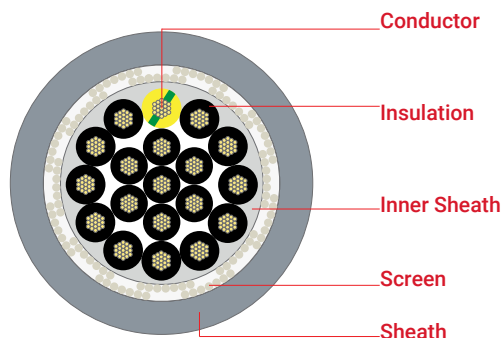




Cable structure



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
TM7 EN 50363-8

Braided screen made of tinned copper wires

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

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

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 mm ² max.		39.0 Ω/km
	0.75 mm ² max.		26.0 Ω/km
	1.0 mm ² max.		19.5 Ω/km
	1.5 mm ² max.		13.3 Ω/km
	2.5 mm ² 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]
220002	2x0.50 mm ²	6 . 8	19	70
220003	3x0.50 mm ²	7 . 1	24	76
220004	4x0.50 mm ²	7 . 7	29	87
220005	5x0.50 mm ²	8 . 2	35	104
220006	6x0.50 mm ²	8 . 9	41	122
220007	7x0.50 mm ²	8 . 9	45	126
220010	10x0.50 mm ²	10.1	61	156
220012	12x0.50 mm ²	11.0	72	184
220014	14x0.50 mm ²	11.9	82	214
220016	16x0.50 mm ²	12.4	92	236
220018	18x0.50 mm ²	13.0	107	264
220019	19x0.50 mm ²	13.0	111	267
220024	24x0.50 mm ²	14.7	137	333
220027	27x0.50 mm ²	15.3	152	362
220030	30x0.50 mm ²	15.9	168	393
220033	33x0.50 mm ²	16.6	183	430
220036	36x0.50 mm ²	17.0	197	459
220037	37x0.50 mm ²	17.0	202	463

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
220062	2x0.75 mm ²	7 . 2	24	82
220063	3x0.75 mm ²	7 . 7	32	93
220064	4x0.75 mm ²	8 . 2	40	104
220065	5x0.75 mm ²	8 . 9	47	127
220066	6x0.75 mm ²	9 . 5	55	147
220067	7x0.75 mm ²	9 . 5	62	152
220070	10x0.75 mm ²	11.1	86	198
220072	12x0.75 mm ²	12.2	101	236
220074	14x0.75 mm ²	12.8	116	263
220076	16x0.75 mm ²	13.6	131	299
220078	18x0.75 mm ²	14.2	150	333
220079	19x0.75 mm ²	14.2	157	338
220084	24x0.75 mm ²	15.9	195	416
220087	27x0.75 mm ²	16.7	217	459
220090	30x0.75 mm ²	17.6	239	508
220093	33x0.75 mm ²	18.4	262	557
220096	36x0.75 mm ²	18.8	283	595
220097	37x0.75 mm ²	18.8	290	600

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
220122	2x1 mm ²	7 . 8	29	97
220123	3x1 mm ²	8 . 2	39	108
220124	4x1 mm ²	8 . 9	50	124
220125	5x1 mm ²	9 . 5	60	150
220126	6x1 mm ²	10.1	70	172
220127	7x1 mm ²	10.1	79	179
220130	10x1 mm ²	12.2	110	245
220132	12x1 mm ²	13.0	130	279
220134	14x1 mm ²	14.0	154	326
220136	16x1 mm ²	14.8	174	367
220138	18x1 mm ²	15.4	194	404
220139	19x1 mm ²	15.4	203	411
220144	24x1 mm ²	17.2	252	504
220147	27x1 mm ²	18.4	282	572
220150	30x1 mm ²	19.4	324	641
220153	33x1 mm ²	20.0	354	689
220156	36x1 mm ²	20.7	383	749
220157	37x1 mm ²	20.7	392	756

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
220182	2x1.5 mm ²	9 . 0	40	1 3 2
220183	3x1.5 mm ²	9 . 4	54	1 4 4
220184	4x1.5 mm ²	10.1	69	1 6 3
220185	5x1.5 mm ²	11.0	84	2 0 4
220186	6x1.5 mm ²	12.2	99	2 4 9
220187	7x1.5 mm ²	12.2	112	2 5 9
220190	10x1.5 mm ²	14.4	161	3 4 5
220192	12x1.5 mm ²	15.5	190	3 9 9
220194	14x1.5 mm ²	16.6	219	4 5 8
220196	16x1.5 mm ²	17.6	247	5 2 0
220198	18x1.5 mm ²	18.5	276	5 8 0
220199	19x1.5 mm ²	18.5	290	5 9 1
220204	24x1.5 mm ²	21.0	375	7 4 8
220207	27x1.5 mm ²	22.1	418	8 2 8
220210	30x1.5 mm ²	23.0	462	9 0 2
220213	33x1.5 mm ²	24.2	505	9 9 8
220216	36x1.5 mm ²	25.0	548	1084
220217	37x1.5 mm ²	25.0	561	1094

Product code	Cable structure	Diameter [mm]	Copper weight [kg/km]	Cable weight [kg/km]
220242	2x2.5 mm ²	9 . 8	59	1 6 7
220243	3x2.5 mm ²	10.5	82	1 9 2
220244	4x2.5 mm ²	11.2	106	2 1 7
220245	5x2.5 mm ²	12.5	131	281
220246	6x2.5 mm ²	13.6	154	3 3 4
220247	7x2.5 mm ²	13.6	176	3 5 2
220250	10x2.5 mm ²	16.3	253	4 7 9
220252	12x2.5 mm ²	17.6	300	5 5 8
220254	14x2.5 mm ²	19.1	360	6 6 0
220256	16x2.5 mm ²	20.0	408	7 3 7
220258	18x2.5 mm ²	21.0	455	8 2 2
220259	19x2.5 mm ²	21.0	477	8 3 9
220264	24x2.5 mm ²	23.7	596	1045
220267	27x2.5 mm ²	25.2	668	1174
220270	30x2.5 mm ²	26.4	738	1292
220273	33x2.5 mm ²	27.3	808	1397
220276	36x2.5 mm ²	28.2	876	1517
220277	37x2.5 mm ²	28.2	899	1535

Specifications may vary depending on technical modifications.