladder individually (unbundled) with no contact. A 20.5/30 kW flame is applied with a burner. Air supply blows air into the chamber at a flow rate of 8000 ± 400 L/min. Test duration is 25 minutes and flame application time is 20 minutes.

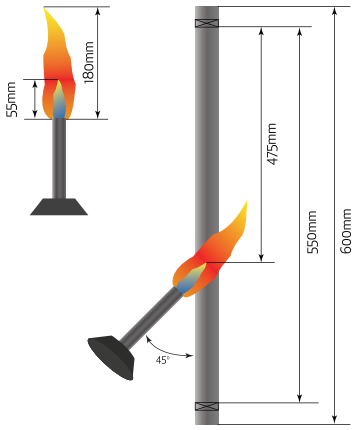
before the test

after the test

Vertical flame propagation test (single)
IEC 60332-1-2/EN 60332-1-2/DIN VDE 0482-332-1-2

A 60-cm long insulated wire or single cable is fixed vertically and inflamed with a propane gas burner at a vertical slope of 45°.

- Test equipment is in compliance with IEC/EN 60332-1-1.
- 1 kW Flame verification is specified according to IEC 60695-11-2.



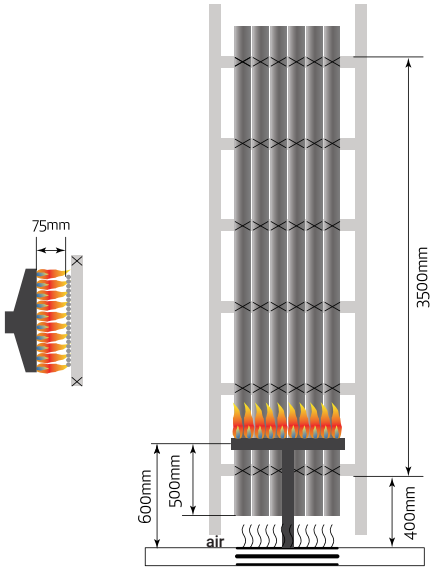
cable diameter	test duration
D ≤ 25 mm	60±2 seconds
25 < D ≤ 50 mm	120±2 seconds
50 < D ≤ 75 mm	240±2 seconds
D > 75 mm	480±2 seconds

Compliance criteria:
Flame must extinguish itself. If the damage due to burning reaches to a point beyond 50 mm from the lower end of the top support and beyond 540 mm from the lower end of the top support, an error is recorded and two more tests are carried out. The cable passes the test if the requirement is met in both runs. Otherwise the cable fails the test.

Vertical flame propagation test (bundled)
IEC 60332-3/EN 60332-3/DIN VDE 0482-332-3

360-cm long test cables are fixed, in parallel, to a test ladder in single or multiple layers depending on the conductor diameters. Flame is applied to cable bundles.

- Test equipment and flame verification are specified according to IEC/EN 60332-3-10.



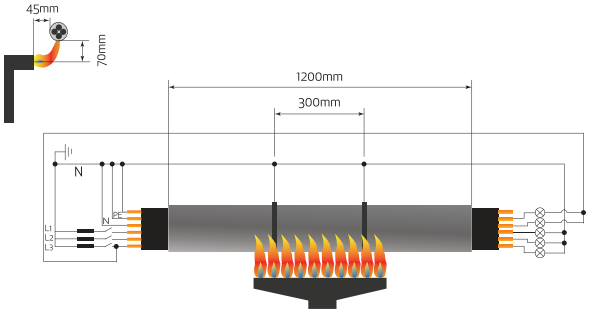
Part	Category	Test Duration
Part 21	CAT A F/R only for special applications,	-
Part 22	CAT A (7 L flammable substance/m)	40 min.
Part 23	CAT B (3.5 L flammable substance/m)	40 min.
Part 24	CAT C (1.5 L flammable substance/m)	20 min.
Part 25	CAT D (0.5 L flammable substance/m)	20 min.

Compliance criteria:
According to the table above, after application, flame must extinguish itself and height of the damage to cables due to flame must not exceed 2.5 m from the bottom end of the burner.

Continuity of Flow FE180
IEC 60331-21/DIN VDE 0472-814/IEC 60331-22/IEC 60331-23

The test cable approximately 1200 mm in length is fixed horizontally, allowing it to be connected to the power supply at certain voltages. A flame at a minimum temperature of 750°C is applied under the cable horizontally from an offset position. The standard contains different parts for certain cable types as follows:

- Test equipment and flame verification are specified according to IEC/EN 60331-11.



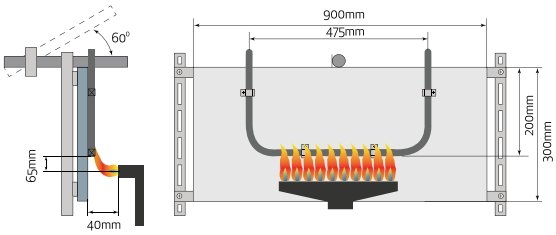
Part	Related cables
Part 21	power and control cables ≤
Part 22	1 kV power cables >1 kV
Part 23	data cables

Compliance criteria:
Following the application of flame and during a cooling period of an additional 15 minutes, the cable should maintain the circuit integrity and it must still be able to transmit power or signals via all conductors. There must be no short circuit between conductors or between conductors and shielding.

Continuity of Flow PH120 (with mechanical shocks) EN 50200/DIN VDE 0482-200

The test cable, max. 20 mm in diameter and min. 1200 mm in length, is connected to the power supply and secured onto a fireproof board. The positioning board is subjected to shocks every 5 minutes during the test period. A flame at a minimum temperature of 842°C is applied by the front.

- Test equipment and flame verification are specified according to EN 50200.



Compliance criteria:

Following the application of flame and during a cooling period of an additional 15 minutes, the cable should maintain the circuit integrity and it must still be able to transmit power or signals via all conductors. There must be no short circuit between conductors or between conductors and shielding.

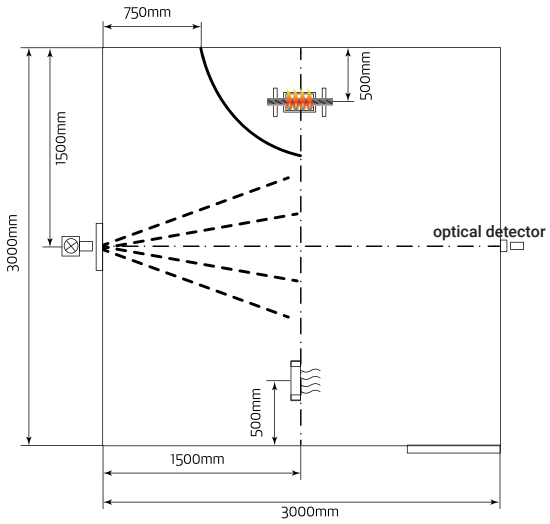
Smoke density

Smoke density IEC 61034-2/EN 61034-2/DIN VDE 0482-1034-2

A single cable bundle is burnt along a metal tray containing a ±1% per litre alcohol mixture in a 3 m x 3 m x 3 m metallic chamber. A photometric system consisting of a light source and a light detector is placed horizontally in the mid-vertical plane of the cube at a height of 2150 mm ± 100 mm. The light transmittance of the resulting smoke is measured optically.

- Test equipment and flame verification are specified according to IEC/EN 61034-1.

cable diameter (D) mm	number of cables in the bundle	number of bundles
D > 40	1	1
20 < D ≤ 40	2	1
10 < D ≤ 20	3	1
5 ≤ D ≤ 10	45/D	1
1 < D < 5	7	45/3D



Compliance criteria:

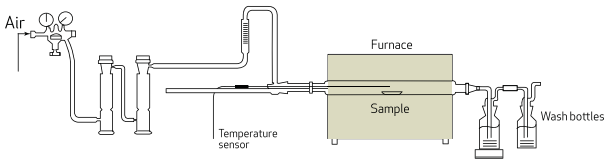
Photometric measurements for light transmittance shall be observed in 40 minutes and the cable will pass the test if a minimum light transmission of 60% is achieved.

Determination of the halogen acid gas content IEC 60754-1/EN 60754-1

Test sample weight should be between 500 mg and 1000 mg. The sample is heated in a tube. Temperature of the flame applied is 800±10°C. Resulting gas is dissolved in Sodium Hydroxide solution and halogen content is measured. Test duration: 20 min

- Test equipment and temperature verification are specified according to EN 50267-1.

Compliance criteria: The amount of halogen acid is identified as amount of hydrochloric acid in mg per gram of test sample. If amount of halogen acid is identified to be less than 5 mg/g or defined as "zero halogen", then the method specified in IEC 60754-2/EN 60754-2 is used.



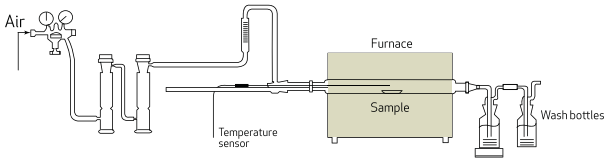
pH and conductivity test IEC 60754-2/EN 60754-2

Test sample weight should be 1000 mg. The sample is heated in a tube. Temperature of the flame applied is min. 935°C. Resulting gases are dissolved in pure water with a pH value and conductivity, and halogen content is measured. Test duration: 30 min

- Test equipment and temperature verification are specified according to EN 50267-1.

Compliance criteria:

If measured pH value is ≥4.3 and if electrical conductivity is ≤10 µS/mm, then the sample passes the test.



Harmonised Cable Symbols

H: Harmonised order
A: Recognised national structure

Voltage rating
01: 100/100 V
03: 300/300 V
05: 300/500 V
07: 450/750 V
11: 600/1000 V

Insulation materials

V: Polyvinyl chloride (PVC)
V2: PVC up to +90°C
V3: PVC for low temperature
B: EPR
E: Polyethylene
X: XLPE cross-linked PE
R: Rubber
S: Silicone rubber

Sheath materials

V: Polyvinyl chloride (PVC)
V2: PVC up to +90°C V3:PVC, for low temperature
V5: PVC, oil resistant
R: Rubber
N: Chloroprene rubber
Q: Polyurethane

Braid materials

C4: Braided copper wire screen
J: Glass-fibre braid
T: Textile braid

Custom design characteristics

H: Flat splittable cables
H2: Flat non-splittable cables
H6: Flat non-splittable cables, for lifts
H8: Spiral cables

Conductor type

U: Single-wire round conductor
R: Multi-wire round conductor
K: Thin multi-wire (for fixed installations)
F: Thin multi-wire (for flexible cables)
H: Ultra-thin multi-wire
D: Flexible conductor for use in arc welding cables
E: Highly flexible conductor for use in arc welding cables

Ground protection conductor

x: Without ground protection conductor
G: With ground protection conductor

Symbols According to VDE Standards

Power Cables

N: VDE standard
(N): based on VDE standard

Conductor materials

Cu: Copper
A: Aluminium

Insulation materials

H: Halogen Free (HFFR)
Y: Polyvinyl chloride (PVC)
2Y: Polyethylene
2X: Cross-linked PE

Concentric conductor, screen

C: Concentric copper conductor
CW: Concentric copper conductor, corrugated
CE: Concentric copper conductor in each core
S: Copper screen
SE:Copper screen around each core

Armouring

F: Flat wire armour
R: Round wire armour
B: Steel tape armour

Outer sheath material

Y: PVC
2Y: Polyethylene

Grounding conductor

J: With ground protection conductor
O: Without ground protection conductor

Conductor type

r...: Circular conductor
s...: Sector conductor
o...: Oval conductor
re: Solid conductor
Rm: Multi-wire conductor
V: Compressed conductor

Symbols According to VDE Standards

Telecommunication Cables

A: Outdoor cable
G: Mining cable
J: Installation cable and conductors
L: Multi-core cables
S: Switchboard cables - Signal cables
JE: Installation cables and conductors for industrial electronics
Li: Stranded conductor wire

Insulation materials

P: Paper insulation
Y: PVC
2Y: Polyethylene
3Y: PS, polystyrene
5Y: PTFE
6Y: FEP
7Y: ETFE
02Y: Foam PE, cellular polyethylene O2YS: Foam-skin PE

Design Characteristics

F: Filled cable
Yv: Reinforced PVC sheath
2Yv: Reinforced PE sheath
(C): Braided copper wire screen
(L): Rubber-coated aluminium tape screen
(St): Metal Foil screen
D: Concentric copper wires
(Z): Steel braided wire
M: Lead sheath
Mz: Hardened lead alloy sheath
L: Aluminium sheath, straight
LD: Corrugated aluminium sheath
W: Corrugated steel sheath
(L)2Y: Laminated sheath b:Armour c:Protective covering of jute
E: PVC tape
(T): With suspension wire for overhead cables
STIII: Star quads in local cables
STI: Star quads for larger distances
ST: Star quads for use of phantom circuits
F: Star quads for railway use
PiMF: Pair with individual screens
TiMF: Triad with individual screens
ViMF: Quad with individual screens
Bd: Stranded in bundles
Lg:Stranded in layers

Colour code according to DIN 47100 with colour repetition from the 45th core

Core No	Core Colour	Core No	Core Colour
1	WHITE	32	YELLOW/Blue
2	BROWN	33	GREEN/Red
3	GREEN	34	YELLOW/Red
4	YELLOW	35	GREEN/Black
5	GREY	36	YELLOW/Black
6	PINK	37	GREY/Blue
7	BLUE	38	PINK/Blue
8	RED	39	GREY/Red
9	BLACK	40	PINK/Red
10	PURPLE	41	GREY/Black
11	GREY/Pink	42	PINK/Black
12	RED/Blue	43	BLUE/Black
13	WHITE/Green	44	RED/Black
14	BROWN/Green	45	WHITE
15	WHITE/Yellow	46	BROWN
16	YELLOW/Brown	47	GREEN
17	WHITE/Grey	48	YELLOW
18	GREY/Brown	49	GREY
19	WHITE/Pink	50	PINK
20	PINK/Brown	51	BLUE
21	WHITE/Blue	52	RED
22	BROWN/Blue	53	BLACK
23	WHITE/Red	54	PURPLE
24	BROWN/Red	55	GREY/Pink
25	WHITE/Black	56	RED/Blue
26	BROWN/Black	57	WHITE/Green
27	GREY/Green	58	BROWN/Green
28	YELLOW/Grey	59	WHITE/Yellow
29	PINK/Green	60	YELLOW/Brown
30	YELLOW/Pink	61	WHITE/Grey
31	GREEN/Blue		

Colour code according to DIN 47100 for twisted pairs with colour repetition

Pair No			Pair Colours	
			a-core	b-core
1	23	45	WHITE	BROWN
2	24	46	GREEN	YELLOW
3	25	47	GREY	PINK
4	26	48	BLUE	RED
5	27	49	BLACK	PURPLE
6	28	50	GREY/Pink	RED/Blue
7	29	51	WHITE/Green	BROWN/Green
8	30	52	WHITE/Yellow	YELLOW/Brown
9	31	53	WHITE/Grey	GREY/Brown
10	32	54	WHITE/Pink	PINK/Brown
11	33	55	WHITE/Blue	BROWN/Blue
12	34	56	WHITE/Red	BROWN/Red
13	35	57	WHITE/Black	BROWN/Black
14	36	58	GREY/Green	YELLOW/Grey
15	37	59	PINK/Green	YELLOW/Pink
16	38	60	GREEN/Blue	YELLOW/Blue
17	39	61	GREEN/Red	YELLOW/Red
18	40		GREEN/Black	YELLOW/Black
19	41		GREY/Blue	PINK/Blue
20	42		GREY/Red	PINK/Red
21	43		GREY/Black	PINK/Black
22	44		BLUE/Black	RED/Black

Copper stranded conductor structure according to DIN VDE 0295 and IEC 60228

Stranded conductor structure is defined in the following table according to DIN VDE 0295 in compliance with IEC 60228 for class 2 in column 1, class 5 in column 3 and class 6 in column 4 from 0.50 mm².

cross-section	multi-wire round conductor	stranded multi-wired	fine stranded wires	ultra-fine stranded wires			
				VDE 0295 class 6 1) column 4	column 5	standard design	
	VDE 0295 class 2 2) column 1	standard design column 2	VDE 0295 class 5 1) column 3			column 6	column 7
0.035	-	7x0.08	-	-	-	-	-
0.05	-	-	-	-	-	14x0.07	26x0,05
0.08	-	-	-	-	-	-	-
0.09	-	-	-	-	7x0.124	24x0.07*	-
0.14	-	-	-	18x0.10	18x0.10	36x0.07	72x0,05
0.25	-	-	18x0.10	32x0.10	32x0.10	65x0.07	128x0,05
0.34	-	7x0.25	14x0,15	42x0.10	42x0.10	88x0.07	174x0,05
0.38	-	7x0,27	19x0,15	21x0.15	48x0.10	100x0.07	194x0,05
0.5	7x0.30	7x0.30	12x0,20	28x0.15	64x0.10	131x0.07	256x0,05
0.75	7x0.37	7x0.37	16x0,20	42x0.15	96x0.10	195x0.07	384x0,05
1.0	7x0.43	7x0.43	24x0,20	56x0.15	128x0.10	260x0.07	512x0,05
1.5	7x0.52	7x0.52	32x0,20	84x0.15	192x0.10	392x0.07	768x0,05
2.5	7x0.67	19x0,41	30x0,25	140x0.15	320x0.10	615x0.07	128x0,05
4	7x0.85	19x0,52	50x0,25	224x0.15	512x0.10	1040x0.07	-
6	7x1.05	19x0,64	56x0,30	192x0.20	768x0.10	1560x0.07	-
10	7x1.35	49x0,51	84x0,30	320x0.20	128x0.10	2600x0.07	-
16	7x1.70	49x0,65	80x0,40	512x0.20	2048x0.10	4116x0.07	-
25	7x2.13	84x0,62	128x0,40	800x0.20	3200x0.10	6370x0.07	-
35	7x2.52	133x0,58	200x0,40	1120x0.40	4410x0.10	9100x0.07	-
50	19x1.83	113x0,69	280x0,40	705x0.30	-	-	-
70	19x2.17	189x0,69	400x0,40	990x0.30	-	-	-
95	19x2.52	259x0,69	356x0,50	1340x0.30	-	-	-
120	37x2.03	336x0,67	485x0,50	1690x0.30	-	-	-
150	37x2.27	392x0,69	614x0,50	2123x0.30	-	-	-
185	37x2.52	494x0,69	765x0,50	1470x0.40	-	-	-
240	61x2.24	627x0,70	944x0,50	1905x0.40	-	-	-
300	61x2.50	790x0,70	1225x0,50	2385x0.40	-	-	-
400	61x2.89	-	1530x0,70	-	-	-	-
500	61x3.23	-	2034x0,50	-	-	-	-
630	91x2.97	2228x0,60	1768x0,60	-	-	-	-

*Alternatively 19x0.08

Note:

1) DIN VDE 0295, in compliance with IEC 60228, specifies only the maximum individual wire diameter for Conductor Class 5 and Conductor Class 6. The number of wires is not binding.

2) For Conductor Class 2, however, the minimum number of individual wires in the round conductor is specified instead of individual wire diameters. The required maximum values for conductor resistance of each conductor at 20°C are specified. The respective nominal cross-section for the specified maximum values must not be exceeded.

maximum permissible largest individual wire diameter Ø	
nominal wire diameter Ø	maximum value for individual wire diameter Ø
0.20	0.21
0.25	0.26
0.30	0.31
0.40	0.41
0.50	0.51
0.60	0.61

Explanatory notes on ultra-fine-wired stranded conductors;
Column 4 Standard design of very fine stranded wires as per DIN VDE
Column 5 High flexibility
Column 6 Ultra-high flexibility
Column 7 Extreme flexibility

Conductor resistance data according to VDE 0295 and IEC 60228

conductor dimensions	power cables and wires						welding cable	
	copper conductors				aluminium conductors		copper conductor	
	tinned wires		bare wires		bare wires		bare wires	tinned wires
nominal cross-section mm²	Class 1 Class 2 Ω/km	Class 5 Class 6 Ω/km	Class 1 Class 2 Ω/km	Class 5 Class 6 Ω/km	Class 1 Ω/km	Class 2 Ω/km	Ω/km	Ω/km
0.05	-	~380	-	~360	-	-	-	-
0.08	-	~240	-	~230	-	-	-	-
0.09	-	~230	-	~215	-	-	-	-
0.14	-	~140	-	~138	-	-	-	-
0.20	-	~96.8	-	~95	-	-	-	-
0.25	-	~79.3	-	~78	-	-	-	-
0.34	-	~57.1	-	~56	-	-	-	-
0.50	36.70	40.10	36.00	39.00	-	-	-	-
0.75	24.80	26.70	24.50	26.00	-	-	-	-
1	18.20	20.00	18.10	19.50	-	-	-	-
1.50	12.20	13.70	12.10	13.30	-	-	-	-
2.50	7.56	8.21	7.41	7.98	-	-	-	-
4	4.70	5.09	4.61	4.95	-	-	-	-
6	3.11	3.39	3.08	3.33	-	-	-	-
10	1.84	1.50	1.83	1.91	-	-	-	-
16	1.16	1.24	1.15	1.21	-	1.910[2)]	1.160	1.190
25	0.734	0.795	0.727[1)]	0.780	1.200	1.200	0.758	0.780
35	0.529	0.565	0.524[1)]	0.554	0.868	0.868	0.536	0.552
50	0.391	0.393	0.387[1)]	0.386	0.641	0.641	0.379	0.391
70	0.270	0.277	0.268[1)]	0.272	0.443	0.443	0.268	0.276
95	0.195	0.210	0.193[1)]	0.206	0.320	0.320	0.198	0.204
120	0.154	0.164	0.153[1)]	0.161	0.253	0.253	0.155	0.159
150	0.126	0.132	0.124[1)]	0.129	0.206	0.206	0.125	0.129
185	0.1260	0.108	0.0991	0.106	0.164	0.164	0.102	0.105
240	0.0762	0.0817	0.0754	0.0801	0.125	0.125	-	-
300	0.0607	0.0654	0.0601	0.0641	0.100	0.100	-	-
400	0.0475	0.0495	0.0470	0.0486	-	0.0778	-	-
500	0.0369	0.0391	0.0366	0.0384	-	0.0605	-	-
630	0.0286	0.0292	0.0283	0.0287	-	0.0469	-	-

[1)] applies to mineral insulated Class 1 cables
[2)] applies only to conductors with reduced cross-section for NAYCWY 4 x 25/16

Explanatory notes
Class 1 - for single-wire conductors Class 2 - for multi-wire conductors Class 5 - for fine-wired conductors Class 6 - for ultra-fine-wired conductors

AWG wire metrics and stranded conductors

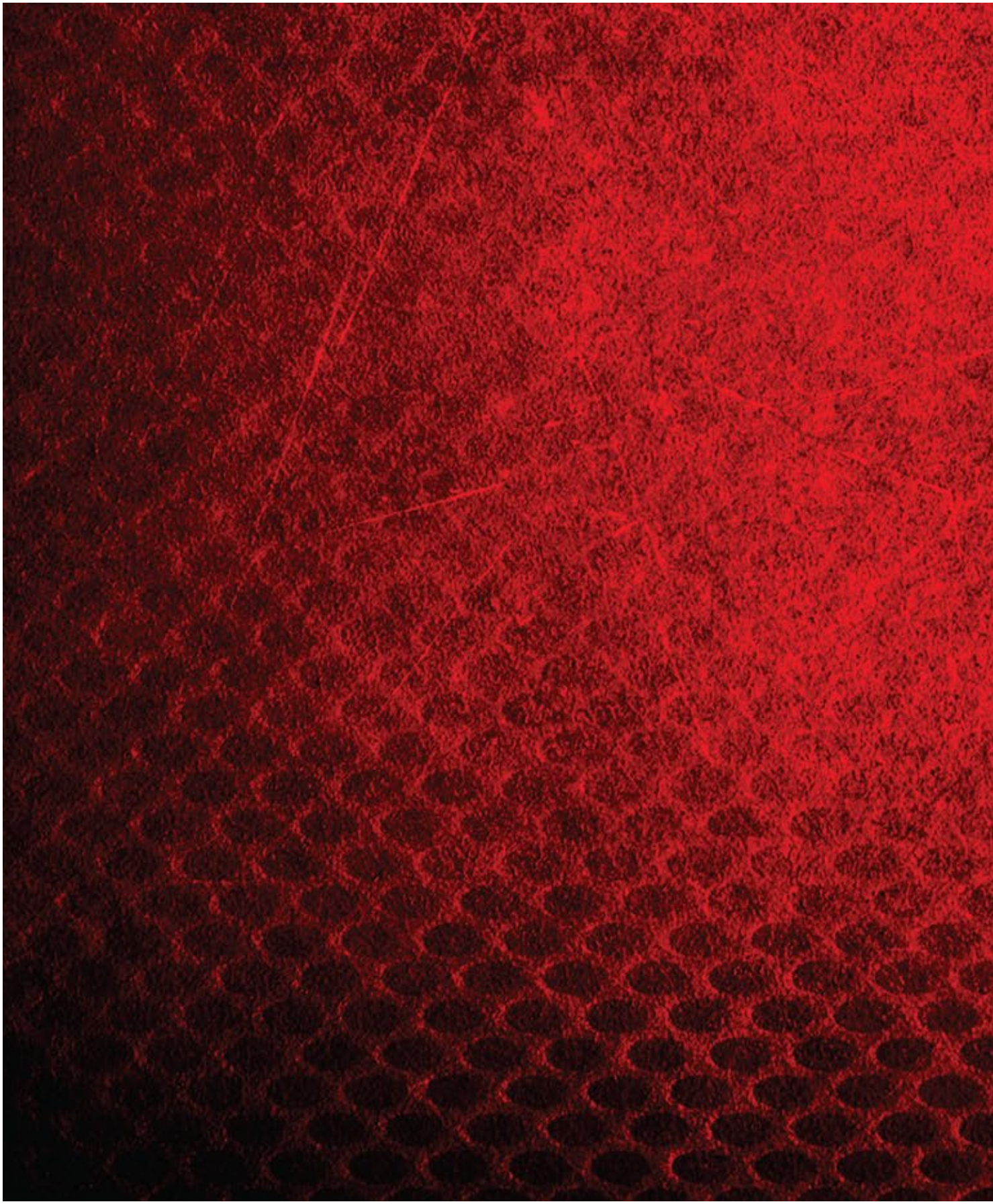
AWG No.	AWG - structure n x AWG	wire structure n x wire-Ø mm	conductor cross-section mm	outer diameter Ø mm	conductor resistance Ω/km	conductor weight kg/km
36	mono	mono	0.013	0.127	1460.0	0.116
36	7/44	7 x 0.05	0.014	0.152	1271.0	0.125
34	mono	mono	0.020	0.160	918.0	0.178
34	7/42	7 x 0.064	0.022	0.192	777.0	0.196
32	mono	mono	0.032	0.203	571.0	0.284
32	7/40	7 x 0.078	0.034	0.203	538.0	0.302
32	19/44	19 x 0.05	0.037	0.229	448.0	0.329
30	mono	mono	0.051	0.254	365.0	0.45
30	7/38	7 x 0.102	0.057	0.305	339.0	0.507
30	19/42	19 x 0.064	0.061	0.305	286.7	0.543
28	mono	mono	0.080	0.330	232.0	0.71
28	7/36	7 x 0.127	0.087	0.381	213.0	0.774
28	19/40	19 x 0.078	0.091	0.406	186.0	0.81
27	7/35	7 x 0.142	0.111	0.457	179.0	0.988
26	mono	mono	0.128	0.404	143.0	1.14
26	10/36	10 x 0.127	0.127	0.533	137.0	1.13
26	19/38	19 x 0.102	0.155	0.508	113.0	1.38
26	7/34	7 x 0.160	0.141	0.483	122.0	1.25
24	mono	mono	0.205	0.511	89.4	1.82
24	7/32	7 x 0.203	0.227	0.610	76.4	2.02
24	10/34	10 x 0.160	0.201	0.582	85.6	1.79
24	19/36	19 x 0.127	0.241	0.610	69.2	2.14
24	41/40	41 x 0.078	0.196	0.582	84.0	1.74
22	mono	mono	0.324	0.643	55.3	2.88
22	7/30	7 x 0.254	0.355	0.762	48.4	3.16
22	19/34	19 x 0.160	0.382	0.787	45.1	3.40
22	26/36	26 x 0.127	0.330	0.762	52.3	2.94
20	mono	mono	0.519	0.813	34.6	4.61
20	7/28	7 x 0.320	0.562	0.965	33.8	5.00
20	10/30	10 x 0.254	0.507	0.889	33.9	4.51
20	19/32	19 x 0.203	0.615	0.940	28.3	5.47
20	26/34	26 x 0.160	0.523	0.914	33.0	4.65
20	41/36	41 x 0.127	0.520	0.914	32.9	4.63
18	mono	mono	0.823	1.020	21.8	7.32
18	7/26	7 x 0.404	0.897	1.219	19.2	7.98
18	16/30	16 x 0.254	0.811	1.194	21.3	7.22
18	19/30	19 x 0.254	0.963	1.245	17.9	8.57
18	41/34	41 x 0.160	0.824	1.194	20.9	7.33
18	65/36	65 x 0.127	0.823	1.194	21.0	7.32
16	mono	mono	1.310	1.290	13.7	11.66
16	7/24	7 x 0.511	1.440	1.524	12.0	12.81
16	65/34	65 x 0.160	1.310	1.499	13.2	11.65
16	26/30	26 x 0.254	1.317	1.499	13.1	11.72
16	19/29	19 x 0.287	1.229	1.473	14.0	10.94
16	105/36	105 x 0.127	1.330	1.499	13.1	11.84
14	mono	mono	2.080	1.630	8.6	18.51
14	7/22	7 x 0.643	2.238	1.854	7.6	19.92
14	19/27	19 x 0.361	1.945	1.854	8.9	17.31
14	41/30	41 x 0.254	2.078	1.854	8.3	18.49
14	105/34	105 x 0.160	2.111	1.854	8.2	18.79

AWG wire metrics and stranded conductors

AWG No.	AWG - structure n x AWG	wire structure n x wire-Ø mm	conductor cross-section mm²	outer diameter Ø mm	conductor resistance Ω/km	conductor weight kg/km
12	mono	mono	3.31	2.05	5.4	29.46
12	7/20	7 x 0.813	3.63	2.438	4.8	32.30
12	19/25	19 x 0.455	3.09	2.369	5.6	27.50
12	65/30	65 x 0.254 165 x	3.292	2.413	5.7	29.29
12	165/34	0.60	3.316	2.413	5.2	29.51
10	mono	mono	5.26	2.59	3.4	46.81
10	37/26	37 x 0.404	4.74	2.921	3.6	42.18
10	49/27	49 x 0.363	5.068	2.946	3.6	45.10
10	105/30	105 x 0.254	5.317	2.946	3.2	47.32
8	49/25	49 x 0.455	7.963	3.734	2.2	70.87
8	133/29	133 x 0.287	8.604	3.734	2.0	76.57
8	655/36	655 x 0.127	8.297	3.734	2.0	73.84
4	133/25	133 x 0.455	21.625	5.898	0.80	192.46
4	259/27	259 x 0.363	26.804	5.898	0.66	238.55
4	1666/36	1666 x 0.127	21.104	5.898	0.82	187.82
2	133/23	133 x 0.574	34.416	7.417	0.50	306.30
2	259/26	259 x 0.404	33.201	7.417	0.52	295.49
2	665/30	665 x 0.254	33.696	7.417	0.52	299.89
2	2646/36	2646 x 0.127	33.518	7.417	0.52	298.31
1	133/22	133 x 0.643	43.187	8.331	0.40	384.37
1	259/2	259 x 0.455	42.112	8.331	0.41	374.80
1	817/30	817 x 0.254	41.397	8.331	0.42	368.43
1	2109/34	2109 x 0.160	42.403	8.331	0.41	377.39
1/0	133/21	133 x 0.724	54.75	9.347	0.31	487.28
1/0	259/24	259 x 0.511	53.116	9.347	0.32	472.73
2/0	133/20	133 x 0.813	69.043	10.516	0.25	614.48
2/0	259/23	259 x 0.574	67.021	10.516	0.25	596.49
3/0	259/22	259 x 0.643	84.102	11.786	0.20	748.51
3/0	427/24	427 x 0.511	87.570	11.786	0.20	779.37
4/0	259/21	259 x 0.724	106.626	13.259	0.16	948.97
4/0	427/23	427 x 0.574	110.494	13.259	0.15	983.39

AWG wire metrics and mono conductors

AWG No.	diameter-Ø mm	AWG No.	diameter-Ø mm	AWG No.	diameter-Ø mm
44	0.050	26	0.404	10	2.588
41	0.070	25	0.455	9	2.906
40	0.079	24	0.511	8	3.268
39	0.089	23	0.574	7	3.665
38	0.102	22	0.643	6	4.115
37	0.114	21	0.724	5	4.620
36	0.127	20	0.813	4	5.189
35	0.142	19	0.912	3	5.827
34	0.160	18	1.024	2	6.543
33	0.180	17	1.151	1	7.348
32	0.203	16	1.290	1/0	8.252
31	0.226	15	1.450	2/0	9.266
30	0.254	14	1.628	3/0	10.404
29	0.287	13	1.829	4/0	11.684
28	0.320	12	2.052		
27	0.363	11	2.304		



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