

INDUSTRIAL CONTROL SOLUTIONS

Global Component Solutions :
Technology in Safe Hands



EATON

Powering Business Worldwide



Automotive



Aerospace



Truck



Hydraulics



Electrical

Powering business worldwide

Eaton delivers the power inside hundreds of products that are answering the demands of today's fast changing world.

We help our customers worldwide manage the power they need for buildings, aircraft, trucks, cars, machinery and entire businesses. And we do it in a way that consumes fewer resources.

Next generation transportation

Eaton is driving the development of new technologies – from hybrid drivetrains and emission control systems to advanced engine components – that reduce fuel consumption and emissions in trucks and cars.

Higher expectations

We continue to expand our aerospace solutions and services to meet the needs of new aviation platforms, including the high-flying light jet and very light jet markets.

Building on our strengths

Our hydraulics business combines localised service and support with an innovative portfolio of fluid power solutions to answer the needs of global infrastructure projects, including locks, canals and dams.

Powering Greener Buildings and Businesses

Eaton's Electrical Group is a leading provider of power quality, distribution and control solutions that increase energy efficiency and improve power quality, safety and reliability. Our solutions offer a growing portfolio of "green" products and services, such as energy audits and real-time energy consumption monitoring. Eaton's Uninterruptible Power Supplies (UPS), variable-speed drives and lighting controls help conserve energy and increase efficiency.

CONTENTS	PAGE
1. MINI CONTACTOR RELAY , CONTACTOR RELAY , CONTACTOR.....	5
2. OVERLOAD RELAY.....	146
3. PKZ & PKE MOTOR PROTECTIVE CIRCUIT BREAKERS.....	190
4. RMQ PILOT DEVICES, FAK PALM SWITCHES, SLSIGNAL TOWERS.....	282
5. RMQ-TITAN PILOT DEVICES C22- COMPACT RANGE.....	389
6. DILET , ETR TIMING RELAYS , MEASURING RELAYS AND EMR MONITORING RELAYS.....	417
7. EASY CONTROL RELAY , MFD- TITAN MULTIFUNCTION DISPLAY.....	454



Powering electrical systems worldwide

When it comes to making more efficient use of the world's electrical power Eaton is at the cutting edge. Our industry-leading electrical power control systems help you reduce power consumption – and its attendant greenhouse gas emissions.

Eaton can help you manage your complete electrical power system, whether it is contained within a manufacturing facility, university campus, healthcare centre, data centre, geographically dispersed set of office buildings or retail stores, residential or any other entity where electricity must function with high quality and without interruption.

The result is an unparalleled integration of PowerChain® solutions that optimise energy usage, reduce energy consumption and enhance the comfort and sustainability of your facility.

- Government**
- Commercial property**
- Petrochemicals**
- Data centres**
- Healthcare**
- Pharmaceuticals**
- Education**
- Water and waste water**
- Residential**
- Utilities**
- Manufacturing**
- Retail**
- Pulp and paper**
- Telecommunications**



Mini contactor relays, contactor relay, contactors

Continual operation requires high operational reliability in the components used. The DILM contactor achieves the best lifespan values in AC-3 applications and is ideal for heavy AC-4 jogging.



Eaton After Sales Service

Testing switching devices in compliance with regulations applicable to this technology
→ Chapter 22

Mini contactor relay DILE..., contactor relays, contactors up to 12 A AC-3 at 400 V

Compact dimensions for the highest packing densities +++ Extended performance range up to 5.5 kW at 400 V

AC and DC contactor system DILM..., contactor relays, 3 pole contactors up to 170 A AC-3 at 400 V, 4 pole contactors up to 200 A AC-1

Easier engineering through identical construction sizes for AC- and DC-operated contactors +++ Energy savings and higher packing density in control panel due to minimized heat dissipation +++ High wiring security through doubled box terminals +++ Less coupler relays: direct actuation from the PLC for contactors up to 32 A +++ Easy engineering through integrated suppressor circuits for DC +++ Uniform accessories for 3- and 4-pole contactors +++ Mechanical interlock double conductor run mountable without additional separation gap +++ Direct fieldbus connection through the communication system SmartWire-Darwin, through plug-in type protective module

High rated contactors - contactors up to 1600 A AC-3 at 400 V, contactors up to 2600 A AC-1

Compact dimensions with high switching power +++ Direct actuation from the PLC saves coupler relays +++ Easy engineering through wide range coils +++ Cost and energy savings for control panel ventilation due to reduced heat dissipation +++ Long lifespan through vacuum technology from 580 A



SmartWire-Darwin

The DIL product range offers contact elements which can be connected to the SmartWire-Darwin communication system. → Protective modules,



Ordering

Mini contactor relays DILER, DILEEM, DILEM	
Mini contactor relays, contactors	6
Auxiliary contact modules	10
Accessories	12
Actuating voltages	74



DILA contactor relays	
Contactors relays	14
Auxiliary contact modules	16
Actuating voltages	75

Technical overview

Contactors DILM, DILH	18
-----------------------	----

System overview

Contactors DILM, DILH	20
-----------------------	----

Ordering

Contactors DILM, DILH	
Basic devices up to 170 A	22
Complete units up to 170 A	28
Contactors up to 150 A with electronic actuation	32
Standard devices greater than 170 A	34
Comfort devices greater than 170 A	36
Basic devices up to 200 A, 4 pole	40
Auxiliary contact modules	42



Engineering

Auxiliary contact modules	46
---------------------------	----

Ordering

DILK contactors for capacitors	47
--------------------------------	----

Engineering

Contactors for power factor correction	48
--	----

Ordering

Lighting contactors DILL	49
--------------------------	----

Engineering

Lighting systems	50
------------------	----

Ordering

Star-delta combinations SDAINL	51
--------------------------------	----

Engineering

Star-delta combinations SDAINL	53
--------------------------------	----

Ordering

DIUL reversing combinations	55
-----------------------------	----

Description

CMD contactor monitoring device	71
---------------------------------	----

Ordering

CMD contactor monitoring device	73
---------------------------------	----



Ordering

DILM contactor relays, DILM, DILH contactors	
Suppressor circuit	55
Accessories	59

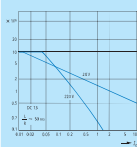
Ordering

Actuating voltages contactors DILM, DILH	
Basic devices up to 170 A	76
Basic devices up to 200 A, 4 pole	81
Contactors up to 150 A with electronic actuation	82
Replacement coils	
Comfort devices greater than 170 A	84
Standard devices greater than 170 A	84
Electronic modules including coil	83
Contactors for capacitors	83



Engineering

Contact travel diagrams	85
Enclosure	86
UL/CSA-Approved rating data	87
UL/CSA Special Purpose Ratings	88
UL/CSA Short Circuit Current Rating	89
Contactors for resistive loads	90
Electrical life span	92
Short-time loading	96
Operating frequency	97
Switching of DC current	98

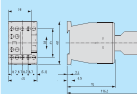


Technical data

Mini contactor relays, contactor relays	99
Contactors monitoring device	102
Basic devices up to 170 A	109
Basic devices up to 200 A, 4 pole	125
Comfort devices greater than 170 A	117
Standard devices greater than 170 A	117
Contactors for capacitors	128
Contactors up to 150 A with electronic actuation	130
Lighting contactors	130
Auxiliary contact modules	133
Accessories	135

Dimensions

Mini contactor relays	135
Contactors relays	136
Basic devices up to 170 A	137
Basic devices up to 200 A, 4 pole	138
Contactors larger than 170 A	139
Contactors for capacitors	141
Lighting contactors	141
Contactors combinations	142
Accessories	143



Contactors

Mini contactor relays

DILER

Ordering

Rated operational current		Conventional free air thermal current	Contact	Distinctive number	Circuit symbol	For use with
AC-15						
220 V	380 V		N/O = normally open contact NC = normally closed contact			
230 V	400 V					
240 V	415 V					
I_e	I_e	I_{th}				
A	A	A				

DILER mini contactor relays

Screw terminals



6	3	10	4 N/O	–	40E		DILE...
			3 N/O	1 NC	31E		DILE...
			2 N/O	2 NC	22E		DILE...

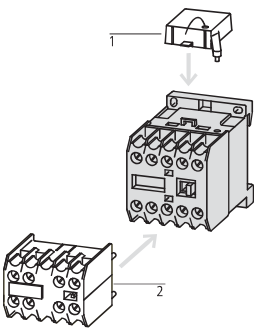
Notes

- Coil terminal marking as specified in EN 50005
- Contact numbers to EN 50011
- The following applies to DC-operated contactors:
 - Integrated diode-resistor combination
 - Coil rating 2.6 W

Product Standards

UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification



IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05;
CE marking
E29184
NKCR
012528
3211-03
UL Listed,
CSA certified

AC operation Part no. Article no.	DC operation Part no. Article no.	Notes
<hr/> DILER-40(230V50HZ) 051759 <hr/> DILER-31(230V50HZ) 051768 <hr/> DILER-22(230V50HZ) 051777	<hr/> DILER-40-G(24VDC) 010223 <hr/> DILER-31-G(24VDC) 010157 <hr/> DILER-22-G(24VDC) 010042	<div data-bbox="878 541 1299 1066" style="border: 1px solid black; padding: 5px;"> <p>With screw terminals:</p>  <p>Accessories 1 Suppressor 2 Auxiliary contact modules Further actuating voltages</p> </div>

Contactors

Mini contactor relays

DILEM







Rated operational current	Max. motor rating for three-phase motors, 50 - 60 Hz						Conventional thermal current $I_{th} = I_e$ AC-1 at 50 °C		Contact	Circuit symbol	For use with
	AC-3		AC-3		AC-4		Open	Enclosed			
380 V 400 V	220 V 230 V	380 V 400 V	660 V 690 V	220 V 230 V	380 V 400 V	660 V 690 V	$I_{th} = I_e$	$I_{th} = I_e$	 N/O = normally open contact  NC = normally closed contact		
I_e	P	P	P	P	P	P	A	A			
A	kW	kW	kW	kW	kW	kW	A	A			

DILEM contactors

3 pole with auxiliary contact

Screw terminals



6.6	1.5	3	3	1.1	2.2	2.2	20	16	1 N/O	–		...DILEM DILE...
6.6	1.5	3	3	1.1	2.2	2.2	20	16	–	1 NC		DILE...
9	2.2	4	4	1.5	3	3	20	16	1 N/O	–		...DILEM DILE...
9	2.2	4	4	1.5	3	3	20	16	–	1 NC		DILE...
12	3.5	5.5	6.5	2	3	2.2	20	16	1 N/O	–		...DILEM DILE...
12	3.5	5.5	6.5	2	3	2.2	20	16	–	1 NC		DILE...

4 pole

Screw terminals



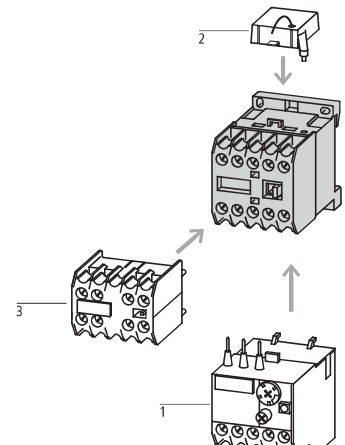
9	2.2	4	4	1.5	3	3	20	16	–	–		...DILEM DILE...
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Product Standards

UL File No.	E29096
UL CCN	NLDX
CSA File No.	012528
CSA Class No.	3211-04
NA Certification	UL Listed, CSA certified

Product Standards

UL File No.	E29096
UL CCN	NLDX
CSA File No.	012528
CSA Class No.	2411-03, 3211-04
NA Certification	UL Listed, request filed for CSA

AC operation Part no. Article no.	DC operation Part no. Article no.	Notes
DILEEM-10(230V50HZ)¹⁾ 051608	DILEEM-10-G(24VDC)¹⁾ 051643	
DILEEM-01(230V50HZ)¹⁾ 051633	DILEEM-01-G(24VDC)¹⁾ 051650	<p>With screw terminals:</p>  <p>Accessories</p> <ul style="list-style-type: none"> 1 Overload relay 2 Suppressor 3 Auxiliary contact module <p>Enclosures totally insulated</p> <p>Further actuating voltages</p> <p>Accessories</p>
DILEM-10(230V50HZ)¹⁾ 051786	DILEM-10-G(24VDC)¹⁾ 010213	
DILEM-01(230V50HZ)¹⁾ 051795	DILEM-01-G(24VDC)¹⁾ 010343	
DILEM12-10(230V50HZ)²⁾ 127075	DILEM12-10-G(24VDC)²⁾ 127132	
DILEM12-01(230V50HZ)²⁾ 127091	DILEM12-01-G(24VDC)²⁾ 127137	
DILEM4(230V50HZ)¹⁾ 051804	DILEM4-G(24VDC)¹⁾ 012701	

Mini contactor relays

Auxiliary contact modules

DILE

Contact	Rated operational current		Conventional thermal current I_{th} A	Distinctive number/type of combinations with basic device		
	AC-15			DILER-40(-G)	DILER-31(-G)	DILER-22
N/O = normally open contact	220 V	380 V	A	-	-	-
S _F = NO early-make	230 V	400 V				
NC = normally closed contact	240 V	415 V				
Ö _S = NC late-break	I _e	I _e				
	A	A				

Auxiliary contact modules

Screw terminals



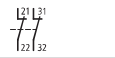
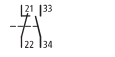

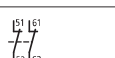
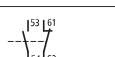
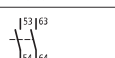
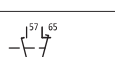
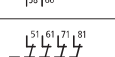
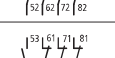
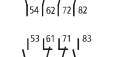
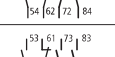

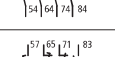
2 pole	-	-	2 NC	-	4	2	10	-	-	-
	1 N/O	-	1 NC	-	4	2	10	-	-	-
4 pole	2 N/O	-	2 NC	-	4	2	10	-	-	-
2 pole	-	-	2 NC	-	4	2	10	42E	33	24
	1 N/O	-	1 NC	-	4	2	10	51E	42	33
	2 N/O	-	-	-	4	2	10	60E	51	42
	-	1 S _F	-	1 Ö _S	4	2	10	51	42	33
4 pole	-	-	4 NC	-	4	2	10	44E	35	26
	1 N/O	-	3 NC	-	4	2	10	53E	44	35
	2 N/O	-	2 NC	-	4	2	10	62E	53	44
	3 N/O	-	1 NC	-	4	2	10	71E	62	53
	4 N/O	-	-	-	4	2	10	80E	71	62
	1 N/O	1 S _F	1 NC	1 Ö _S	4	2	10	62	53	44

Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29184
UL CCN	NKCR
CSA File No.	012528
CSA Class No.	3211-03
NA Certification	UL Listed, CSA certified

Mini contactor relays

Auxiliary contact modules


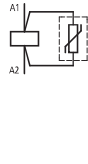

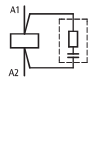
DILE

Circuit symbol	Can be combined with contactor	Part no. Article no.	Notes
		02DILEM 010064	<p>With interlocked opposing contacts</p> <p>The following applies to ...DILEM auxiliary contacts:</p> <ul style="list-style-type: none"> • Contacts to EN 50012 <p>The following applies to ...DILE auxiliary contacts:</p> <ul style="list-style-type: none"> • Contacts to EN 50005 <p>Contacts according to EN50012 are to be preferred. Type E combinations comply with EN 50011 and are to be given preference.</p> <p>No interlocked opposing contacts in NO early-makes and NC late-breaks.</p>
		11DILEM 010080	
		22DILEM 010112	
		02DILE 010240	
		11DILE 010224	
		20DILE 010208	
		11DDILE 049824	
		04DILE 010256	
		13DILE 002397	
		22DILE 010288	
		31DILE 048912	
		40DILE 010304	
		22DDILE 049823	
			<p>With interlocked opposing contacts</p>


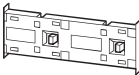



Mini contactor relays

Accessories

VG DILE..., RCDILE..., MVDILE, BT480, P1DILEM

Actuating voltage U_s V AC	Circuit symbol	For use with	Part no. Article no.		
Suppressor circuits					
Varistor suppressor					
	24 - 48 AC 110 - 250 AC 380 - 415 AC		DILE...	VG DILE48 010320 VG DILE250 010336 VG DILE415 010463	Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E29096 UL CCN NLDX CSA File No. 012528 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified
RC-Suppressor					
	24 - 48 AC 110 - 250 AC		DILE...	RCDILE48 044264 RCDILE250 046320	Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E29184 UL CCN NKCR2 CSA File No. - NA Certification UL Recognized

Notes For AC operated contactors 50 - 60 Hz.
DC operated contactor relays have an integrated suppressor.
Note drop-out delay.

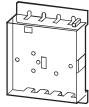

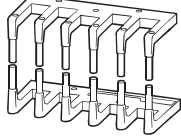
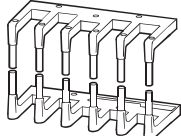
		For use with	Part no. Article no.	
Mechanical interlocks				
For mechanical connection of contactor and timing relays in combinations. 0 mm distance between contactors.				
		DILE... DILET...	VODILE 026634	UL/CSA certification not required
Mechanical interlock				
For contactors with the same or different magnet system. 0 mm distance between contactors. Mechanical lifespan 2.5 x 10 ⁶ operations. Additional auxiliary contact modules possible.				
	-	DILE...	MVDILE 010113	Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E29184 UL CCN NKCR2 CSA File No. 012528 CSA Class No. 3211-07 NA Certification UL Recognized, CSA certified
Paralleling link				
For parallel connection of contacts				
	-	DILE... DILE...	BT480 ²⁾ 052785	Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E29096 UL CCN NLDX CSA File No. 012528 CSA Class No. 3211-07 NA Certification UL Listed, CSA certified
Consisting of two four-pole paralleling links.				
		DILEEM DILEM12 DILEM	P1DILEM ²⁾ 019095	

Notes ¹⁾ Not protected against accidental contact as specified in VDE 0106 Part 100.
²⁾ 4th pole can be broken off
4 pole: $I_{th} = 60$ A open
3 pole: $I_{th} = 50$ A open
AC-1 current carrying capacity of the open contactor increases by a factor of 2.5
Protected against accidental contact in accordance with VDE 0106 Part 100

Mini contactor relays

Accessories

HDILE, ...DILEM, MVS

Contact sequence	For use with	Part no. Article no.	
Sealable shrouds			
Transparent Snap-fitting on contactor. Can be used with open installation or on service distribution board. Protection type: IP40 front Can be drilled to accommodate timing relay setting dials.	DILE... DILET...	HDILE 010482	UL/CSA certification not required
			
Start-point bridge			
	DILEEM DILEM12 DILEM	S1DILEM¹⁾ 220218	
Reversing starter wiring kit			
Main current wiring for reversing combinations	DILEEM (+MVDILEM) DILEM12 (+MVDILEM) DILEM (+MVDILEM)	MVS-WB-EM²⁾ 220209	Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E36332 UL CCN NLRV7 CSA File No. 012528 CSA Class No. 3211-06 NA Certification UL Listed, CSA certified
			
Star-delta wiring kit			
Main current wiring for star-delta combination incl. star-point bridge	DILE(E)M (+MVDILEM) DILE(E)M12 (+MVDILEM) DILE(E)M star contactor	MVS-SB-EM³⁾ 220213	Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E36332 UL CCN NLRV7 CSA File No. 012528 CSA Class No. 3211-06 NA Certification UL Listed, CSA certified
			

Notes

- ¹⁾ Protected against accidental contact in accordance with VDE 0106 Part 100
- ²⁾ The following control cables are integrated in addition to electrical interlock:
 - Q11: A1 - Q12: 21
 - Q11: 21 - Q12: A1
 - Q11: A2 - Q12: A2
 For use with overload relay separate mounting.
- ³⁾ The following control cables are integrated in addition to electrical interlock:
 - Q13: A1 - Q15: 21
 - Q13: 21 - Q15: A1
 - Q13: A2 - Q15: A2
 For use with overload relay separate mounting.

Contactor relays

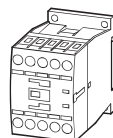

Basic devices

DILA

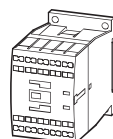

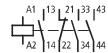
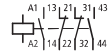
Contact		Rated operational current		Conventional thermal current	Distinctive number	Can be combined with auxiliary contact	Circuit symbol
N/O = normally open contact	NC = normally closed contact	AC-15		I_{th}			
		220 V	380 V	A			
		230 V	400 V				
		240 V	415 V				
		I_e	I_e				
		A	A				

Basic devices with positively driven contacts

Screw terminals

	4 N/O	–	4	4	16	40E	DILA-XHI(V)...	
	3 N/O	1 NC				31E	DILA-XHI(V)...	
	2 N/O	2 NC				22E	DILA-XHI(V)...	

Spring-loaded terminals

	4 N/O	–	4	4	16	40E	DILA-XHIC(V)...	
	3 N/O	1 NC				31E	DILA-XHIC(V)...	
	2 N/O	2 NC				22E	DILA-XHIC(V)...	

Notes


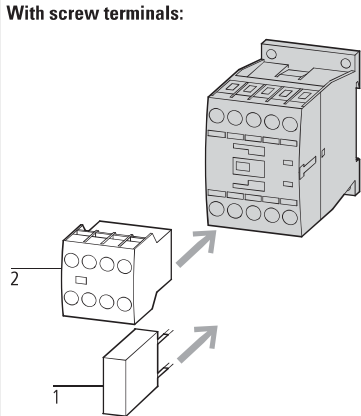
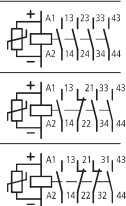
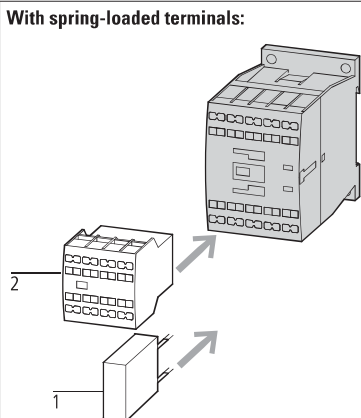
- Contact numbers to EN 50011
- Coil terminal markings to EN 50005
- The following applies to DC-operated contactors:
 - Integrated suppressor circuit

Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29184
UL CCN	NKCR
CSA File No.	012528
CSA Class No.	3211-03
NA Certification	UL Listed, CSA certified

Contactor relays

Basic devices

DILA

AC operation Part no. Article no.	Circuit symbol	DC operation Part no. Article no.	Notes
DILA-40(230V50HZ) 276329 DILA-31(230V50HZ) 276364 DILA-22(230V50HZ) 276399		DILA-40(24VDC) 276344 DILA-31(24VDC) 276379 DILA-22(24VDC) 276414	<p>With screw terminals:</p>  <p>Accessories 1 Suppressor 2 Auxiliary contact modules Further actuating voltages</p>
DILAC-40(230V50HZ) 276441 DILAC-31(230V50HZ) 276473 DILAC-22(230V50HZ) 276505		DILAC-40(24VDC) 276456 DILAC-31(24VDC) 276488 DILAC-22(24VDC) 276520	<p>With spring-loaded terminals:</p>  <p>Accessories 1 Suppressor 2 Auxiliary contact modules Further actuating voltages</p>

Contactor relays

Auxiliary contact modules

DILA...XHI...

Contact	Rated operational current		Conventional thermal current	Circuit symbol
	AC-15			
N/O = normally open contact S _F = NO early-make NC = normally closed contact Ö _S = NC late-break	220 V 230 V 240 V	380 V 400 V 415 V	I _{th}	
	I _e A	I _e A	A	

DILA auxiliary contact modules

Screw terminals



Pole	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Terminal numbers
2 pole	-	-	2 NC	-	4	4	16										51 61 52 62
	1 N/O	-	1 NC	-	4	4	16										53 63 54 64
	2 N/O	-	-	-	4	4	16										53 63 54 64
	-	1 S _F	-	1 Ö _S	4	4	16										57 65 58 66



4 pole	-	-	4 NC	-	4	4	16										51 61 71 81 52 62 72 82
	1 N/O	-	3 NC	-	4	4	16										53 63 73 83 54 64 74 84
	2 N/O	-	2 NC	-	4	4	16										53 63 73 83 54 64 74 84
	3 N/O	-	1 NC	-	4	4	16										53 63 73 83 54 64 74 84
	4 N/O	-	-	-	4	4	16										53 63 73 83 54 64 74 84
	1 N/O	1 S _F	1 NC	1 Ö _S	4	4	16										57 65 75 85 58 66 76 86

Spring-loaded terminals



2 pole	-	-	2 NC	-	4	4	16										51 61 52 62
	1 N/O	-	1 NC	-	4	4	16										53 63 54 64
	2 N/O	-	-	-	4	4	16										53 63 54 64
	-	1 S _F	-	1 Ö _S	4	4	16										57 65 58 66



4 pole	-	-	4 NC	-	4	4	16										51 61 71 81 52 62 72 82
	1 N/O	-	3 NC	-	4	4	16										53 63 73 83 54 64 74 84
	2 N/O	-	2 NC	-	4	4	16										53 63 73 83 54 64 74 84
	3 N/O	-	1 NC	-	4	4	16										53 63 73 83 54 64 74 84
	4 N/O	-	-	-	4	4	16										53 63 73 83 54 64 74 84
	1 N/O	1 S _F	1 NC	1 Ö _S	4	4	16										57 65 75 85 58 66 76 86

Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
 UL File No. E29184
 UL CCN NKCR
 CSA File No. 012528
 CSA Class No. 3211-03
 NA Certification UL Listed, CSA certified

Contactor relays

Auxiliary contact modules

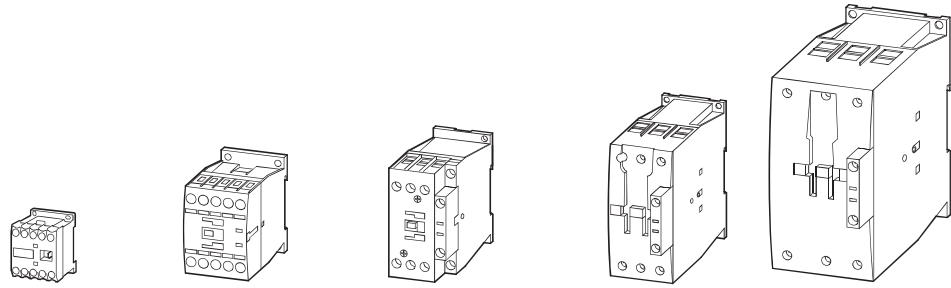
DILA...XHI...

Distinctive number/type of combinations			Part no. Article no.	Description	Notes
DILA(C)-40	DILA(C)-31	DILA(C)-22			
42E	33	24	DILA-XHI02 276420	With interlocked opposing contacts	Type E combinations comply with EN 50011 and must be given preference. The other combinations comply with EN 50005. The DC operated contactor DILA(C)-22 must only be combined with 2 pole auxiliary contacts.
51E	42	33	DILA-XHI11 276421		
60E	51	42	DILA-XHI20 276422		
51	42	33	DILA-XHIV11 276423	-	
44E	35	26	DILA-XHI04 276424	With interlocked opposing contacts	
53E	44	35	DILA-XHI13 276425		
62E	53	44	DILA-XHI22 276426		
71E	62	53	DILA-XHI31 276427		
80E	71	62	DILA-XHI40 276428		
62	53	44	DILA-XHIV22 276429		
42E	33	24	DILA-XHIC02 276526	With interlocked opposing contacts	Type E combinations comply with EN 50011 and must be given preference. The other combinations comply with EN 50005. The DC operated contactor DILA(C)-22 must only be combined with 2 pole auxiliary contacts.
51E	42	33	DILA-XHIC11 276527		
60E	51	42	DILA-XHIC20 276528		
51	42	33	DILA-XHICV11 276529	-	
44E	35	26	DILA-XHIC04 276530	With interlocked opposing contacts	
53E	44	35	DILA-XHIC13 276531		
62E	53	44	DILA-XHIC22 276532		
71E	62	53	DILA-XHIC31 276533		
80E	71	62	DILA-XHIC40 276534		
62	53	44	DILA-XHICV22 276535		

DILM, DILE(E)M, DILMP

Technical overview

Contactors
3 pole



DIL	EEM	EM	EM12	M7	M9	M12	M15	M17	M25	M32	M38	M40	M50	M65	M80	M95	M115	M150	M170
Basic devices	Page → 5/4			→ 5/18			→ 5/18			→ 5/20			→ 5/50						
Complete units	-			→ Page 5/24			→ Page 5/24			→ Page 5/26			→ Page 5/26						

Rated-operational voltage kW kW kW kW kW kW kW kW kW kW kW kW kW kW kW kW kW kW kW

AC-3	Rated operational power for 3-phase motors 50–60 Hz																		
220 V – 230 V	1.5	2.2	3	2.2	2.5	3.5	4	5	7.5	10	11	12.5	15.5	20	25	30	37	48	52
380 V – 400 V	3	4	5.5	3	4	5.5	7.5	7.5	11	15	18.5	18.5	22	30	37	45	55	75	90
440 V	3.3	4.6	5.5	4.5	5.5	7.5	8.4	10.5	15.5	20	21	25	32	41	51	60	75	95	105
500 V	3	4	5.5	3.5	4.5	7	7.5	12	17.5	23	24	28	36	47	58	70	85	110	120
660 V/690 V	3	4	4	3.5	4.5	6.5	7	11	14	17	21	23	30	35	63	75	90	96	140
1000 V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

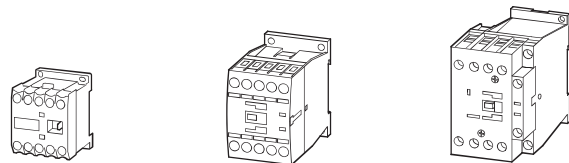
▲ Increase in life span for DILM7 – DILM150 to 200000 operations

AC-4	Rated operational power for 3-phase motors 50–60 Hz																		
220 V – 230 V	1.1	1.5	1.5	1	1.5	2	2	2.5	3.5	4	4	5	6	7	12	16	17	20	20
380 V – 400 V	2.2	3	3	2.2	2.5	3	3	4.5	6	7	7	9	10	12	20	26	28	33	33
440 V	2.4	3.3	3.3	2.4	3	3.6	3.6	5.5	7	8	8	10	12	14	25	32	35	41	41
500 V	2.2	3	3	2.5	2.8	3.5	3.5	6	8	9	9	11	13	16	29	36	40	47	47
660 V/690 V	2.2	3	3	2.9	3.6	4.4	4.4	6.5	8.5	10	10	12	14	17	26	35	43	48	48
1000 V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

AC-1	Rated operational power under resistive load, 40 °C																		
220 V – 230 V	8	8	8	8	8	8	8	15	17	17	17	22	30	37	42	49	61	72	85
380 V – 400 V	13	13	13	14	14	14	14	26	29	29	29	39	53	65	72	85	105	125	150
440 V	15	15	15	16	16	16	16	30	34	34	34	45	58	71	80	94	116	138	170
500 V	18	18	18	19	19	19	19	34	38	38	38	51	66	81	90	107	132	156	194
660 V/690 V	23	23	23	25	25	25	25	45	51	51	51	68	91	111	125	148	182	216	268
1000 V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

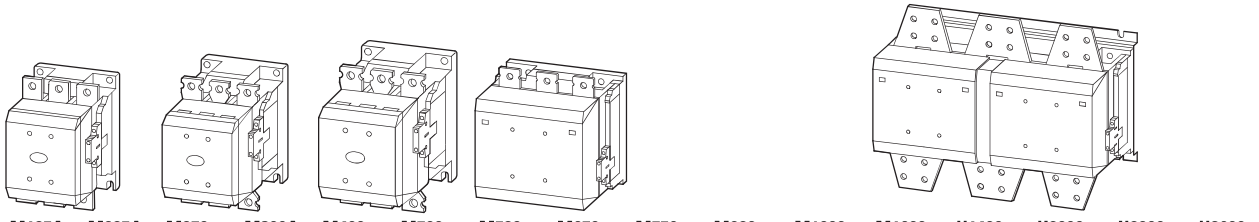
Conventional thermal Current	I _{th} = I _e open at 40 °C																			
	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
	22	22	22	22	22	22	22	40	45	45	45	60	80	98	110	130	160	190	225	

Contactors
4 pole



DIL	Page		
Rated operational voltage			
AC-1	Conventional free air thermal current I _{th} = I _e open, at 40 °C		
	A	A	A
up to 690 V	22	22	32

Contactors 3 pole



M185A	M225A	M250	M300A	M400	M500	M580	M650	M750	M820	M1000	M1600	H1400	H2000	H2200	H2600
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→ Page 5/32		→ Page 5/32			→ Page 5/32		→ Page 5/32		→ Page 5/34						
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kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
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55	70	75	90	125	155	185	205	240	260	315	500	-	-	-	-
90	110	132	160	200	250	315	355	400	450	560	900	-	-	-	-
115	142	157	190	255	345	370	420	480	525	650	1000	-	-	-	-
132	160	180	215	290	360	420	470	550	600	730	1180	-	-	-	-
175	215	240	286	344	344	560	630	720	750	1000	1600	-	-	-	-
108	108	108	132	132	132	600	600	800	800	1000	1770	-	-	-	-

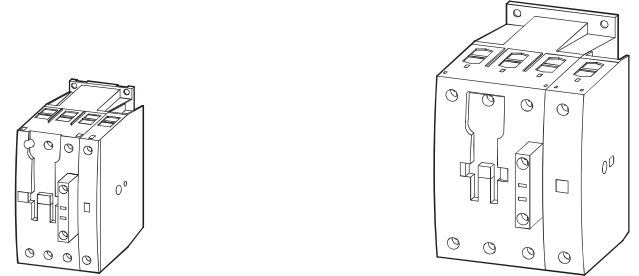
41	51	62	75	92	112	143	161	181	209	260	430	-	-	-	-
75	90	110	132	160	200	250	280	315	355	450	750	-	-	-	-
85	102	125	140	186	229	290	326	367	418	520	830	-	-	-	-
96	116	143	172	214	260	330	370	417	474	590	940	-	-	-	-
127	155	189	229	283	344	440	494	556	633	780	1300	-	-	-	-
108	108	108	132	132	132	509	509	678	678	1000	1650	-	-	-	-

121	139	155	177	221	310	354	376	398	443	443	717	620	886	1075	1269
210	241	268	306	382	535	612	650	689	766	766	1247	1071	1531	1870	2207
243	279	310	354	443	620	709	753	797	886	886	1371	1240	1773	2058	2427
277	317	352	403	503	705	806	856	906	1007	1007	1558	1410	2015	2338	2758
365	419	465	532	664	930	1064	1130	1196	1330	1330	2151	1861	2660	3227	3806
554	635	705	806	1007	1410	1612	1712	1813	2015	2015	2420	2417	3223	4676	5516

A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
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337	356	400	430	612	857	980	1041	1102	1225	1225	2200	1714	2450	2700	3185
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Contactors 4 pole

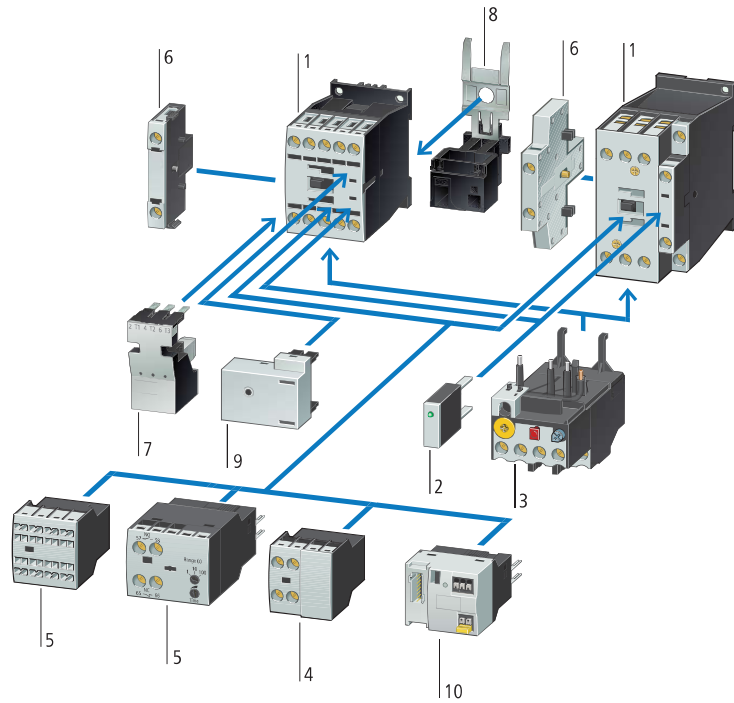


A	A	A	A	A	A
45	63	80	125	160	200

Contactors

DILM7...DILM170

System overview



Contactors up to 90 kW
(AC-3/400 V) 1

3 pole

4 pole

Suppressor circuits 2

Overload relays 3

Auxiliary contact modules 4

Auxiliary contact modules 5

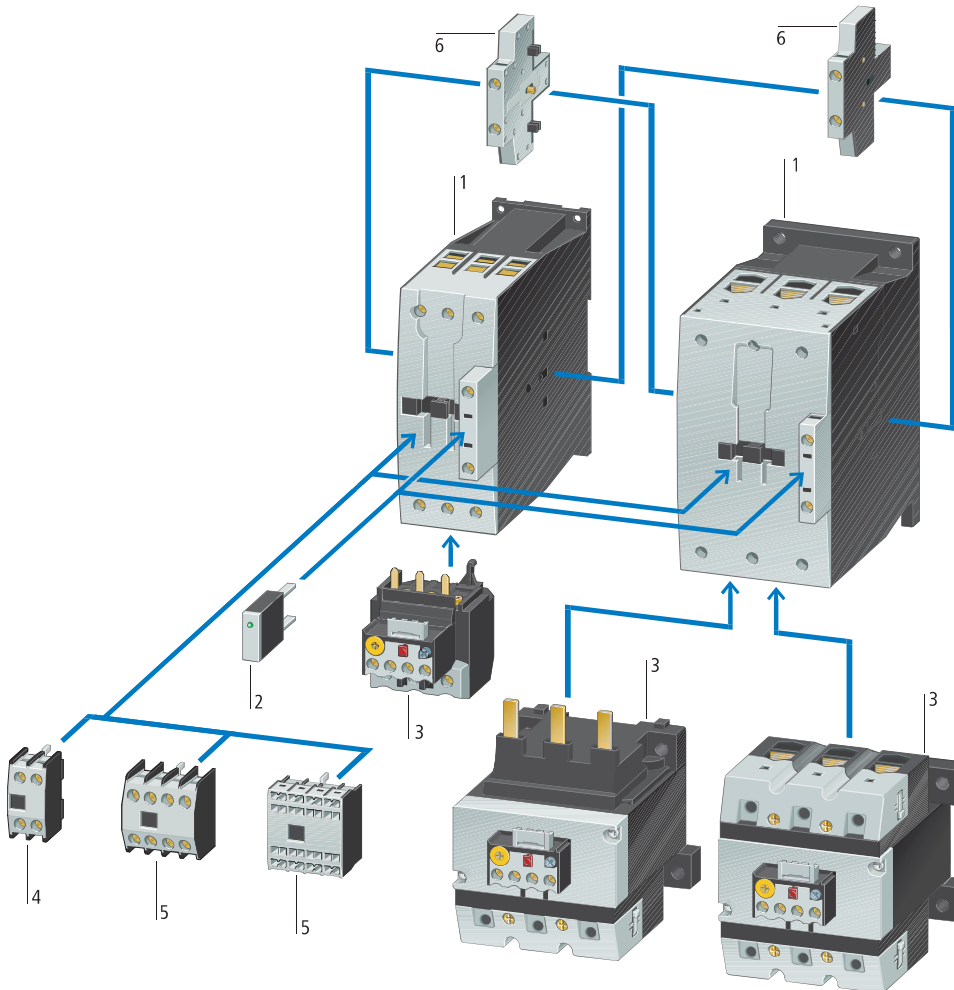
Auxiliary contact modules 6

Motor feeder plug 7

PE module with contact
plate 8

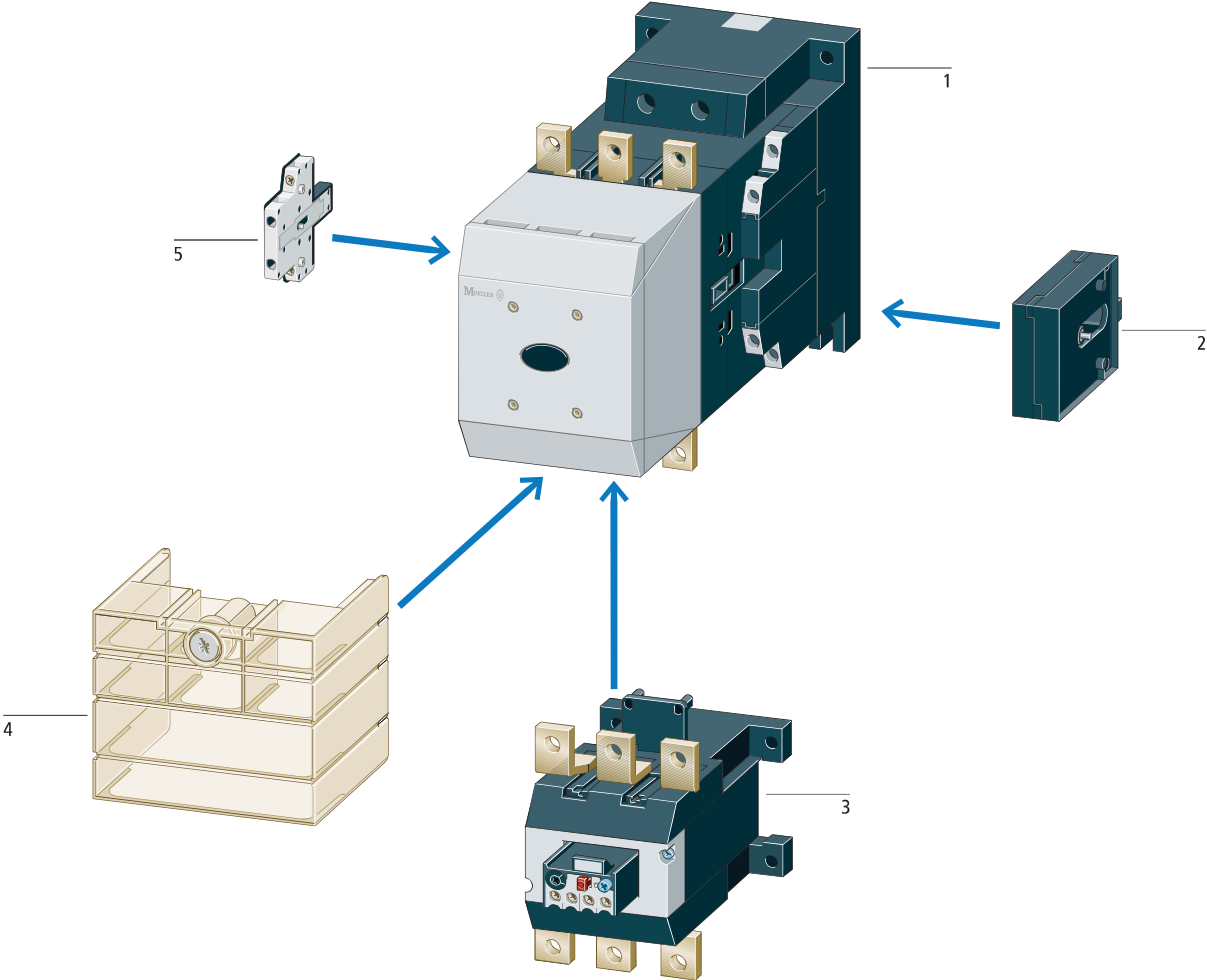
Motor suppressor module

SmartWire-Darwin
contactor module 10



Contactors

DILM185... DILH2600



1
Contactors 90 – 900 kW
 (AC-3/400 V)
 Comfort series

1
Standard range 90 – 250 kW

2
Mechanical interlock

3
Overload relays

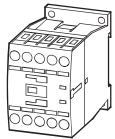



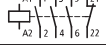



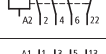
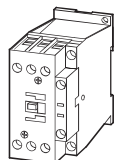



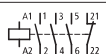

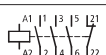


4
Terminal shroud

5
Auxiliary contact modules

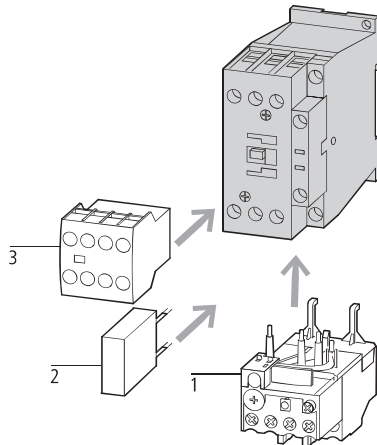
Contactors

Basic devices up to 170 A

DILM

	Rated operational current	Max. motor rating for three-phase motors 50 - 60 Hz						Conventional thermal current $I_{th} = I_e$ AC-1 at 60 °C	Contact configuration	Circuit symbol	
		AC-3		AC-3		AC-4					
	380 V 400 V	220 V 230 V	380 V 400 V	660 V 690 V	220 V 230 V	380 V 400 V	660 V 690 V	Open	N/O = normally open contact NC = normally closed contact		
	I_e A	P kW	P kW	P kW	P kW	P kW	P kW	$I_{th} = I_e$ A			
Basic device											
Screw terminals											
3 pole											
	7	2.2	3	3.5	1	2.2	2.9	20	1 N/O	-	
	7	2.2	3	3.5	1	2.2	2.9	20	-	1 NC	
	9	2.5	4	4.5	1.5	2.5	3.6	20	1 N/O	-	
	9	2.5	4	4.5	1.5	2.5	3.6	20	-	1 NC	
	12	3.5	5.5	6.5	2	3	4.4	20	1 N/O	-	
	12	3.5	5.5	6.5	2	3	4.4	20	-	1 NC	
	15.5	4	7.5	7	2	3	4.4	20	1 N/O	-	
	15.5	4	7.5	7	2	3	4.4	20	-	1 NC	
	18	5	7.5	11	2.5	4.5	6.5	35	1 N/O	-	
	18	5	7.5	11	2.5	4.5	6.5	35	-	1 NC	
	25	7.5	11	14	3.5	6	8.5	40	1 N/O	-	
	25	7.5	11	14	3.5	6	8.5	40	-	1 NC	
	32	10	15	17	4	7	10	40	1 N/O	-	
	32	10	15	17	4	7	10	40	-	1 NC	
	38	11	18.5	21	4	7	10	40	1 N/O	-	
	38	11	18.5	21	4	7	10	40	-	1 NC	

Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
 UL File No. E29096
 UL CCN NLDX
 CSA File No. 012528
 CSA Class No. 2411-03, 3211-04
 NA Certification UL Listed, CSA certified

Can be combined with auxiliary contact	AC operation Part no. Article no.	DC operation Part no. Article no.	Notes
	DILM7-10(230V50HZ) 276550	DILM7-10(24VDC) 276565	<p>Contacts to EN 50 012.</p> <p>For all DC operated contactors DILM7 - DILM15 the following applies:</p> <ul style="list-style-type: none"> • Integrated varistor-suppressor circuit. <p>For DC operated contactors DILM17 - DILM170 the following applies:</p> <ul style="list-style-type: none"> • Integrated suppressor circuit in actuating electronics <p>For AC operated contactors DILM115 - DILM170 the following applies:</p> <ul style="list-style-type: none"> • Integrated suppressor circuit in actuating electronics • For DILM7-01 – DILM38-01 the following applies: <ul style="list-style-type: none"> • With mirror contact. <p>¹⁾ Electrical lifespan</p> <div style="text-align: center;">  </div> <p>Accessories</p> <p>1 Overload relay 2 Suppressor 3 Auxiliary contact module</p> <p>Further actuating voltages Accessories</p>
DILM32-XHI.. DILA-XHI(V)..			
DILA-XHI(V)..	DILM7-01(230V50HZ) 276585	DILM7-01(24VDC) 276600	
DILM32-XHI.. DILA-XHI(V)..	DILM9-10(230V50HZ) 276690	DILM9-10(24VDC) 276705	
DILA-XHI(V)..	DILM9-01(230V50HZ) 276725	DILM9-01(24VDC) 276740	
DILM32-XHI.. DILA-XHI(V)..	DILM12-10(230V50HZ) 276830	DILM12-10(24VDC) 276845	
DILA-XHI(V)..	DILM12-01(230V50HZ) 276865	DILM12-01(24VDC) 276880	
DILM32-XHI.. DILA-XHI(V)..	DILM15-10(230V50HZ)¹⁾ 290058	DILM15-10(24VDC)¹⁾ 290073	
DILA-XHI(V)..	DILM15-01(230V50HZ)¹⁾ 290093	DILM15-01(24VDC)¹⁾ 290108	
DILM32-XHI.. DILA-XHI(V).. DILM32-XHI11-S	DILM17-10(230V50HZ) 277004	DILM17-10(RDC24) 277018	
DILA-XHI(V).. DILM32-XHI11-S	DILM17-01(230V50HZ) 277036	DILM17-01(RDC24) 277050	
DILM32-XHI.. DILA-XHI(V).. DILM32-XHI11-S	DILM25-10(230V50HZ) 277132	DILM25-10(RDC24) 277146	
DILA-XHI(V).. DILM32-XHI11-S	DILM25-01(230V50HZ) 277164	DILM25-01(RDC24) 277178	
DILM32-XHI.. DILA-XHI(V).. DILM32-XHI11-S	DILM32-10(230V50HZ) 277260	DILM32-10(RDC24) 277274	
DILA-XHI(V).. DILM32-XHI11-S	DILM32-01(230V50HZ) 277292	DILM32-01(RDC24) 277306	
DILM32-XHI.. DILA-XHI(V).. DILM32-XHI11-S	DILM38-10(230V50HZ)¹⁾ 112428	DILM38-10(RDC24)¹⁾ 112442	
DILA-XHI(V).. DILM32-XHI11-S	DILM38-01(230V50HZ)¹⁾ 112456	DILM38-01(RDC24)¹⁾ 112470	

Contactors

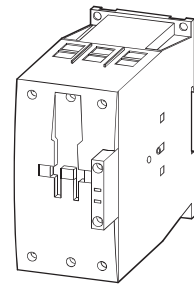
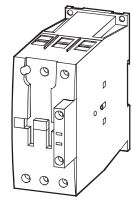
Basic devices up to 170 A

DILM

Rated operational current	Max. motor rating for three-phase motors 50 - 60 Hz							Conventional thermal current $I_{th} = I_o$ AC-1 at 60 °C	Contact configuration	Circuit symbol
	AC-3		AC-3		AC-4					
380 V 400 V	220 V	380 V	660 V	220 V	380 V	660 V	Open	N/O = normally open contact NC = normally closed contact		
	230 V	400 V	690 V	230 V	400 V	690 V				
I_o A	P	P	P	P	P	P	$I_{th} = I_o$ A			
	kW	kW	kW	kW	kW	kW				

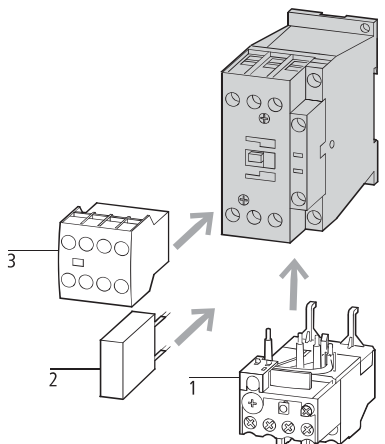
Basic device

Screw terminals
3 pole



40	12.5	18.5	23	5	9	12	50	—	—	
50	15.5	22	30	6	10	14	65	—	—	
65	20	30	35	7	12	17	80	—	—	
72	25	37	35	7	12	17	80	—	—	
80	25	37	63	12	20	26	90	—	—	
95	30	45	75	16	26	35	110	—	—	
115	37	55	90	17	28	43	130	—	—	
150	48	75	96	20	33	48	160	—	—	
170	52	90	140	20	33	48	185	—	—	

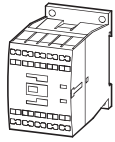








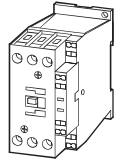






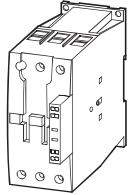



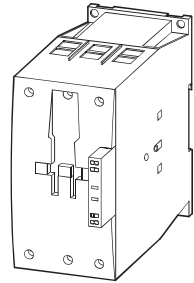




Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29096
UL CCN	NLDX
CSA File No.	012528
CSA Class No.	2411-03, 3211-04
NA Certification	UL Listed, CSA certified

Can be combined with auxiliary contact	AC operation Part no. Article no.	DC operation Part no. Article no.	Notes
DILM150-XHI(V).. DILM1000-XHI(V)..	DILM40(230V50HZ) 277766	DILM40(RDC24) 277780	<p>Contacts to EN 50012.</p> <p>For all DC operated contactors DILM7 - DILM15 the following applies:</p> <ul style="list-style-type: none"> • Integrated varistor-suppressor circuit. <p>For DC operated contactors DILM17 - DILM170 the following applies:</p> <ul style="list-style-type: none"> • Integrated suppressor circuit in actuating electronics <p>For AC operated contactors DILM115 - DILM170 the following applies:</p> <ul style="list-style-type: none"> • Integrated suppressor circuit in actuating electronics <p>For DILM7-01 – DILM38-01 the following applies:</p> <ul style="list-style-type: none"> • With mirror contact. <p>¹⁾ Electrical lifespan → 5/91</p> 
DILM150-XHI(V).. DILM1000-XHI(V)..	DILM50(230V50HZ) 277830	DILM50(RDC24) 277844	
DILM150-XHI(V).. DILM1000-XHI(V)..	DILM65(230V50HZ) 277894	DILM65(RDC24) 277908	
DILM150-XHI(V).. DILM1000-XHI(V)..	DILM72(230V50HZ)¹⁾ 107670	DILM72(RDC24)¹⁾ 107671	
DILM150-XHI(V).. DILM1000-XHI(V)..	DILM80(230V50HZ) 239402	DILM80(RDC24) 239416	
DILM150-XHI(V).. DILM1000-XHI(V)..	DILM95(230V50HZ) 239480	DILM95(RDC24) 239510	
DILM150-XHI(V).. DILM1000-XHI(V)..	DILM115(RAC240) 239548	DILM115(RDC24) 239555	
DILM150-XHI(V).. DILM1000-XHI(V)..	DILM150(RAC240) 239588	DILM150(RDC24) 239591	
DILM150-XHI(V).. DILM1000-XHI(V)..	DILM170(RAC240)¹⁾ 107013	DILM170(RDC24)¹⁾ 107016	

Contactors

Basic devices up to 170 A

DILM

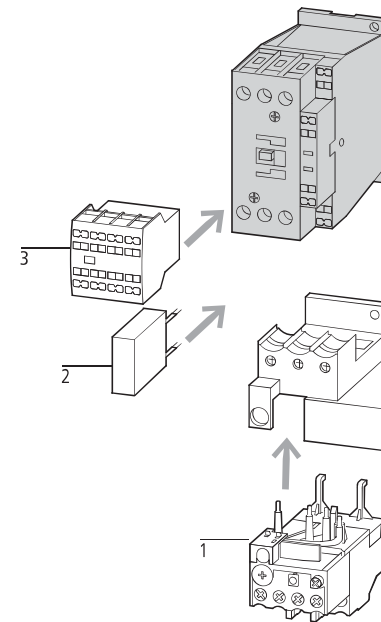
	Rated operational current AC-3	Max. motor rating for three-phase motors 50 - 60 Hz						Conventional thermal current $I_{th} = I_e$ AC-1 at 60 °C	Contact configuration	Circuit symbol	
	AC-3	AC-3		AC-4		AC-3	AC-4				
	380 V 400 V I_e A	220 V 230 V P kW	380 V 400 V P kW	660 V 690 V P kW	220 V 230 V P kW	380 V 400 V P kW	660 V 690 V P kW	Open $I_{th} = I_e$ A	N/O = normally open contact NC = normally closed contact		
Basic device											
Spring-loaded terminals 3 pole											
	7	2.2	3	3.5	1	2.2	2.9	20	1 N/O	–	
	7	2.2	3	3.5	1	2.2	2.9	20	–	1 NC	
	9	2.5	4	4.5	1.5	2.5	3.6	20	1 N/O	–	
	9	2.5	4	4.5	1.5	2.5	3.6	20	–	1 NC	
	12	3.5	5.5	6.5	2	3	4.4	20	1 N/O	–	
	12	3.5	5.5	6.5	2	3	4.4	20	–	1 NC	
	15.5	4	7.5	7	2	3	4.4	20	1 N/O	–	
	15.5	4	7.5	7	2	3	4.4	20	–	1 NC	
Spring-loaded terminals on auxiliary and control circuit terminals 3 pole											
	18	5	7.5	11	2.5	4.5	6.5	35	1 N/O	–	
	18	5	7.5	11	2.5	4.5	6.5	35	–	1 NC	
	25	7.5	11	14	3.5	6	8.5	40	1 N/O	–	
	25	7.5	11	14	3.5	6	8.5	40	–	1 NC	
	32	10	15	17	4	7	10	40	1 N/O	–	
	32	10	15	17	4	7	10	40	–	1 NC	
	40	12.5	18.5	23	5	9	12	50	–	–	
	50	15.5	22	30	6	10	14	65	–	–	
	65	20	30	35	7	12	17	80	–	–	
	80	25	37	63	12	20	26	90	–	–	
	95	30	45	75	16	26	35	110	–	–	
	115	37	55	90	17	28	43	130	–	–	
	150	48	75	96	20	33	48	160	–	–	

Contactors

Basic devices up to 170 A

DILM

Can be combined with auxiliary contact	AC operation	DC operation	Notes
	Part no. Article no.	Part no. Article no.	
	DILMC7-10(230V50HZ) 277389	DILMC7-10(24VDC) 277404	<p>Contacts to EN 50 012.</p> <p>For DILMC7 – DILMC15 the following applies:</p> <ul style="list-style-type: none"> Auxiliary coil, and main current terminals with spring-loaded terminals. <p>For DILMC17 – DILMC150 the following applies:</p> <ul style="list-style-type: none"> Auxiliary connections, coil connections with spring-loaded connection terminals. Main current connections with screw terminals. <p>For DC operated contactors DILMC7 - DILMC15 the following applies:</p> <ul style="list-style-type: none"> Integrated varistor-suppressor circuit. <p>For DC operated contactors DILMC17 - DILMC150 the following applies:</p> <ul style="list-style-type: none"> Integrated suppressor circuit in actuating electronics <p>For AC operated contactors DILMC115 - DILMC150 the following applies:</p> <ul style="list-style-type: none"> Integrated suppressor circuit in actuating electronics <p>For DILMC7-01 – DILMC32-01 the following applies:</p> <ul style="list-style-type: none"> With mirror contact.
	DILMC7-01(230V50HZ) 277421	DILMC7-01(24VDC) 277436	
	DILMC9-10(230V50HZ) 277453	DILMC9-10(24VDC) 277468	
	DILMC9-01(230V50HZ) 277485	DILMC9-01(24VDC) 277500	
	DILMC12-10(230V50HZ) 277517	DILMC12-10(24VDC) 277532	
	DILMC12-01(230V50HZ) 277549	DILMC12-01(24VDC) 277564	
	DILMC15-10(230V50HZ) 293911	DILMC15-10(24VDC) 293926	
	DILMC15-01(230V50HZ) 293946	DILMC15-01(24VDC) 293961	
	DILMC17-10(230V50HZ) 277581	DILMC17-10(RDC24) 277595	
	DILMC17-01(230V50HZ) 277611	DILMC17-01(RDC24) 277625	
	DILMC25-10(230V50HZ) 277641	DILMC25-10(RDC24) 277655	
	DILMC25-01(230V50HZ) 277671	DILMC25-01(RDC24) 277685	
	DILMC32-10(230V50HZ) 277701	DILMC32-10(RDC24) 277715	
	DILMC32-01(230V50HZ) 277731	DILMC32-01(RDC24) 277745	
DILM150-XHIC(V).. DILM1000-XHIC..	DILMC40(230V50HZ) 277965	DILMC40(RDC24) 277979	
	DILMC50(230V50HZ) 277995	DILMC50(RDC24) 278009	
	DILMC65(230V50HZ) 278025	DILMC65(RDC24) 278039	
	DILMC80(230V50HZ) 239618	DILMC80(RDC24) 239652	
	DILMC95(230V50HZ) 239685	DILMC95(RDC24) 239715	
	DILMC115(RAC240) 239736	DILMC115(RDC24) 239741	
DILMC150(RAC240) 239751	DILMC150(RDC24) 239765		



Accessories

- 1 Overload relay
 - 2 Suppressor
 - 3 Auxiliary contact module
- Further actuating voltages
- Accessories

Product Standards

UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification

IEC/EN 60947-4-1; UL 5080;
CSA-C22.2 No. 14-05;
CE marking
E29096
NLDX
012528
2411-03, 3211-04
UL Listed, CSA certified

Contactors

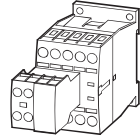
Complete device up to 170 A

DILM

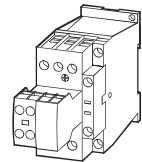
Rated operational current AC-3	Max. motor rating for three-phase motors 50 - 60 Hz						Conventional free air thermal current $I_{th} = I_e$ AC-1 at 60 °C	Contact configuration: ☉ = Safety function by positive opening according to IEC/EN 60947-5-1	Circuit symbol
	AC-3		AC-4		AC-4				
380 V 400 V	220 V	380 V	660 V	220 V	380 V	660 V	Open $I_{th} = I_e$	N/O = normally open contact NC = normally closed contact	
	230 V	400 V	690 V	230 V	400 V	690 V			
I_e	P	P	P	P	P	P			
A	kW	kW	kW	kW	kW	kW	A		

DILM complete device

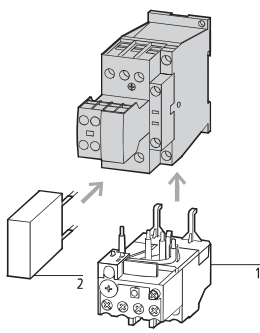
Screw terminals



7	2.2	3	3.5	1	2.2	2.9	20	2 N/O	1 NC	
7	2.2	3	3.5	1	2.2	2.9	20	2 N/O	1 NC	
7	2.2	3	3.5	1	2.2	2.9	20	3 N/O	2 NC	
9	2.5	4	4.5	1.5	2.5	3.6	20	2 N/O	1 NC	
9	2.5	4	4.5	1.5	2.5	3.6	20	2 N/O	1 NC	
9	2.5	4	4.5	1.5	2.5	3.6	20	3 N/O	2 NC	
12	3.5	5.5	6.5	2	3	4.4	20	2 N/O	1 NC	
12	3.5	5.5	6.5	2	3	4.4	20	2 N/O	1 NC	
12	3.5	5.5	6.5	2	3	4.4	20	3 N/O	2 NC	
15.5	4	7.5	7	2	3	4.4	20	2 N/O	2 NC	
18	5	7.5	11	2.5	4.5	6.5	35	2 N/O	1 NC	
18	5	7.5	11	2.5	4.5	6.5	35	2 N/O	1 NC	
18	5	7.5	11	2.5	4.5	6.5	35	3 N/O	2 NC	
25	7.5	11	14	3.5	6	8.5	40	2 N/O	1 NC	
25	7.5	11	14	3.5	6	8.5	40	2 N/O	1 NC	
25	7.5	11	14	3.5	6	8.5	40	3 N/O	2 NC	
32	10	15	17	4	7	10	40	2 N/O	1 NC	
32	10	15	17	4	7	10	40	2 N/O	1 NC	
32	10	15	17	4	7	10	40	3 N/O	2 NC	



Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29096
UL CCN	NLDX
CSA File No.	012528
CSA Class No.	2411-03, 3211-04
NA Certification	UL Listed, CSA certified

AC operation	DC operation	Notes
Part no. Article no.	Part no. Article no.	
DILM7-21(230V50HZ) 276620	DILM7-21(24VDC) 276635	<div style="text-align: center;">  </div> <p>Accessories</p> <p>1 Overload relay 2 Suppressor Accessories</p> <p>For all DC operated contactors DILM7 - DILM15 the following applies:</p> <ul style="list-style-type: none"> • Integrated varistor suppressor circuit. <p>For DC operated contactors DILM17 - DILM170 the following applies:</p> <ul style="list-style-type: none"> • Integrated suppressor circuit in actuating electronics <p>For AC operated contactors DILM115 - DILM170 the following applies:</p> <ul style="list-style-type: none"> • Integrated suppressor circuit in actuating electronics <p>For DILM7 - DILM150 the following applies:</p> <ul style="list-style-type: none"> • With mirror contact. <p>Contacts to EN 50012</p>
DILM7-22(230V50HZ) 106360	DILM7-22(24VDC) 106367	
DILM7-32(230V50HZ) 276655	DILM7-32(24VDC) 276670	
DILM9-21(230V50HZ) 276760	DILM9-21(24VDC) 276775	
DILM9-22(230V50HZ) 106361	DILM9-22(24VDC) 106368	
DILM9-32(230V50HZ) 276795	DILM9-32(24VDC) 276810	
DILM12-21(230V50HZ) 276900	DILM12-21(24VDC) 276915	
DILM12-22(230V50HZ) 106362	DILM12-22(24VDC) 106369	
DILM12-32(230V50HZ) 276935	DILM12-32(24VDC) 276950	
DILM15-22(230V50HZ) 106363	DILM15-22(24VDC) 106370	
DILM17-21(230V50HZ) 277068	DILM17-21(RDC24) 277082	
DILM17-22(230V50HZ) 106364	DILM17-22(RDC24) 106371	
DILM17-32(230V50HZ) 277100	DILM17-32(RDC24) 277114	
DILM25-21(230V50HZ) 277196	DILM25-21(RDC24) 277210	
DILM25-22(230V50HZ) 106365	DILM25-22(RDC24) 106372	
DILM25-32(230V50HZ) 277228	DILM25-32(RDC24) 277242	
DILM32-21(230V50HZ) 277324	DILM32-21(RDC24) 277338	
DILM32-22(230V50HZ) 106366	DILM32-22(RDC24) 106373	
DILM32-32(230V50HZ) 277356	DILM32-32(RDC24) 277370	

Contactors

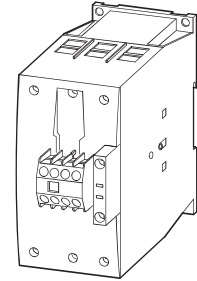
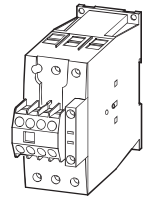
Complete device up to 170 A

DILM

Rated operational current AC-3	Max. motor rating for three-phase motors 50 - 60 Hz						Conventional free air thermal current $I_{th} = I_e$ AC-1 at 60 °C	Contact configuration: ⊕ = Safety function by positive opening according to IEC/EN 60947-5-1	Circuit symbol
	AC-3			AC-4					
380 V 400 V	220 V	380 V	660 V	220 V	380 V	660 V	Open $I_{th} = I_e$	N/O = normally open contact NC = normally closed contact	
	230 V	400 V	690 V	230 V	400 V	690 V			
I_e	P	P	P	P	P	P			
A	kW	kW	kW	kW	kW	kW	A		

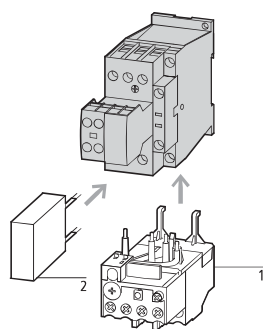
DILM complete device

Screw terminals



40	12.5	18.5	23	5	9	12	50	2 N/O	2 NC	
50	15.5	22	30	6	10	14	65	2 N/O	2 NC	
65	20	30	35	7	12	17	80	2 N/O	2 NC	
80	25	37	63	12	20	26	90	2 N/O	2 NC	
95	30	45	75	16	26	35	110	2 N/O	2 NC	
115	37	55	90	17	28	43	130	2 N/O	2 NC	
150	48	75	96	20	34	48	160	2 N/O	2 NC	

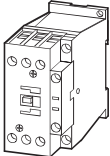
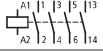
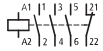


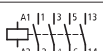

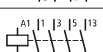
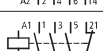
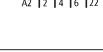



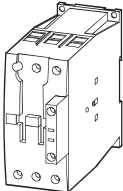

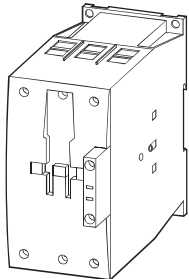

Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29096
UL CCN	NLDX
CSA File No.	012528
CSA Class No.	2411-03, 3211-04
NA Certification	UL Listed, CSA certified

AC operation Part no. Article no.	DC operation Part no. Article no.	Notes
DILM40-22(230V50HZ) 277798	DILM40-22(RDC24) 277812	<div style="text-align: center;">  </div> <p>Accessories 1 Overload relay 2 Suppressor Accessories</p> <p>For DC operated contactors DILM17 - DILM170 the following applies: <ul style="list-style-type: none"> • Integrated suppressor circuit in actuating electronics For AC operated contactors DILM115 - DILM170 the following applies: <ul style="list-style-type: none"> • Integrated suppressor circuit in actuating electronics For DILM7 - DILM150 the following applies: <ul style="list-style-type: none"> • With mirror contact. Contacts to EN 50012</p>
DILM50-22(230V50HZ) 277862	DILM50-22(RDC24) 277876	
DILM65-22(230V50HZ) 277926	DILM65-22(RDC24) 277940	
DILM80-22(230V50HZ) 239449	DILM80-22(RDC24) 239463	
DILM95-22(230V50HZ) 239527	DILM95-22(RDC24) 239541	
DILM115-22(RAC240) 239578	DILM115-22(RDC24) 239581	
DILM150-22(RAC240) 239598	DILM150-22(RDC24) 239601	

Contactors DILM, DILH

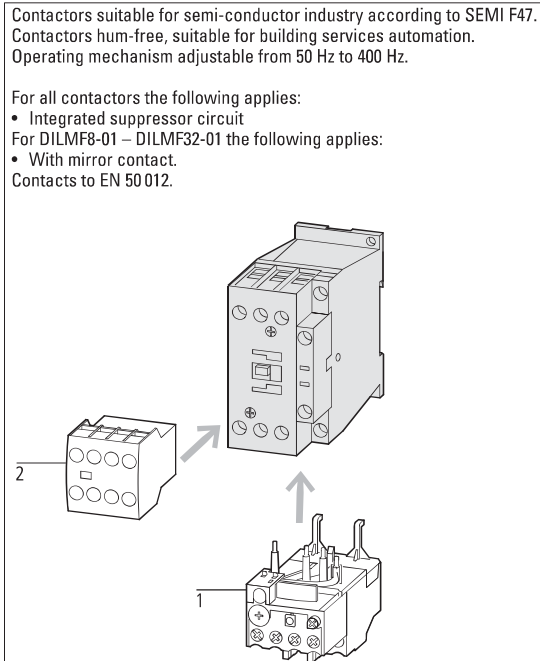
Contactors up to 150 A with electronic actuation

DILMF

Pole	Rated operational current	Max. motor rating, three-phase motors, 50 - 60 Hz						Conventional thermal current $I_{th} = I_e$ AC-1 at 60 °C	Contact configuration: ☉ = Safety function by positive opening according to IEC/EN 60947-5-1 N/O = normally open contact NC = normally closed contact	Circuit symbol		
		AC-3		AC-3		AC-4						
		380 V 400 V	220 V 230 V	380 V 400 V	660 V 690 V	220 V 230 V	380 V 400 V				660 V 690 V	
	I_e A	P kW	P kW	P kW	P kW	P kW	P kW	$I_{th} = I_e$ A				
Basic device												
Screw terminals												
	3 pole	7	2.2	3	3.5	1	2.2	2.9	20	1 N/O	–	
		7	2.2	3	3.5	1	2.2	2.9	20	–	1 NC	
		9	2.5	4	4.5	1.5	2.5	3.6	20	1 N/O	–	
		9	2.5	4	4.5	1.5	2.5	3.6	20	–	1 NC	
		12	3.5	5.5	6.5	2	3	4.4	20	1 N/O	–	
		12	3.5	5.5	6.5	2	3	4.4	20	–	1 NC	
		18	5	7.5	11	2.5	4.5	6.5	35	1 N/O	–	
		18	5	7.5	11	2.5	4.5	6.5	35	–	1 NC	
		25	7.5	11	14	3.5	6	8.5	40	–	1 NC	
		25	7.5	11	14	3.5	6	8.5	40	1 N/O	–	
		32	10	15	17	4	7	10	40	1 N/O	–	
		32	10	15	17	4	7	10	40	–	1 NC	
	3 pole	40	12.5	18.5	23	5	9	12	50	–	–	
		50	15.5	22	30	6	10	14	65	–	–	
		65	20	30	35	7	12	17	80	–	–	
	3 pole	80	25	37	63	12	20	26	90	–	–	
		95	30	45	75	16	26	35	110	–	–	
		115	37	55	90	17	28	43	130	–	–	
		150	48	75	96	20	33	48	160	–	–	

Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05;
	CE marking
UL File No.	E29096
UL CCN	NLDX
CSA File No.	012528
CSA Class No.	2411-03, 3211-04
NA Certification	UL Listed, CSA certified

AC operation Part no. Article no.	Notes
DILMF8-10(RAC240) 104413	Contactors suitable for semi-conductor industry according to SEMI F47. Contactors hum-free, suitable for building services automation. Operating mechanism adjustable from 50 Hz to 400 Hz.
DILMF8-01(RAC240) 104417	For all contactors the following applies: • Integrated suppressor circuit
DILMF11-10(RAC240) 104421	For DILMF8-01 – DILMF32-01 the following applies: • With mirror contact.
DILMF11-01(RAC240) 104425	Contacts to EN 50 012.
DILMF14-10(RAC240) 104429	
DILMF14-01(RAC240) 104433	
DILMF17-10(RAC240) 104437	
DILMF17-01(RAC240) 104441	
DILMF25-01(RAC240) 104449	
DILMF25-10(RAC240) 104445	
DILMF32-10(RAC240) 104453	
DILMF32-01(RAC240) 104457	
DILMF40(RAC240) 104461	
DILMF50(RAC240) 104465	Accessories 1 Overload relay
DILMF65(RAC240) 104469	2 Auxiliary contact modules Further actuating voltages
DILMF80(RAC240) 104473	Accessories
DILMF95(RAC240) 104477	
DILMF115(RAC240) 104481	
DILMF150(RAC240) 104485	



Accessories
 1 Overload relay
 2 Auxiliary contact modules
 Further actuating voltages
 Accessories

Contactors DILM, DILH

Standard devices greater than 150 A

DILM...S/22...

Rated operational current	Max. motor rating for three-phase motors 50 - 60 Hz						Conventional thermal current $I_{th} = I_e$ AC-1 at 40 °C Open $I_{th} = I_e$	Circuit symbol	For use with
	AC-3		AC-3		AC-4				
380 V	220 V	380 V	660 V	220 V	380 V	660 V			
400 V	230 V	400 V	690 V	230 V	400 V	690 V			
I_e	P	P	P	P	P	P			
A	kW	kW	kW	kW	kW	kW	A		

Standard device for currents greater than 150 A

DILM complete device

	250	75	132	240	62	110	189	400		DILM820-XHI...
	300	90	160	195	75	132	160	430		
	400	125	200	344	92	160	283	612		DILM820-XHI...
	500	155	250	344	112	200	344	857		DILM820-XHI...
	580	185	315	344	112	200	344	920		DILM820-XHI...

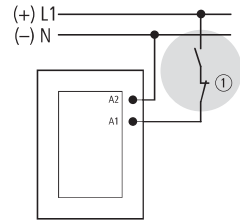
Notes

¹⁾ Availability from August 2010.
Previous DILM300/22, see Online Catalog at <http://ecat.moeller.net>

For all contactors the following applies:

- 660 V, 690 V or 1000 V: do not reverse directly
- Integrated suppressor circuit in actuating electronics.

DILM...-S contactors are actuated conventionally



① Stopping in the event of an emergency (emergency switching off)

Accessories

Auxiliary contact modules

Enclosures

totally insulated

Further actuating voltages

Contactors DILM, DILH

Standard devices greater than 150 A

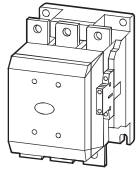

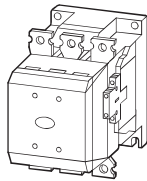

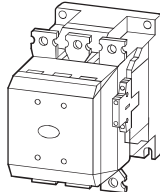

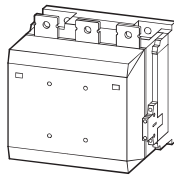

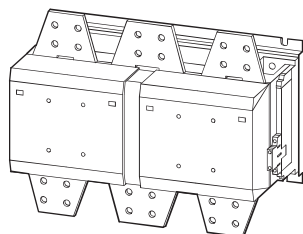
DILM...-S/22...

Part no. Article no.		
DILM250-S/22(220-240V50/60HZ) 274190	Product Standards UL File No. UL CCN CSA File No. CSA Class No. NA Certification	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking E29096 NLDX 1017510 3211-04 UL Listed, CSA certified
DILM300A-S/22(220-240V50/60HZ)¹⁾ 139559	Request filed for UL and CSA	
DILM400-S/22(220-240V50/60HZ) 274196	Product Standards UL File No. UL CCN CSA File No. CSA Class No. NA Certification See also	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking E29096 NLDX 012528 3211-04 UL Listed, CSA certified
DILM500-S/22(220-240V50/60HZ) 274199		
DILM570-S/22(220-240V50/60HZ) 110744		

Contactors DILM, DILH

Comfort devices greater than 150 A

DILM, DILH

	Rated operational current	Max. motor rating for three-phase motors 50 - 60 Hz									Conventional thermal current $I_{th} = I_e$ AC-1 at 60 °C Open $I_{th} = I_e$	Circuit symbol
		AC-3			AC-3			AC-4				
		380 V 400 V	220 V 230 V	380 V 400 V	660 V 690 V	1000 V	220 V 230 V	380 V 400 V	660 V 690 V	1000 V		
	I_e A	P kW	P kW	P kW	P kW	P kW	P kW	P kW	P kW	A		
Contactors, comfort DILM												
	185	55	90	140	108	41	75	102	77	275		
	225	70	110	150	108	51	90	110	77	315		
	250	75	132	195	108	62	110	160	109	330		
	300	90	160	195	132	75	132	160	109	350		
	400	125	200	344	132	92	160	283	132	500		
	500	155	250	344	132	112	200	344	132	700		
	580	185	315	560	600	143	250	440	509	800		
	650	205	355	630	600	161	280	494	509	850		
	750	240	400	720	800	181	315	556	678	900		
	820	260	450	750	800	209	355	633	678	1000		
	1000	315	560	1000	1100	260	450	780	1000	1000		
	1600	500	900	1600	1770	430	750	1300	1650	1800		

Notes

¹⁾ Availability from August 2010.
Previous DILM185/22 to DILM300/22, see Online Catalog at <http://ecat.moeller.net>

- For all contactors the following applies:
- 660 V, 690 V or 1000 V: do not reverse directly
 - Integrated suppressor circuit in actuating electronics.

When operating contactors DILM580 to DILM1600 behind a frequency inverter or mains with strong harmonic loads, the suppressor circuit on the load side must be removed.

During high-voltage tests, the suppressor circuit on the load-side for DILM580 to DILH2600 contactors must be disconnected (see instructional leaflet).

Control voltages

RA250 \pm 110 V - 250 V AC/DC

RAW250 \pm 230 V - 250 V AC/DC

Accessories

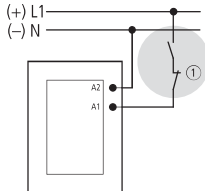
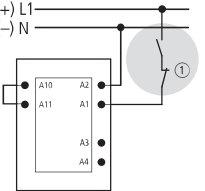
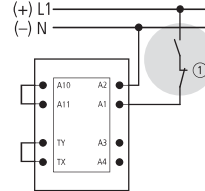
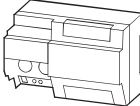
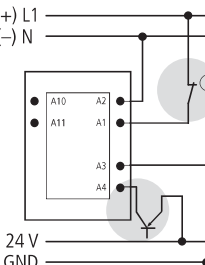
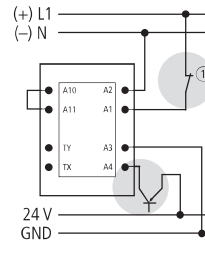
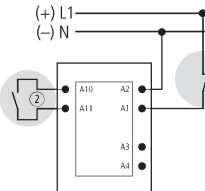
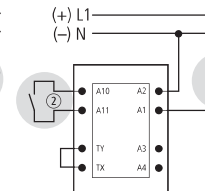
Auxiliary contact modules

Suppressor circuits on load side

Enclosures

totally insulated

Further actuating voltages

Part no.	Notes
DILM185A/22(RAC240) ¹⁾ 139537	
DILM225A/22(RAC240) ¹⁾ 139547	<p>Conventional DILM 185 A, DILM 225 A</p> <p>A1/A2 are attached to power supply as normal</p> 
DILM250/22(RA250) ²⁾ 208201	
DILM300A/22(RA250) ^{1) 2)} 139556	<p>DILM250 to DILM1000, DILH1400</p> 
DILM400/22(RA250) ³⁾ 208209	<p>DILM1600 to DILH 2600</p> 
DILM500/22(RA250) ³⁾ 208213	<p>Directly from the PLC</p> <p>A 24 V output from the PLC can be directly connected to the terminals A4/A24.</p> 
DILM580/22(RA250) ³⁾ 208216	<p>From a low-power command device</p> <p>Low-power actuating devices such as PCB relays, pilot devices or position switches can be directly connected to A10/A11.</p> 
DILM650/22(RA250) ³⁾ 208219	 <p>24 V GND</p>
DILM750/22(RA250) ³⁾ 208222	
DILM820/22(RA250) ³⁾ 208225	
DILM1000/22(RA250) ³⁾ 267214	<p>① Stopping in the event of an emergency (emergency switching off)</p> <p>② Max. cable capacitance 6 nF</p>
DILM1600/22(RAW250) ³⁾ 106727	

¹⁾ NA Certification Request filed for UL and CSA

²⁾ Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
 UL File No. E29096
 UL CCN NLDX
 CSA File No. 1017510
 CSA Class No. 3211-04
 NA Certification UL Listed, CSA certified

³⁾ Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
 UL File No. E29096
 UL CCN NLDX
 CSA File No. 012528
 CSA Class No. 3211-04
 NA Certification UL Listed, CSA certified

Contactors DILM, DILH

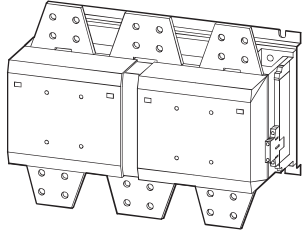
Comfort devices greater than 150 A

DILM, DILH

Conventional thermal current $I_{th} = I_e$ Circuit symbol
 AC-1 at 60 °C
 Open
 $I_{th} = I_e$
 A

Part no.

DILH comfort devices AC-1



1400
 2000
 2200
 2600



DILH1400/22(RAW250)¹⁾
 272441
DILH2000/22(RAW250)¹⁾
 272442
DILH2200/22(RAW250)¹⁾
 111793
DILH2600/22(RAW250)²⁾
 125945

Notes

For all contactors the following applies:

- 660 V, 690 V or 1000 V: do not reverse directly
- Integrated suppressor circuit in actuating electronics.

When operating contactors DILM580 to DILM1600 behind a frequency inverter or mains with strong harmonic loads, the suppressor circuit on the load side must be removed.

During high-voltage tests, the suppressor circuit on the load-side for DILM580 to DILH2600 contactors must be disconnected (see instructional leaflet).

Control voltages

RAW250 \triangleq 230 V - 250 V AC/DC

Accessories

Auxiliary contact modules

Suppressor circuits on load side

Enclosures

totally insulated

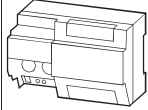
Notes

Conventional

A1/A2 are attached to power supply as normal

Directly from the PLC

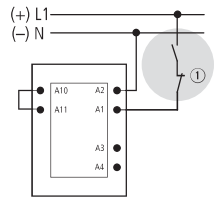
A 24 V output from the PLC can be directly connected to the terminals A4/A24.



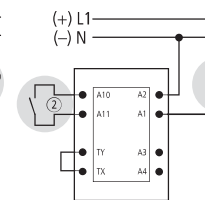
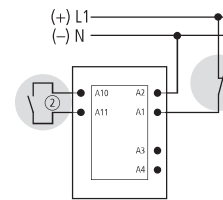
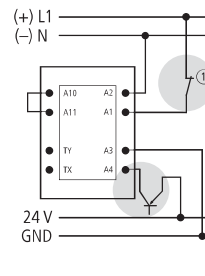
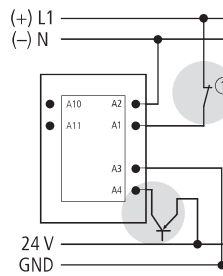
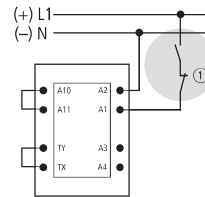
From a low-power command device

Low-power actuating devices such as PCB relays, pilot devices or position switches can be directly connected to A10/A11.

DILH1400



DILM1600 to DILH 2600



- ① Stopping in case of emergency (Emergency-stop)
- ② Max. cable capacitance 6 nF

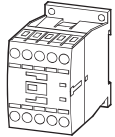

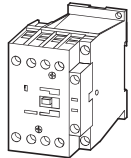
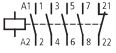
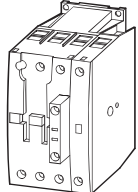

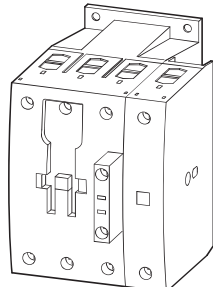

1)
 Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
 UL File No. E29096
 UL CCN NLDX
 CSA File No. 012528
 CSA Class No. 3211-04
 NA Certification UL Listed, CSA certified

2)
 NA Certification Request filed for UL and CSA

Leistungsschütze

Basic devices up to 200 A

DILMP 4 pole

	Rated operational current open			Conventional thermal current $I_{th} = I_e$ AC-1 at 50 °C Open $I_{th} = I_e$ A	Circuit symbol	For use with
	AC-1					
	40 °C	55 °C	70 °C			
4 pole						
	22	21	20	20		DILM32-XHI(C)... DILA-XHI(V)(C)...
	32	30	28	32		DILM32-XHI(C)... DILA-XHI(V)(C)...
	32	30	28	32		
	45	41	39	45		
	45	41	39	45		
	63	60	54	63		DILM150-XHI(A)(V)... or DILM1000-XHI11-SA ¹⁾ or DILM1000-XHI(V)11-SI ¹⁾
	80	76	69	80		
	125	116	108	125		DILM150-XHI(A)(V)... DILM1000-XHI(V)... ¹⁾
	160	150	138	160		
	200	188	172	200		

Notes

¹⁾ DILM1000-XHI... can only be fitted on the left of DILMP.

Contacts to EN 50012.

For DC operated contactors DILMP20 the following applies:

- Integrated varistor suppressor circuit.

For DC operated contactors DILMP32 - DILMP200 the following applies:

- Integrated suppressor circuit in actuating electronics.

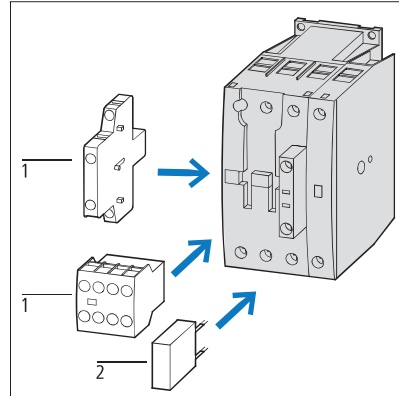
For AC operated contactors DILMP125 - DILMP200 the following applies:

- Integrated suppressor circuit in actuating electronics.

For DILMP32-01 and DILMP45-01 the following applies:

- With mirror contact.

AC operation Part no. Article no.		DC operation Part no. Article no.	Notes
DILMP20(230V50HZ,240V60HZ) 276970		DILMP20(24VDC) 276985	
DILMP32-01(230V50HZ,240V60HZ) 118911		DILMP32-01(RDC24) 118913	
DILMP32-10(230V50HZ,240V60HZ) 109797		DILMP32-10(RDC24) 109811	
DILMP45-01(230V50HZ,240V60HZ) 118914		DILMP45-10(RDC24) 109840	
DILMP45-10(230V50HZ,240V60HZ) 109826			
DILMP63(230V50HZ,240V60HZ) 109855		DILMP63(RDC24) 109869	
DILMP80(230V50HZ,240V60HZ) 109884		DILMP80(RDC24) 109898	
DILMP125(RAC240) 109905		DILMP125(RDC24) 109910	
DILMP160(RAC240) 109915		DILMP160(RDC24) 109920	
DILMP200(RAC240) 109925		DILMP200(RDC24) 109930	



























- Accessories**
- 1 Auxiliary contact module
 - 2 Suppressor
- Further actuating voltages
Accessories

Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29096
UL CCN	NLDX
CSA File No.	012528
CSA Class No.	2411-03, 3211-04
NA Certification	UL Listed, CSA certified

Contactors

Auxiliary contact modules

















DILM, DILA

Terminal type	Pole	Conventional thermal current $I_{th} = I_e$ AC-1 at 60 °C Open $I_{th} = I_e$ A	Contact configuration	Circuit symbol	For use with	Part no.	
Auxiliary contact modules							
With interlocked opposing contacts, except ...XHI(C)V							
Top mounting auxiliary contacts							
	2 pole	16	1 N/O	1 NC		DILM(C)7-10... DILM(C)9-10... DILM(C)12-10... DILM(C)15-10... DILM(C)17-10... DILM(C)25-10... DILM(C)32-10... DILM38-...10 DILMP20... DILMP32-10... DILMP45-10... DILL...	DILM32-XHI11 277376
				–	2 NC		DILM32-XHI02 277375
	4 pole	16	2 N/O	2 NC		DILM32-XHI22 277377	
				3 N/O	1 NC		DILM32-XHI31 106112
	2 pole	16	1 N/O	1 NC		DILM32-XHIC11 277751	
				–	2 NC		DILM32-XHIC02 277750
	4 pole	16	2 N/O	2 NC		DILM32-XHIC22 277752	
	2 pole	16	2 N/O	–		DILM(C)7... DILM(C)9... DILM(C)12... DILM(C)15... DILM(C)17... DILM(C)25... DILM(C)32... DILM38... DILMP20... DILMP32... DILMP45... DILL...	DILA-XHI20 276422
				1 N/O	1 NC		DILA-XHI11 276421
			–	2 NC		DILA-XHI02 276420	
			1 S _F	1 Ö _S		DILA-XHIV11 276423	
	4 pole	16	4 N/O	–		DILA-XHI40 276428	
				3 N/O	1 NC		DILA-XHI31 276427
			2 N/O	2 NC		DILA-XHI22 276426	
			1 N/O	3 NC		DILA-XHI13 276425	
			–	4 NC		DILA-XHI04 276424	
			1 N/O	1 NC		DILA-XHIV22 276429	
			1 S _F	1 Ö _S			

Notes

- Auxiliary NC usable as mirror contact according to IEC/EN 60947-4-1, Annex F
- Interlocked opposing contacts according to IEC/EN 60947-5-1 Annex L, inside the auxiliary contact modules, also for the integrated auxiliary contacts of the DILM 7 - DILM32

Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29184
UL CCN	NKCR
CSA File No.	012528
CSA Class No.	3211-03
NA Certification	UL Listed, CSA certified

Terminal type	Pole	Conventional thermal current $I_{th} = I_e$ AC-1 at 60 °C Open $I_{th} = I_e$ A	Contact configuration	Circuit symbol	For use with	Part no.	
Auxiliary contact modules							
With interlocked opposing contacts, except ...XHI(C)V							
Top mounting auxiliary contacts							
	2 pole	16	2 N/O	—		DILM(C)7... DILM(C)9... DILM(C)12... DILM(C)15... DILM(C)17... DILM(C)25... DILM(C)32... DILM38... DILMP20... DILMP32... DILMP45... DILL...	DILA-XHIC20 276528
			1 N/O	1 NC		DILA-XHIC11 276527	
			—	2 NC		DILA-XHIC02 276526	
			1 S _F	1 Ö _S		DILA-XHICV11 276529	
	2 pole	16	2 N/O	2 NC		DILA-XHIR22¹⁾ 139580	
		16	1 N/O	1 NC		DILA-XHIR11 110140	
	4 pole	16	4 N/O	—		DILM(C)7... DILM(C)9... DILM(C)12... DILM(C)15... DILM(C)17... DILM(C)25... DILM(C)32...	DILA-XHIC40 276534
			3 N/O	1 NC		DILA-XHIC31 276533	
			2 N/O	2 NC		DILA-XHIC22 276532	
			1 N/O	3 NC		DILA-XHIC13 276531	
			—	4 NC		DILA-XHIC04 276530	
			1 N/O	1 NC		DILA-XHICV22 276535	
			1 S _F	1 Ö _S			

- Notes**
- Auxiliary NC usable as mirror contact according to IEC/EN 60947-4-1, Annex F
 - Interlocked opposing contacts according to IEC/EN 60947-5-1 Annex L, inside the auxiliary contact modules, also for the integrated auxiliary contacts of the DILM 7 - DILM32
- ¹⁾ 1 N/C + 1 N/O above microswitch for electronic applications















Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
 UL File No. E29184
 UL CCN NKCR
 CSA File No. 012528
 CSA Class No. 3211-03
 NA Certification UL Listed, CSA certified

¹⁾
 NA Certification Request filed for UL and CSA

Contactors

Auxiliary contact module

DILM

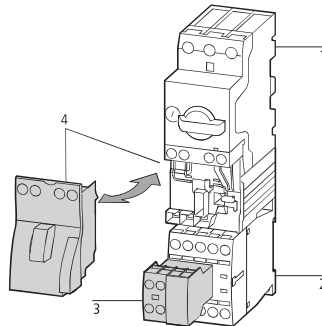
Connection type	Pole	conventional thermal current $I_{th} = I_e$ AC-1 at 60 °C Open $I_{th} = I_e$ A	Contact configuration N/O = normally open contact SF = N/O early make NC = normally closed contact ÖS = NC late-break	Circuit symbol	For use with	Part no. Article no.	Notes	
Auxiliary contact modules								
With interlocked opposing contacts								
Top mounting auxiliary contacts								
	Screw terminals	2 pole	16	2 N/O –		DILM40... DILM50... DILM65... DILM72... DILM80... DILM95... DILM115... DILM150... DILM170... DILMP63... DILMP80... DILMP125... DILMP160... DILMP200...	DILM150-XHI20 277945 DILM150-XHI11 277946 DILM150-XHIA11 283463 DILM150-XHI02 277947 DILM150-XHI40 277948 DILM150-XHI31 277949 DILM150-XHI22 277950 DILM150-XHIA22 283464 DILM150-XHI13 277951 DILM150-XHI04 277952 DILM150-XHIV22 277953	Interlocked opposing contacts according to IEC/EN 60947-5-1 Annex L, inside the auxiliary contact modules Auxiliary NC usable as mirror contact according to IEC/EN 60947-4-1, Annex F
	Screw terminals	4 pole	16	4 N/O –				
				3 N/O 1 NC				
				2 N/O 2 NC				
				2 N/O 2 NC				
				1 N/O 3 NC				
				– 4 NC				
				1 N/O 1 NC 1 SF 1 ÖS				
High version ¹⁾								
	Screw terminals	2 pole	16	2 N/O –		DILM7... DILM9... DILM12... DILM15... DILL...	DILA-XHIT20 101042 DILA-XHIT11 101043 DILA-XHIT02 101041 DILA-XHIT22 101044	Interlocked opposing contacts according to IEC/EN 60947-5-1 Annex L, inside the auxiliary contact modules Auxiliary NC usable as mirror contact according to IEC/EN 60947-4-1, Annex F
		4 pole		2 N/O 2 NC				

Notes

¹⁾ Suitable for the combination with electrical wiringlinks in tool-less plug connection usable with:

DILM12-XSL
DILM12-XRL
DILM12-XS1
PKZM0-XDM12
PKZM0-XRM12
PKZM0-XSM12

1 PKZM0
2 DILM7 - DILM15
3 DILA-XHIT
4 PKZM0-XDM12



Product Standards

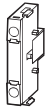
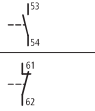
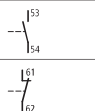









UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification

IEC/EN 60947-4-1;
UL 508; CSA-C22.2
No. 14-05; CE marking
E29184
NKCR
012528
3211-03
UL Listed,
CSA certified

Contactors

Auxiliary contact module

DILA, DILM

Connection type	Pole	conventional thermal current $I_{th} = I_e$ AC-1 at 60 °C Open $I_{th} = I_e$ A	Contact configuration N/O = normally open contact SF = N/O early make NC = normally closed contact ÖS = NC late-break	Circuit symbol	For use with	Part no. Article no.	Notes		
Side-mounting auxiliary contacts									
	Screw terminals	1 pole	10	1 N/O – – 1 NC		DILM(C)7... DILM(C)9... DILM(C)12... DILM(C)15... DILMP20... DILA(C)...	DILA-XHI10-S 115948 DILA-XHI01-S 115949	1)	
	Spring-loaded terminals	1 pole		1 N/O – – 1 NC			DILA-XHIC10-S 115950 DILA-XHIC01-S 115951		
	Screw terminals	2 pole		1 N/O 1 NC		DILM17... DILM25... DILM32... DILM38...	DILM32-XHI11-S 101371		Can only be left on the contactor. Cannot be combined with mechanical interlock
Side-mounting auxiliary contacts									
	Screw terminals	2 pole	10	1 N/O 1 NC		DILM250 - DILH2600	DILM820-XHI11-SI 208281		1)
			10	1 N/O 1 NC			DILM820-XHI11-SA 208282		
			10	1 SF 1 ÖS			DILM820-XHI11V-SI 208283		
			10	1 N/O 1 NC		DILM40 - DILM225A DILMP63 - DILMP200	DILM1000-XHI11-SI 278425		
			10	1 SF 1 ÖS			DILM1000-XHIV11-SI 278426		
			10	1 N/O 1 NC			DILM1000-XHI11-SA 278427		

Notes

- 1)
- Interlocked opposing contacts according to IEC/EN 60947-5-1 Annex L, inside the auxiliary contact module, also for the integrated auxiliary contacts of the DILM7 – DILM32 (not NO early-make and NC late-break)
 - Auxiliary NC usable as mirror contact according to IEC/EN 60947-4-1, Annex F (no NC late-breaks)
 - No auxiliary contact is possible between 2 contactors with mechanical interlock.

2)









Product Standards IEC/EN 60947-4-1;
UL 508; CSA-C22.2 No. 14-05;
CE marking
UL File No. E29184
UL CCNKCRCR
CSA File No. 012528
CSA Class No. 3211-03, 3211-04
NA Certification UL Listed,
CSA certified

Contactors

Auxiliary contact modules

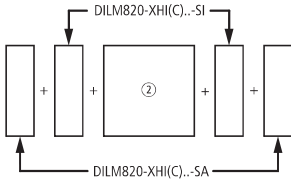
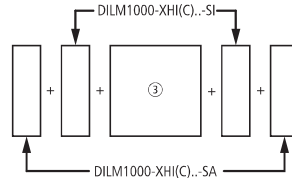
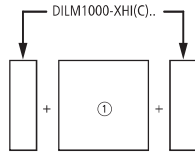
DILM, DILH

Engineering

								
DILM40	2 x	–	–	–	–	–	1 x	–
... DILM72	–	–	2 x	–	1 x	–	–	–
	1 x	–	–	–	–	–	–	1 x
	–	–	1 x	–	–	1 x	–	–
DILM80	2 x	–	2 x	–	–	–	–	–
... DILM170	2 x	–	–	–	–	–	–	1 x
	2 x	–	–	–	–	–	1 x	–
	–	–	2 x	–	–	1 x	–	–
	–	–	2 x	–	1 x	–	–	–
DILM185A	2 x	–	2 x	–	–	–	–	–
DILM222A	2 x	–	–	–	–	–	–	–
DILM250	–	2 x	–	2 x	–	–	–	–
DILM1600	–	–	–	–	–	–	–	–
DILH1400	–	2 x	–	2 x	–	–	–	–
... DILH2600	–	–	–	–	–	–	–	–

Notes

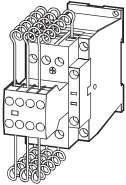
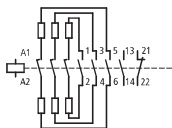
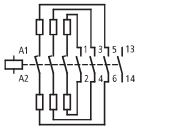
Side mounting auxiliary contacts



- ① DILM40 – DILM72
- ② DILM250 – DILH2600
- ③ DILM80-DILM225A

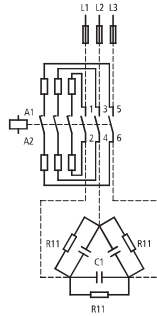
- Interlocked opposing contacts according to IEC/EN 60947-5-1 Annex L, inside the auxiliary contact module (not N/O early close and N/C late open)
- Auxiliary contacts can be used as mirror contacts according to IEC/EN 60947-4-1, Annex F (not N/C late open)
- No auxiliary contact is possible between two contactors with mechanical interlock.
- 2 auxiliary contacts DILM820-XHI11-SI are already built into the contactors DILM250 to DILH2600/22.
- 2 DILM1000-XHI11-SI auxiliary contacts are already installed in DILM185A and DILH225A contactors.

Ordering

Three-phase capacitors 50 – 60 Hz				Circuit symbol	Part no. Article no.
Open					
230 V	400 V	525 V	690 V		
kvar	kvar	kvar	kvar		
With series resistors					
Basic Units					
	7.5	12.5	16.7	20	 
	11	20	25	33.3	
	15	25	33.3	40	
	20	33.3	40	55	
	25	50	65	85	
					DILK12-11(230V50HZ,240V60HZ) 293988 DILK20-11(230V50HZ,240V60HZ) 294010 DILK25-11(230V50HZ,240V60HZ) 294032 DILK33-10(230V50HZ,240V60HZ) 294054 DILK50-10(230V50HZ,240V60HZ) 294076

Notes

Weld-resistant for capacitors with inrush current peaks up to $180 \times I_N$
 With group compensation multi-stage capacitor banks are connected to the mains as required. This can cause, transient currents of up to $180 \times I_e$ to flow between the capacitors.
 The capacitors are pre-charged via the early-make auxiliary contacts and the fitted wire resistors, thereby reducing the inrush current. The main contacts then close after a time lag and carry the continuous current.
 The contactors for capacitors are weld-resistant with inrush current peaks up to $180 \times I_e$ due to their special contacts.
 DILK... cannot be combined with other auxiliary contacts.
 For the switching of reactive-power compensation equipment please see Engineering notes on power factor correction



Accessories

Enclosures totally insulated

Accessories

Further actuating voltages

Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29096
UL CCN	NLDX
CSA File No.	012528
CSA Class No.	3211-04
NA Certification	UL Listed, CSA certified

Contactors

Contactors for power factor correction

DILM, DILK

Engineering

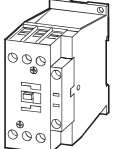









Part no.	Ordering data Page	Switching power			
		230 V kvar	400 V 420 V 440 V kvar	525 V kvar	690 V kvar
Individual compensation, open version					
DILM7-...(…)	→ 5/18	1.5	3	3.5	5
DILM9-...(…)	→ 5/18	2	4	4.5	6
DILM12-...(…)	→ 5/18	2.5	4.5	5.5	7
DILM15-...(…)	→ 5/18	2.5	4.5	5.5	7
DILM17-...(…)	→ 5/18	6.5	12	14.5	19
DILM25-...(…)	→ 5/18	7	13.5	16	21
DILM32-...(…)	→ 5/18	7.5	14.5	17	22.5
DILM40(…)	→ 5/20	11	20.5	24.5	32
DILM50(…)	→ 5/20	11.5	22	26	34.5
DILM65(…)	→ 5/20	12.5	23.5	28	37
DILM80(…)	→ 5/20	16	30.5	36.5	48
DILM95(…)	→ 5/20	18	34	41	54
DILM115(…)	→ 5/20	24	46	54.5	72
DILM150(…)	→ 5/20	28	53	63.5	83.5
DILM185A(…)	→ 5/32	87	150	190	150
DILM300A(…)	→ 5/32	115	200	265	200
DILM580(…)	→ 5/32	175	300	400	300
Group compensation, with choke, open version					
DILM7-...(…)	→ 5/18	4	7	7.5	12
DILM9-...(…)	→ 5/18	5	8	10	14
DILM12-...(…)	→ 5/18	5.5	10	12	16
DILM15-...(…)	→ 5/18	5.5	10	12	16
DILM17-...(…)	→ 5/18	7.5	18	20	28
DILM25-...(…)	→ 5/18	10	20	23	30
DILM32-...(…)	→ 5/18	12.5	25	25	32
DILM40(…)	→ 5/20	15	30	30	40
DILM50(…)	→ 5/20	20	40	40	48
DILM65(…)	→ 5/20	25	50	50	57
DILM80(…)	→ 5/20	30	60	70	90
DILM95(…)	→ 5/20	35	70	80	104
DILM115(…)	→ 5/20	50	95	100	125
DILM150(…)	→ 5/20	55	115	115	152
DILM185A(…)	→ 5/32	80	150	200	260
DILM225A(…)	→ 5/32	100	175	230	300
DILM250(…)	→ 5/32	110	190	260	340
DILM300A(…)	→ 5/32	130	225	290	390
DILM400(…)	→ 5/32	160	280	370	480
DILM500(…)	→ 5/32	220	390	500	680
Group compensation, without choke, open version					
DILK12-...(…)	→ 5/43	7.5	12.5	16.7	20
DILK20-...(…)	→ 5/43	11	20	25	33.3
DILK25-...(…)	→ 5/43	15	25	33.3	40
DILK33-...(…)	→ 5/43	20	33.3	40	55
DILK50-...(…)	→ 5/43	25	50	65	85
DILM185A(…)	→ 5/32	66	115	145	115
DILM300A(…)	→ 5/32	85	150	195	150
DILM580(…)	→ 5/32	145	250	333	250

Notes

Use of the contactors DILM without series resistor for group compensation

When using the contactors for group compensation in a system without chokes each capacitor must have a minimum induction of approx. 6 µH to limit the peak inrush current. This corresponds to an air-cored coil with 5 windings and a coil diameter of approximately \varnothing 140 mm. The conductor cross section must correspond to the rated operational current.

Ordering

	Rated operational current				Conventional thermal current $I_{th} = I_e$ AC-1 at 60 °C Open $I_{th} = I_e$ A	Circuit symbol	Part no. Article no.
	AC-5a operation		AC-5b operation				
	230 V	400 V	230 V	400 V			
	I_e	I_e	I_e	I_e			
	A	A	A	A			
	12	12	14	14	24		DILL12(230V50HZ,240V60HZ) 104402
	12	12	14	14	24		DILL12(24V50HZ) 104401
	12	12	14	14	24		DILL12(400V50HZ,440V60HZ) 104403
	18	18	21	21	35		DILL18(230V50HZ,240V60HZ) 104405
	18	18	21	21	35		DILL18(24V50HZ) 104404
	18	18	21	21	35		DILL18(400V50HZ,440V60HZ) 104406
	20	20	27	27	40		DILL20(230V50HZ,240V60HZ) 104408
	20	20	27	27	40		DILL20(24V50HZ) 104407
	20	20	27	27	40		DILL20(400V50HZ,440V60HZ) 104409

Notes

DILL do not have an integrated auxiliary contact.
They can be combined with DILM32-XHI... and DILA-XHI... auxiliary contacts.

Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29096
UL CCN	NLDX
CSA File No.	012528
CSA Class No.	3211-04
NA Certification	UL Listed, CSA certified

Illumination contactors

Switchgear for illumination systems

DILL...

Engineering

	DIL	L12	L18	L20	M7	M9	M12	M17	M25	M32	M40	M50
Permissible compensation capacitance	C_{max} [mF]	470	470	470	47	80	100	220	330	470	470	500
Filament bulbs	I_e [A]	14	21	27	6	7.5	10	14	21	27	33	42
Mercury blended lamps	I_e [A]	12	16	23	5	6.5	8.5	12	16	23	30	38
Fluorescent lamps, conventional reactor – starter – connection	I_e [A]	20	26	35	9	10	15	20	26	35	41	45
Fluorescent lamps, duo circuit (series compensated)	I_e [A]	20	26	35	5.5	8	13	15	22.5	29	36	47
Electronic upstream devices	I_e [A]	12	18	20	5	6.5	8.5	12	17.5	22.5	28	35
High-pressure mercury vapour lamps	I_e [A]	12	18	20	3.5	6	10	12	17.5	20	25	30
Metal-halide lamps	I_e [A]	12	18	20	3.5	6	10	12	17.5	20	25	30
High-pressure sodium lamps	I_e [A]	12	18	20	3.5	6	10	12	17.5	20	25	30
Low-pressure sodium lamps	I_e [A]	7.5	10	12	3	4	6	7.5	10	12	15	22

	DIL	M65	M80	M95	M115	M150	M185A	M225A	M250	M300A	M400	M500
Permissible compensation capacitance	C_{max} [mF]	500	550	620	830	970	2055	2300	2600	3000	3250	3500
Filament bulbs	I_e [A]	55	67	79	95	125	153	187	208	249	332	415
Mercury blended lamps	I_e [A]	45	65	67	80	110	123	150	167	200	266	332
Fluorescent lamps, conventional reactor – starter – connection	I_e [A]	55	95	100	125	145	207	237	263	300	375	525
Fluorescent lamps, duo circuit (series compensated)	I_e [A]	59	71	95	100	138	186	213	236	270	338	473
Electronic upstream devices	I_e [A]	45.5	56	66.5	80.5	105	130	158	175	210	280	350
High-pressure mercury vapour lamps	I_e [A]	36	55	60	80	95	138	158	175	200	250	350
Metal-halide lamps	I_e [A]	36	55	60	80	95	138	158	175	200	250	350
High-pressure sodium lamps	I_e [A]	36	55	60	80	95	138	158	175	200	250	350
Low-pressure sodium lamps	I_e [A]	25	35	40	50	70	100	111	123	140	175	245


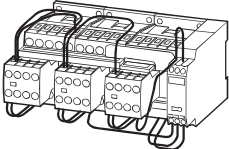
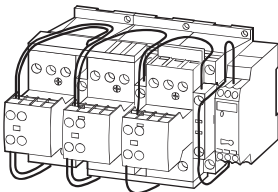
In compensated lamps, the sum of the capacitances must not exceed the contactors' max. permissible capacitor load (C_{max})!
The values in the table are for each individual contactor contact.

Contactor combinations

Star-delta combination

SDAINL

Ordering

	Rated operational current AC-3	Max. rated operational power for three-phase motors, 50 - 60 Hz AC-3				Max. change- over time ^s	Part no. Article no.
		400 V I _e A	230 V P kW	400 V P kW	500 V P kW		
Star-delta combinations SDAINL							
Operating frequency: maximum 30 starts per hour							
	12	4	5.5	5.5	–	< 30	SDAINLEM(230V50HZ) 051840
	12	3	5.5	5.5	5.5	< 20	SDAINLM12(230V50HZ) 278286
	12	3	5.5	5.5	5.5	< 20	SDAINLM12(400V50HZ) 101380
	12	3	5.5	5.5	5.5	< 20	SDAINLM12(24VDC) 100416
	16	4	7.5	7.5	7.5	< 20	SDAINLM16(230V50HZ) 278311
	16	4	7.5	7.5	7.5	< 20	SDAINLM16(400V50HZ) 101381
	16	4	7.5	7.5	7.5	< 20	SDAINLM16(24VDC) 100417
	22	5.5	11	11	11	< 20	SDAINLM22(230V50HZ) 278336
	22	5.5	11	11	11	< 20	SDAINLM22(400V50HZ) 101382
	22	5.5	11	11	11	< 20	SDAINLM22(24VDC) 100418
	30	7.5	15	18.5	18.5	< 20	SDAINLM30(230V50HZ) 278361
	30	7.5	15	18.5	18.5	< 20	SDAINLM30(400V50HZ) 101383
	30	7.5	15	18.5	18.5	< 20	SDAINLM30(RDC24) 100419
	45	11	22	30	22	< 20	SDAINLM45(230V50HZ) 278386
	45	11	22	30	22	< 20	SDAINLM45(400V50HZ) 101384
	45	11	22	30	22	< 20	SDAINLM45(RDC24) 100420
	55	15	30	37	30	< 20	SDAINLM55(230V50HZ) 278411
	55	15	30	37	30	< 20	SDAINLM55(400V50HZ) 101385
	55	15	30	37	30	< 20	SDAINLM55(RDC24) 100421
70	18.5	37	45	37	< 20	SDAINLM70(230V50HZ) 239895	
70	18.5	37	45	37	< 20	SDAINLM70(400V50HZ) 101386	
90	22	45	55	45	< 20	SDAINLM90(230V50HZ) 239937	
115	30	55	75	55	< 20	SDAINLM115(230V50HZ) 239963	
140	37	75	90	90	< 20	SDAINLM140(230V50HZ) 240009	
165	45	90	110	132	< 20	SDAINLM165(230V50HZ) 240035	
200	55	110	132	160	< 20	SDAINLM200(230V50HZ) 101010	
260	75	132	160	160	< 20	SDAINLM260(230V50HZ) 101031	

Individual components of the combination				Spare auxiliary contacts			Notes
Mains contactor Q11	Delta contactor Q15	Star contactor Q13	Timing relays K1	Q11	Q13	Q15	
Part no.	Part no.	Part no.	Part no.				
DILEM-10 + 22DILEM	DILEM-01	DILEM-10 + 02DILEM	DILET		—	—	<p>Main circuit: Depending on the type of coordination required (i.e. Type "1" or Type "2") it must be established whether the fuse protection and the input wiring for the mains contactor and delta contactor are to be common or separate.</p> <p>The following applies for SDAINLM 140 – SDAINLM 260:</p> <ul style="list-style-type: none"> On the mounting plate. <p>Circuit diagrams, Star-delta combinations</p> <p>Accessories 1 Overload relay</p> <p>Accessories</p>
DILM7-10 + DILA-XHI20	DILM7-01 + DILA-XHI20	DILM7-01 + DILA-XHI20	ETR4-51				
DILM7-10 + DILA-XHI20	DILM7-01 + DILA-XHI20	DILM7-01 + DILA-XHI20	ETR4-51				
DILM7-10 + DILA-XHI20	DILM7-01 + DILA-XHI20	DILM7-01 + DILA-XHI20	ETR4-51				
DILM9-10 + DILA-XHI20	DILM9-01 + DILA-XHI20	DILM7-01 + DILA-XHI20	ETR4-51				
DILM9-10 + DILA-XHI20	DILM9-01 + DILA-XHI20	DILM7-01 + DILA-XHI20	ETR4-51				
DILM9-10 + DILA-XHI20	DILM9-01 + DILA-XHI20	DILM7-01 + DILA-XHI20	ETR4-51				
DILM12-10 + DILA-XHI20	DILM12-01 + DILA-XHI20	DILM7-01 + DILA-XHI20	ETR4-51				
DILM12-10 + DILA-XHI20	DILM12-01 + DILA-XHI20	DILM7-01 + DILA-XHI20	ETR4-51				
DILM12-10 + DILA-XHI20	DILM12-01 + DILA-XHI20	DILM7-01 + DILA-XHI20	ETR4-51				
DILM17-10 + DILA-XHI20	DILM17-01 + DILA-XHI20	DILM17-01 + DILA-XHI20	ETR4-51				
DILM17-10 + DILA-XHI20	DILM17-01 + DILA-XHI20	DILM17-01 + DILA-XHI20	ETR4-51				
DILM17-10 + DILA-XHI20	DILM17-01 + DILA-XHI20	DILM17-01 + DILA-XHI20	ETR4-51				
DILM17-10 + DILA-XHI20	DILM17-01 + DILA-XHI20	DILM17-01 + DILA-XHI20	ETR4-51				
DILM25-10 + DILA-XHI20	DILM25-01 + DILA-XHI20	DILM17-01 + DILA-XHI20	ETR4-51				
DILM25-10 + DILA-XHI20	DILM25-01 + DILA-XHI20	DILM17-01 + DILA-XHI20	ETR4-51				
DILM25-10 + DILA-XHI20	DILM25-01 + DILA-XHI20	DILM17-01 + DILA-XHI20	ETR4-51				
DILM32-10 + DILA-XHI20	DILM32-01 + DILA-XHI20	DILM25-01 + DILA-XHI20	ETR4-51				
DILM32-10 + DILA-XHI20	DILM32-01 + DILA-XHI20	DILM25-01 + DILA-XHI20	ETR4-51				
DILM32-10 + DILA-XHI20	DILM32-01 + DILA-XHI20	DILM25-01 + DILA-XHI20	ETR4-51				
DILM40 + DILM150-XHI31	DILM40 + DILM150-XHI11	DILM40 + DILM150-XHI11	ETR4-51		—	—	
DILM40 + DILM150-XHI31	DILM40 + DILM150-XHI11	DILM40 + DILM150-XHI11	ETR4-51		—	—	
DILM50 + DILM150-XHI31	DILM50 + DILM150-XHI11	DILM40 + DILM150-XHI11	ETR4-51		—	—	
DILM65 + DILM150-XHI31	DILM65 + DILM150-XHI11	DILM40 + DILM150-XHI11	ETR4-51		—	—	
DILM80 + DILM150-XHI31	DILM80 + DILM150-XHI11	DILM50 + DILM150-XHI11	ETR4-51		—	—	
DILM95 + DILM150-XHI31	DILM95 + DILM150-XHI11	DILM65 + DILM150-XHI11	ETR4-51		—	—	
DILM115 + DILM150-XHI31	DILM115 + DILM150-XHI11	DILM80 + DILM150-XHI11	ETR4-51		—	—	
DILM150 + DILM150-XHI31	DILM150 + DILM150-XHI11	DILM95 + DILM150-XHI11	ETR4-51		—	—	

Contactor combinations

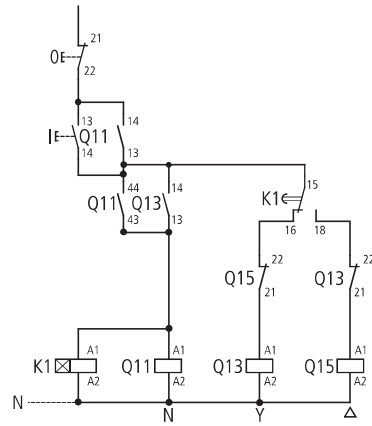
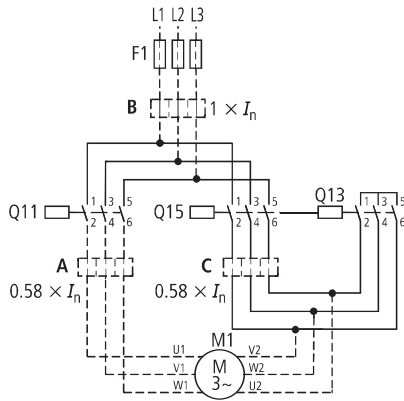
Star-delta combinations

SDAINL

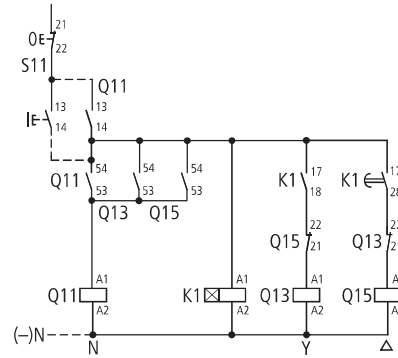
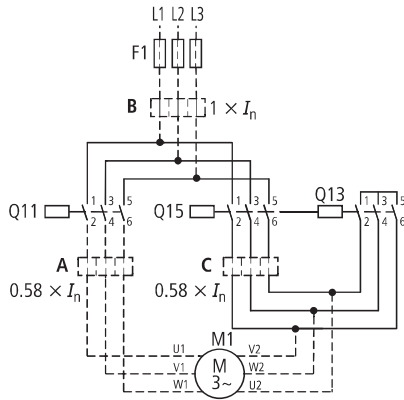
Engineering

Circuit diagrams, Star-delta combinations

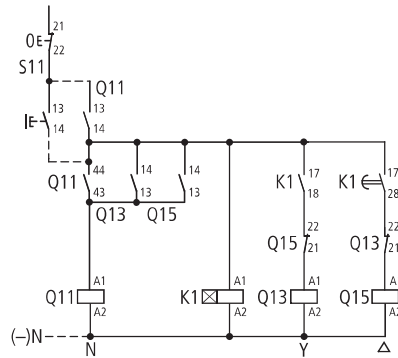
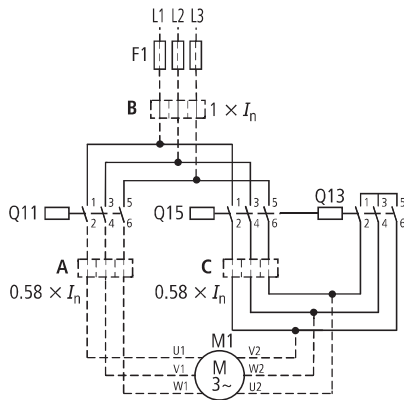
SDAINLEM



SDAINLM12...SDAINLM55



SDAINLM70...SDAINLM260



Overload relay settings

A: $I_N \times 0.58$

Motor protected in Y and Δ - positions

B: $I_N \times 1$

Only partial motor protection in Y position

C: $I_N \times 0.58$

Motor not protected in Y position

Timing relay set to approx. 10 s

Main circuit:

Depending on the type of coordination required (i.e. Type "1" or Type "2") it must be established whether the fuse protection and the input wiring for the mains contactor and delta contactor are to be common or separate.

Starting

F 15 s

15 – 40 s

> 40 s

Components for self-assembly of star-delta combinations

Maximum operational rating of AC motors 50 - 60 Hz

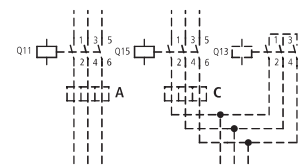
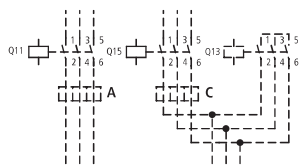
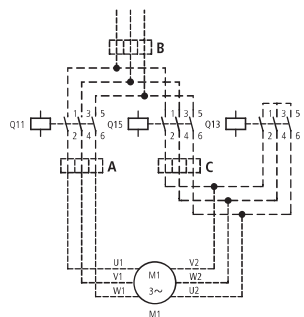
AC-3					Changeover time ¹⁾			Individual components of the combination				Spare auxiliary contacts		
230 V	400 V	500 V	690 V	1000 V	up to 12 s	up to 20 s	up to 30 s	Coil to EN 50005 Switching element to EN 50005 and EN 50012				Q11	Q15	Q13
kW	kW	kW	kW	kW				Mains contactor Q11 Part no. DIL	Delta contactor Q15 Part no. DIL	Star contactor Q13 Part no. DIL	Timing relay K1 Part no.			
90	160	200	250	132	●	●	●	M185A/22	M185A/22	M115/22	ETR4-51			
110	200	250	315	160	●	●	—	M225A/22	M225A/22	M150/22	ETR4-51			
132	250	315	400	200	●	●	●	M250/22	M250/22	M185A/22	ETR4-51			
160	300	355	450	200	●	●	●	M300A/22	M300A/22	M185A/22	ETR4-51			
200	355	450	560	220	●	●	—	M400/22	M400/22	M250/22	ETR4-51			
250	450	560	600	220	●	●	●	M500/22	M500/22	M300A/22	ETR4-51			
300	560	710	900	355	●	●	●	M580/22	M580/22	M400/22	ETR4-51			
350	630	750	950	355	●	●	●	M650/22	M650/22	M400/22	ETR4-51			
400	710	900	1200	1400	●	●	●	M750/22	M750/22	M580/22	ETR4-51			
450	800	950	1300	1400	●	●	●	M820/22	M820/22	M580/22	ETR4-51			
560	1000	1200	1700	1700	●	●	—	M1000/22	M1000/22	M650/22	ETR4-51			

Notes

¹⁾ Longer changeover times please enquire

Components for self-assembly

Notes



Overload relay settings

Timing relay set to approx. 10 s

I_n

Starting

Main circuit:
Depending on the coordination type required (i.e. Type "1" or Type "2") it must be established whether the fuse protection and the input wiring for the mains contactor and delta contactor are to be common or separate.

A x 0.58

Motor protection in Y and Δ positions

≤ 15 s

B x 1

In Y position only limited motor protection

15 – 40 s

C x 0.58

Motor not protected in Y position

> 40 s

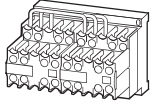
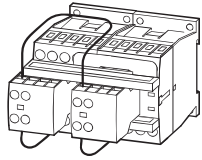
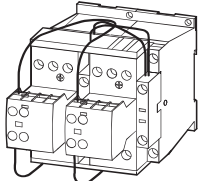
Control circuit:
If the combinations are to be used within the scope of IEC/EN 60 204 Part 1, VDE 0113 Part 1, then Point 9.1.1 regarding the supply of control circuits, must be observed.

Contactors combinations

Reversing combinations

DIUL

Ordering

	Rated operational current AC-3	Max. motor rating for three-phase motors 50 - 60 Hz						Part no.
		AC-3			AC-4			
	400 V	220 V 230 V	380 V 400 V	660 V 690 V	220 V 230 V	380 V 400 V	660 V 690 V	
	I _e A	P kW	P kW	P kW	P kW	P kW	P kW	
DIUL reversing combinations								
AC operation								
	9	2.2	4	4	1.5	3	3	DIULEM/21/MV(230V50HZ) ¹⁾ 051849
	9	2.2	4	4	1.5	3	3	DIULEM/21/MV-G(24VDC) ²⁾ 214655
	7	2.2	3	3.5	1	2.2	2.9	DIULM7/21(230V50HZ) ²⁾ 278061
	7	2.2	3	3.5	1	2.2	2.9	DIULM7/21(24VDC) ²⁾ 107021
	9	2.5	4	4.5	1.5	2.5	3.6	DIULM9/21(230V50HZ) ²⁾ 278086
	9	2.5	4	4.5	1.5	2.5	3.6	DIULM9/21(24VDC) ²⁾ 107022
	12	3.5	5.5	6.5	2	3	4.4	DIULM12/21(230V50HZ) ²⁾ 278111
	12	3.5	5.5	6.5	2	3	4.4	DIULM12/21(24VDC) ²⁾ 107023
	18	5	7.5	11	2.5	4.5	6.5	DIULM17/21(230V50HZ) ²⁾ 278136
	18	5	7.5	11	2.5	4.5	6.5	DIULM17/21(RDC24) ²⁾ 107024
	25	7.5	11	14	3.5	6	8.5	DIULM25/21(230V50HZ) ²⁾ 278161
	25	7.5	11	14	3.5	6	8.5	DIULM25/21(RDC24) ²⁾ 107025
	32	10	15	17	4	7	10	DIULM32/21(230V50HZ) ²⁾ 278186
	32	10	15	17	4	7	10	DIULM32/21(RDC24) ²⁾ 107026
	40	12.5	18.5	23	5	9	12	DIULM40/11(230V50HZ) ²⁾ 278211
	50	15.5	22	30	6	10	14	DIULM50/11(230V50HZ) ²⁾ 278236
65	20	30	35	7	12	17	DIULM65/11(230V50HZ) ²⁾ 278261	

Product Standards

UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification

IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05;

CE marking
E29096
NLDX
012528
3211-04
UL Listed, CSA certified

Product Standards

UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification

IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05;

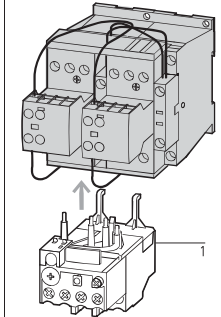
CE marking
E29096
NLDX
012528
2411-03, 3211-04
UL Listed, CSA certified

Contactor combinations

Reversing combinations

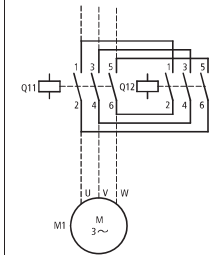
DIUL

Individual components of the combination		Spare auxiliary contacts			Circuit diagram	Notes
Contactor Q11	Contactor Q12	Q11	Q12	Mechanical interlock		
Part no.	Part no.					
DILEM-10 + 11DILEM	DILEM-10 + 11DILEM			+		
DILEM-10-G + 11DILEM	DILEM-10-G + 11DILEM			+		
DILM7-01 + DILA-XHI20	DILM7-01 + DILA-XHI20			+		
DILM7-01 + DILA-XHI20	DILM7-01 + DILA-XHI20			+		
DILM9-01 + DILA-XHI20	DILM9-01 + DILA-XHI20			+		
DILM9-01 + DILA-XHI20	DILM9-01 + DILA-XHI20			+		
DILM12-01 + DILA-XHI20	DILM12-01 + DILA-XHI20			+		
DILM12-01 + DILA-XHI20	DILM12-01 + DILA-XHI20			+		
DILM17-01 + DILA-XHI20	DILM17-01 + DILA-XHI20			+		
DILM17-01 + DILA-XHI20	DILM17-01 + DILA-XHI20			+		
DILM25-01 + DILA-XHI20	DILM25-01 + DILA-XHI20			+		
DILM25-01 + DILA-XHI20	DILM25-01 + DILA-XHI20			+		
DILM32-01 + DILA-XHI20	DILM32-01 + DILA-XHI20			+		
DILM32-01 + DILA-XHI20	DILM32-01 + DILA-XHI20			+		
DILM40 + DILM150-XHI11	DILM40 + DILM150-XHI11	—	—	+		
DILM50 + DILM150-XHI11	DILM50 + DILM150-XHI11	—	—	+		
DILM65 + DILM150-XHI11	DILM65 + DILM150-XHI11	—	—	+		



Accessories
1 Overload relay
Accessories

Reversing contactors







DIULM7/21 to DIULM65/11 with mechanical interlock

Contactor relays, contactors

Suppressor circuit

DILM...-XSP...

Ordering

Voltage U_s V	For use with	Circuit symbol	Part no. Article no.	Notes	
Suppressor circuits					
RC suppressors					
	24 - 48 AC		DILM12-XSPR48 281199	For AC operated contactors 50 - 60 Hz. DC operated contactors and DILM115 and DILM150 have an integrated suppressor. Note drop-out delay.	
	110 - 240 AC		DILM7 - DILM15 DILMP20 DILA		DILM12-XSPR240 281200
	240 - 500 AC				DILM12-XSPR500 281201
24 - 48 AC	DILM17 - DILM32 DILK12 - DILK25 DILL... DILMP32 - DILMP45	DILM32-XSPR48 281202			
110 - 240 AC		DILM32-XSPR240 281203			
240 - 500 AC		DILM32-XSPR500 281204			
24 - 48 AC	DILM40 - DILM95 DILK33 - DILK50 DILMP63 - DILMP200	DILM95-XSPR48 281205			
110 - 240 AC		DILM95-XSPR240 281206			
240 - 500 AC		DILM95-XSPR500 281207			
Varistor suppressors					
	24 - 48 AC		DILM12-XSPV48 281208		For AC operated contactors 50 - 60 Hz. DC operated contactors and DILM115 and DILM150 have an integrated suppressor. Note drop-out delay.
	48 - 130 AC		DILM7 - DILM15 DILMP20 DILA		
	130 - 240 AC			DILM12-XSPV240 281210	
240 - 500 AC	DILM17 - DILM32 DILK12 - DILK25 DILL... DILMP32 - DILMP45	DILM32-XSPV48 281212			
24 - 48 AC		DILM32-XSPV130 281213			
48 - 130 AC		DILM32-XSPV240 281214			
130 - 240 AC	DILM40 - DILM95 DILK33 - DILK50 DILMP63 - DILMP200	DILM32-XSPV500 281215			
240 - 500 AC		DILM95-XSPV48 281216			
24 - 48 AC		DILM95-XSPV130 281217			
48 - 130 AC		DILM95-XSPV240 281218			
130 - 240 AC		DILM95-XSPV500 281219			
240 - 500 AC					


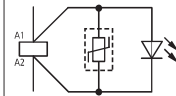


Product Standards
 UL File No.
 UL CCN
 CSA File No.
 CSA Class No.
 NA Certification

IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
 E29096
 NLDX
 227038
 3211-07
 UL Listed, CSA certified

Contactor relays, contactors

Suppressor circuit

DILM...-XSP...

Voltage U_s V	For use with	Circuit symbol	Part no. Article no.	Notes
Varistor suppressors with integrated LED				
 24 - 48 AC 130 - 240 AC	DILM7 - DILM15 DILMP20 DILA		DILM12-XSPVL48 281220	For AC operated contactors 50 - 60 Hz. DC operated contactors and DILM115 and DILM150 have an integrated suppressor. Note drop-out delay.
	24 - 48 AC 130 - 240 AC		DILM17 - DILM32 DILK12 - DILK25 DILL... DILMP32 - DILMP45	
24 - 48 AC 130 - 240 AC	DILM40 - DILM95 DILK33 - DILK50 DILMP63 - DILMP200		DILM32-XSPVL240 281223	
			DILM95-XSPVL48 281224	
			DILM95-XSPVL240 281225	
Diode suppressor				
 12 - 250 DC	DILM7 - DILM15 DILMP20 DILA		DILM12-XSPD 101672	Additional for integrated suppressor with DC operated contactors. Prevention of negative switch-off voltage when the contactor is used together with a safety PLC.

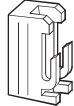
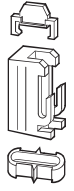

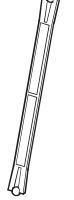
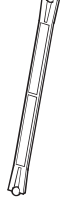
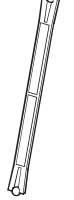


Product Standards
 UL File No.
 UL CCN
 CSA File No.
 CSA Class No.
 NA Certification

IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
 E29096
 NLDX
 227038
 3211-07
 UL Listed, CSA certified

Contactors relays, contactors

Accessories









DILM...-XDILM..-XVB, DILM..-XMV

For use with	Part no.	Notes
Mechanical interlocks		
For mechanically linking contactors in combinations 0 mm distance between contactors.		
	DILM7 - DILM72 DILA DILM32-XVB 281227	— Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E36332 UL CCN NLRV CSA File No. 012528 CSA Class No. 3211-05 NA Certification UL Recognized, CSA certified
	DILM80 - DILM170 DILM150-XVB 281226	— Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E29184 UL CCN NKCR CSA File No. 012528 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified
Mechanical interlocks		
	DILM7 - DILM15 DILMP20 DILA DILM12-XMV 281196	For two contactors with AC or DC operation arranged vertically or horizontally. Distance between contactors 0 mm, including contactor connector Mechanical lifespan 2.5 x 10 ⁶ operations. DILM 150-XMV including mounting plate for contactors. Additional auxiliary contact modules possible. → 5/38 Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E29096 UL CCN NLDX CSA File No. 012528 CSA Class No. 2411-03 NA Certification UL Listed, CSA certified
	DILM17 - DILM38 DILM32-XMV 281197	
	DILM40 - DILM72 DILM65-XMV 281198	
	DILM80 - DILM170 DILM150-XMV 240081	
	DILM185A, DILM225A, DILM250, DILM300A, DILM400, DILM500, DILM570 DILM500-XMV 208289	
	DILM580, DILM650 DILM750, DILM820 DILM1000 DILM820-XMV 208288	For contactors with the same or different magnet systems mounted horizontally or vertically, mechanical lifespan 5 x 10 ⁶ operations. No auxiliary contact permitted between mechanical interlock and contactor. Combination only with consecutive installation sizes or DILM185A - DILM570. For contactors with the same or different magnet systems mounted horizontally or vertically, mechanical lifespan 5 x 10 ⁶ operations. No auxiliary contact permitted between mechanical interlock and contactor. DILM820-XMV consists of interlock element and mounting plate.
Set of spare parts for mechanical interlock		
Ball for mechanical interlock, incl. contactor connector.		
—	DILM80 - DILM170 DILM150-XMVE 107020	UL/CSA certification not required

Contactor relays, contactors

Accessories

DILM...-XP1, DILM...-XS1

For use with	Circuit symbol	Part no.	Notes
Paralleling links for main contacts			
Consisting of 2 paralleling links			
	DILM7 - DILM15	DILM12-XP1 281193	<p>4th pole can be broken off AC-1 current carrying capacity of the open contactor increases by a factor of 2.5 Protected against accidental contact in accordance with VDE 0106 Part 100 A cover is included with DILM185-XP1 for protection against accidental contact. Connection cross section for DILM...-XP1 Technical data</p>
	DILM17 - DILM32	DILM32-XP1 281194	
	DILM40 - DILM72	DILM65-XP1 281195	
	DILM80 - DILM170	DILM150-XP1 284769	
	DILM185A	DILM185-XP1 208292	
Star-point bridges			
	DILM7 - DILM15	DILM12-XS1 281190	<ul style="list-style-type: none"> Designed as tool-less plug connection Use as DILA-XHIT... contactor auxiliary contact
	DILM17 - DILM32	DILM32-XS1 281191	<ul style="list-style-type: none"> Use as DILA-XHIT... contactor auxiliary contact
	DILM40 - DILM72	DILM65-XS1 281192	-
	DILM80 - DILM170	DILM150-XS1 284768	-
	DILM185A - DILM400	DILM400-XS1 208291	A cover is included for protection against accidental contact.
	DILM500	DILM500-XS1 208290	A cover is included for protection against accidental contact.

Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking E29096
UL File No.	NLDX
UL CCN	012528
CSA File No.	3211-03
CSA Class No.	UL Listed, CSA certified
NA Certification	

Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking E36332
UL File No.	NLRV
UL CCN	012528
CSA File No.	3211-05
CSA Class No.	UL Listed, CSA certified
NA Certification	

Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking E36332
UL File No.	NLRV
UL CCN	012528
CSA File No.	3211-04
CSA Class No.	UL Listed, CSA certified
NA Certification	

Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking E36332
UL File No.	NLRV
UL CCN	012528
CSA File No.	3211-03
CSA Class No.	UL Listed, CSA certified
NA Certification	

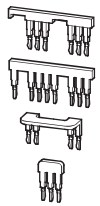
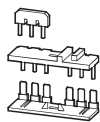




Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking E36332
UL File No.	NLRV
UL CCN	012528
CSA File No.	3211-04
CSA Class No.	UL Listed
NA Certification	

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UL File No.	NLDX
UL CCN	012528
CSA File No.	3211-03
CSA Class No.	UL Listed
NA Certification	

Contactor relays, contactors

Accessories

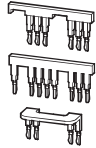



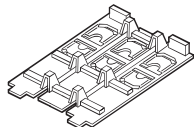


DILM...-XSL

For use with	Part no.	Notes
Star-delta wiring kit		
Main current wiring for star-delta combination Including star-point bridge		
	DILM7/9/12/15 mains contactors DILM7/9/12/15 delta contactors DILM7/9/12/15 star contactors	DILM12-XSL 283130 <ul style="list-style-type: none"> Designed for tool-less plug connection Use as DILA-XHIT... contactor auxiliary contact The following control cables are integrated in addition to electrical interlock: <ul style="list-style-type: none"> Q13: A1 - Q15: 21 Q13: 21 - Q15: A1 Q13: A2 - Q15: A2
	DILM17/25/32 mains contactors DILM17/25/32 delta contactors DILM17/25/32 star contactors	DILM32-XSL 283131 <ul style="list-style-type: none"> Consists of the following connection bridges: <ul style="list-style-type: none"> Mains - delta contactors Delta - star contactors Star-point bridge
	DILM40/50/65 mains contactors DILM40/50/65 delta contactors DILM40/50/65 star contactors	DILM65-XSL 101058
	DILM 80/95 mains contactors DILM80/95 delta contactors DILM50/65 star contactors	DILM95-XSL 101486
	DILM 115/150 mains contactors DILM115/150 delta contactors DILM80/95/115 star contactors	DILM150-XSL 101487
	DILM 185/225 mains contactors DILM185/225 delta contactors DILM115/150 star contactors	DILM225-XSL 101488
		Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking CSA File No. 012528 CSA Class No. 3211-05 NA Certification CSA certified
		Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E36332 UL CCN NLRV CSA File No. 012528 CSA Class No. 3211-04 NA Certification UL Listed, CSA certified
		Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E36332 UL CCN NLRV CSA File No. 012528 CSA Class No. 2411-03, 3211-04 NA Certification UL Listed, CSA certified

Contactor relays, contactors

Accessories




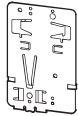
DILM...-XRL, DILM...XIP2X

For use with	Part no.	Notes
Reversing starter wiring kits		
Main current wiring for reversing combinations		
	DILM7 DILM9 DILM12 DILM12-XRL 283108	<ul style="list-style-type: none"> Designed for tool-less plug connection As auxiliary contact DILA-XHIT...use The following control cables are integrated in addition to electrical interlock: <ul style="list-style-type: none"> Q11: A1 - Q12: 21 Q11: 21 - Q12: A1 Q11: A2 - Q12: A2 Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E36332 UL CCN NLRV CSA File No. 012528 CSA Class No. 3211-05 NA Certification UL Listed, CSA certified
	DILM17 DILM25 DILM32 DILM32-XRL 283109	Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E36332 UL CCN NLRV CSA File No. 012528 CSA Class No. 3211-04 NA Certification UL Listed, CSA certified
	DILM40 DILM50 DILM65 DILM65-XRL 101057	Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E36332 UL CCN NLRV CSA File No. 012528 CSA Class No. 3211-04 NA Certification UL Listed, CSA certified
	DILM80 DILM95 DILM115 DILM150 DILM150-XRL 101681	Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E36332 UL CCN NLRV CSA File No. 012528 CSA Class No. 2411-03, 3211-04 NA Certification UL Listed, CSA certified
IP2X cover set		
	DILM17 DILM25 DILM32 DILM38 DILMP32 DILMP45 DILM32-XIP2X 118855	Each cover set consists of two three-pole and two single-pole covers. UL/CSA certification not required
	DILM40 DILM50 DILM65 DILM72 DILMP63 DILMP80 DILM65-XIP2X 106491	2 covers are required per phase The cover set consists of 8 covers UL/CSA certification not required
	DILM80 DILM95 DILM115 DILM150 DILM170 DILMP125 DILMP160 DILMP200 ZB150 DILM150-XIP2X 106492	UL/CSA certification not required

Contactor relays, contactors

Accessories

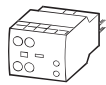
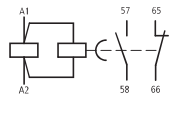
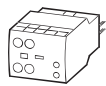
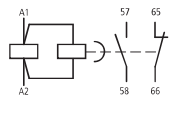
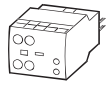
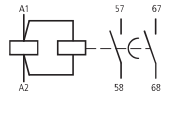
DILM12-XDSBS

For use with	Part no.	Notes
Three-phase commoning links Protected against accidental contact, short-circuit proof, $U_0 = 690\text{ V}$, $I_0 = 35\text{ A}$ Can be extended by rotating by mounting		
	DILM7 DILM9 DILM12 DILM15 DILM12-XDSB0/3 240084	Suitable for 3 contactors. Length 112 mm Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking E36332
	DILM7 DILM9 DILM12 DILM15 DILM12-XDSB0/4 240085	Suitable for 4 contactors. Length 157 mm UL File No. E36332 UL CCN NLRV CSA File No. 012528 CSA Class No. 2411-03 NA Certification UL Listed, CSA certified
	DILM7 DILM9 DILM12 DILM15 DILM12-XDSB0/5 240086	Suitable for 5 contactors. Length 202 mm
Incoming connection block		
—	DILM7 DILM9 DILM12 DILM15 DILM12-XEK 240083	For three-phase commoning link, protected against accidental contact, $U_0 = 690\text{ V}$, $I_0 = 35\text{ A}$. Terminal capacities: Stranded 2.5...16 mm ² Flexible with ferrule 2.5...16 mm ² AWG14...8 Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking E36332 UL File No. NLRV UL CCN 012528 CSA File No. 2411-03 CSA Class No. UL Listed, CSA certified NA Certification
Adapter plate Enables clipping on of switches on to DIN rails		
	DILM80 DILM95 DILM115 DILM150 DILM170 NZM2-XC75 260215	For top-hat rail 75 mm Product Standards UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking E140305 UL File No. DIHS UL CCN 022086 CSA File No. 1437-01 CSA Class No. UL Listed, CSA certified NA Certification

Contactor relays, contactors

Electronic timer modules

DILM32-XTE

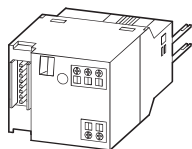
For use with	Circuit symbol	Part no. Article no.	Notes
Electronic timer modules			
On-delayed			
Cannot be combined with top mounting auxiliary contacts Incl. suppressor circuits			
 <p>24 V AC/DC</p> <p>100 ... 130 V AC</p> <p>200 ... 240 V AC</p>	<p>DILM7 - DILM32 DILMP20 DILMP32-DILMP45 DILA</p> 	<p>DILM32-XTEE11(RA24) 101440</p> <p>DILM32-XTEE11(RAC130) 101441</p> <p>DILM32-XTEE11(RAC240) 101442</p>	<p>Time range can be selected</p> <p>0.05 s...1 s</p> <p>0.5 s...10 s</p> <p>5 s...100 s</p>
Off-delayed, auxiliary voltage-free			
Cannot be combined with top mounting auxiliary contacts Incl. suppressor circuits			
 <p>24 V AC/DC</p> <p>100 ... 130 V AC</p> <p>200 ... 240 V AC</p>	<p>DILM7 - DILM32 DILMP20 DILMP32-DILMP45 DILA</p> 	<p>DILM32-XTED11-1(RA24) 105210</p> <p>DILM32-XTED11-10(RA24) 104943</p> <p>DILM32-XTED11-100(RA24) 104946</p> <p>DILM32-XTED11-1(RAC130) 105211</p> <p>DILM32-XTED11-10(RAC130) 104944</p> <p>DILM32-XTED11-100(RAC130) 104947</p> <p>DILM32-XTED11-1(RAC240) 105212</p> <p>DILM32-XTED11-10(RAC240) 104945</p> <p>DILM32-XTED11-100(RAC240) 104948</p>	<p>Time range</p> <p>0.05 s...1 s</p> <p>Time range</p> <p>0.5 s...10 s</p> <p>Time range</p> <p>5 s...100 s</p> <p>Time range</p> <p>0.05 s...1 s</p> <p>Time range</p> <p>0.5 s...10 s</p> <p>Time range</p> <p>5 s...100 s</p> <p>Time range</p> <p>0.05 s...1 s</p> <p>Time range</p> <p>0.5 s...10 s</p> <p>Time range</p> <p>5 s...100 s</p> <p>Time range</p> <p>0.05 s...1 s</p> <p>Time range</p> <p>0.5 s...10 s</p> <p>Time range</p> <p>5 s...100 s</p>
For star-delta applications			
Cannot be combined with top mounting auxiliary contacts Incl. suppressor circuits			
 <p>24 V AC/DC</p> <p>100 ... 130 V AC</p> <p>200 ... 240 V AC</p>	<p>DILM7 - DILM32 DILMP20 DILMP32-DILMP45 DILA</p> 	<p>DILM32-XTEY20(RA24) 101446</p> <p>DILM32-XTEY20(RAC130) 101447</p> <p>DILM32-XTEY20(RAC240) 101448</p>	<p>Changeover time</p> <p>1...30 s</p> <p>50 ms changeover delay</p> <p>Sample circuit</p>


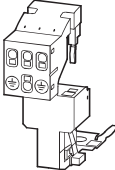

Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29184
UL CCN	NKCR
CSA File No.	012528
CSA Class No.	3211-03
NA Certification	UL Listed, CSA certified

Contactor relays, contactors

Accessories

DIL-SWD..., DILM12-XMC

	For use with	Part no. Article no.	Notes
SWD contactor modules			
SmartWire-Darwin module for installation on contactors. One module per contactor			
	Two digital inputs for potential-free contacts. 1 electrical interlock for the surface mounting of reversing starters. Messages: Contactor switch status, status of the digital inputs 1 and 2. Commands: Contactor actuation	DILM(C)7... - DILM(C)32 DILM38 DILA	<ul style="list-style-type: none"> Take into account the max. current consumption of the contactor coils per SmartWire-Darwin line. A2 terminals must not be bridged. Wiring sets DILM 12-XRL and PKZM0-XRM12 cannot be used. Connection terminals for electrical interlocking are not suitable for safety technology.
	Two digital inputs for potential-free contacts. 1 electrical interlock for the surface mounting of reversing starters. 1-0-A switch for manual or automatic operation. Messages: contactor switching position, status of the digital inputs 1 and 2, 1-0-A switch position. Commands: Contactor actuation	DILM(C)7... - DILM(C)32 DILM38 DILA	

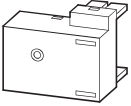
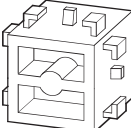
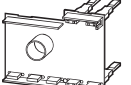

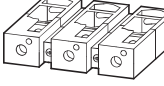
	For use with	Part no. Article no.	Notes
Wiring set for motor feeder plug			
PE module with contact plate 	DILM(C)7 DILM(C)9 DILM(C)12 DILM(C)15	DILM12-XMCE²⁾ 121764	35x7.5 (15) mm mounting rail (as per DIN EN 60715) with PE function required. For connection of: PE 0.75 – 4 mm ²
Motor plate with PE module and contact plate 	DILM(C)7 DILM(C)9 DILM(C)12 DILM(C)15	DILM12-XMCP/E²⁾ 121769	35x7.5 (15) mm mounting rail (as per DIN EN 60715) with PE function required. For connection of: L1, L2, L3, PE 0.75 – 2.5 mm ²
	PKZM0/PKE + DILM(C)7 PKZM0/PKE + DILM(C)9 PKZM0/PKE + DILM(C)12 PKZM0/PKE + DILM(C)15 MSC-D(E)-...-M7... MSC-D(E)-...-M9... MSC-D(E)-...-M15...	DILM12-XMCP/T²⁾ 121770	For connection of: L1, L2, L3, PE 0.75 – 2.5 mm ²

1) NA Certification Request filed for UL and CSA
 2) Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
 NA Certification Request filed for UL and CSA

Contactor relays, contactors

Accessories

DILM...-X...

	For use with	Part no. Article no.	Notes												
Motor suppressor module															
Can be used at 380...575 V 50/60 Hz.															
	DILM7 - DILM15	DILM12-XMSM 109399	<ul style="list-style-type: none"> • Tool-less version using tool-less plug connection • RC suppressor • Ambient temperature -25...+60 °C, open. • Insulated material, difficult to ignite according to UL 94. • Weight = 0.05 kg. • UL/CSA approval applied for 												
			<table border="0"> <tr> <td>Product Standards</td> <td>IEC/EN 60947-4-1; UL 508; CE marking</td> </tr> <tr> <td>UL File No.</td> <td>E300273</td> </tr> <tr> <td>UL CCN</td> <td>NMTR2</td> </tr> <tr> <td>NA Certification</td> <td>UL Recognized</td> </tr> </table>	Product Standards	IEC/EN 60947-4-1; UL 508; CE marking	UL File No.	E300273	UL CCN	NMTR2	NA Certification	UL Recognized				
Product Standards	IEC/EN 60947-4-1; UL 508; CE marking														
UL File No.	E300273														
UL CCN	NMTR2														
NA Certification	UL Recognized														
Test block															
Suitable for switching on contactor off-load															
	DILM7 - DILM38 DILA	DILM32-XMAN 110955	–												
			UL/CSA certification not required												
Printed board contact															
For the adaption of a control circuit on a printed-circuit board															
	DILM7 - DILM15 DILA	DILM12-XPBC 109400	–												
			–												
Load resistor															
For DC contactors in order to increase power consumption															
	DILM17 DILM25 DILM32 DILM38 DILMP32 DILMP45	DILM32-XSPLW24 112419	<p>Installed in a suppressor circuit enclosure. Required when using special PLC outputs for actuation, e.g.: Beckhoff safety controllers.</p>												
			<table border="0"> <tr> <td>Product Standards</td> <td>IEC/EN 60947-4-1; CSA-C22.2 No. 14-05; CE marking</td> </tr> <tr> <td>CSA File No.</td> <td>225135</td> </tr> <tr> <td>CSA Class No.</td> <td>3211-07</td> </tr> <tr> <td>NA Certification</td> <td>CSA certified</td> </tr> </table>	Product Standards	IEC/EN 60947-4-1; CSA-C22.2 No. 14-05; CE marking	CSA File No.	225135	CSA Class No.	3211-07	NA Certification	CSA certified				
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CSA File No.	225135														
CSA Class No.	3211-07														
NA Certification	CSA certified														
Extension terminals															
	DILM80 DILM95 DILM115 DILM150 DILM170	DILM150-XZK 104486	<p>Can be fitted on every main terminal of the contactor.</p> <p>Connection options: maximum 2 x 4 mm² solid maximum 2 x 2.5 mm² flexible with ferrule</p>												
			<table border="0"> <tr> <td>Product Standards</td> <td>IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking</td> </tr> <tr> <td>UL File No.</td> <td>E29184</td> </tr> <tr> <td>UL CCN</td> <td>NKCR</td> </tr> <tr> <td>CSA File No.</td> <td>012528</td> </tr> <tr> <td>CSA Class No.</td> <td>2411-03, 2411-04</td> </tr> <tr> <td>NA Certification</td> <td>UL Listed, CSA certified</td> </tr> </table>	Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking	UL File No.	E29184	UL CCN	NKCR	CSA File No.	012528	CSA Class No.	2411-03, 2411-04	NA Certification	UL Listed, CSA certified
Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking														
UL File No.	E29184														
UL CCN	NKCR														
CSA File No.	012528														
CSA Class No.	2411-03, 2411-04														
NA Certification	UL Listed, CSA certified														
Cable terminal block															
With control circuit terminal Consisting of three flat ribbon terminals															
	DILM250 DILM300A DILM400	DILM400-XKU-S 208293	<p>Connection options: round conductors, flexible and stranded, ribbon cables.</p>												
			<table border="0"> <tr> <td>Product Standards</td> <td>IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking</td> </tr> <tr> <td>UL File No.</td> <td>E29184</td> </tr> <tr> <td>UL CCN</td> <td>NKCR</td> </tr> <tr> <td>CSA File No.</td> <td>012528</td> </tr> <tr> <td>CSA Class No.</td> <td>3211-04</td> </tr> <tr> <td>NA Certification</td> <td>UL Listed, CSA certified</td> </tr> </table>	Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking	UL File No.	E29184	UL CCN	NKCR	CSA File No.	012528	CSA Class No.	3211-04	NA Certification	UL Listed, CSA certified
Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking														
UL File No.	E29184														
UL CCN	NKCR														
CSA File No.	012528														
CSA Class No.	3211-04														
NA Certification	UL Listed, CSA certified														

Contactor relays, contactors

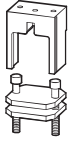
Accessories

DILM...-XK...

For use with	Part no. Article no.	Notes
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Flat strip conductor terminal kit

With control cable connection



DILM580
DILM650
DILM750
DILM820

DILM820-XKB-S
208295

Connection options:
ribbon cables

Conductor material	Cross-section X number of cores mm ²	For use with	Part no. Article no.	Notes
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Connection terminal sets for North America

Consist of three individual terminals

Copper, aluminum	2 x (AWG4 ... MCM500)	DILM500/22	DILM500-XK-CNA 232192
Copper, aluminum	4 x (AWG2 ... MCM500)	DILM580/22 DILM650/22 DILM750/22 DILM820/22	


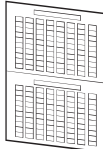
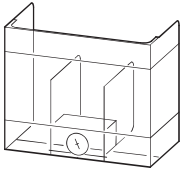
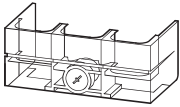


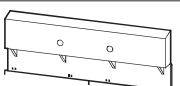
Including cover
With control
cable connec-
tion

Product Standards	IEC/EN 60947-4-1; UL 508;
	CSA-C22.2 No. 14-05;
	CE marking
UL File No.	E29184
UL CCN	NKCR
CSA File No.	012528
CSA Class No.	3211-04
NA Certification	UL Listed, CSA certified

Contactor relays, contactors

Accessories

DILM...-XHB, DILM...-XAB

Description	For use with	Part no. Article no.	Notes
Sealable shrouds			
Transparent 	DILM32-XTE...	DILM32-XTEPLH 101449	-
Device labelling, label sheet			
7.5 x 17 mm Colour: yellow HKS 3 (≈RAL 1018) 	Labelling with laser printer, plotter, film plotter, copier	XGKE-GE 207517	1 off = 1 sheet 240 labels per sheet 1 sheet = DIN A4, Can be split into two DIN A5 sheets UL/CSA certification not required
Covers			
Terminal cover 	DILM185A DILM225A DILM250 DILM300A DILM400 DILM500 DILM580 DILM650 DILM750 DILM820, DILM1000	DILM225A-XHB 139560 DILM400-XHB 208287 DILM500-XHB 208286 DILM650-XHB 208285 DILM820-XHB 208284	To provide terminals with protection against accidental contact vertical from the front UL/CSA certification not required
Shroud for star-point bridge 	DILM400-XS1	DILM400-XHBS1 101687	Can be combined with star-delta wiring kits DILM250-XSL and DILM400-XSL. UL/CSA certification not required
Auxiliary contact seat cover  	DILM7 - DILM38 DILMP32 DILMP45 DILA DILL DILM40 - DILM170 DILMP63 - DILMP200	DILM32-XAB 129538 DILM150-XAB 121712	For preventing manual actuation. Cannot be combined with additional surface mounting accessories. UL/CSA certification not required
Suppressor circuits for vacuum contactors (on load side) 	DILM580 DILM650 DILM750 DILM820 DILM1000 DILH2000 DILH2200 DILH2600	DILM1000-XSM 125947 DILH2600-XSM 125946	For damping the cutout overvoltage when switching off inductive loads. NA Certification Request filed for UL and CSA

Contactor relays, contactors

Accessories

DILM...-XSP...

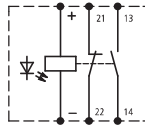
Rated operational current		Actuating voltage	Actuating current	Circuit symbol	For use with	Part no.
AC-15		DC				
230 V	400 V	220 V				
I_e	I_e	I_e	U_s			
A	A	A	V DC			

Amplifier module for separate mounting

Input with integrated suppressor circuit for overvoltage limitation



2 2 0.03 24 25

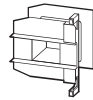


...DILM
DILMLP...
DILL...
DILK...

ETS4-VS3
083094

Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29184
UL CCN	NKCR
CSA File No.	012528
CSA Class No.	2411-03, 3211-04
NA Certification	UL Listed, CSA certified

Notes Contactor coils with rated operational current > 2 A must be actuated via the DILER-G mini contactor relay.
Rated operational current DC:
Making and breaking conditions DC-13, time L/R 300ms

For use with	DC voltage	AC voltage	Notes
	Part no. Article no.	Part no. Article no.	
 DILM17 DILM25 DILM32 DILM38 DILM40 DILM50 DILM65 DILM72 DILM80 DILM95 DILM115 DILM150 DILM170 DILM185A DILM225A	DILM32-XSP(RDC24) ¹⁾ 281155	DILM32-XSP(230V50HZ,240V60HZ) 281141	For additional actuating
	DILM65-XSP(RDC24) ¹⁾ 281185	DILM65-XSP(230V50HZ,240V60HZ) 281171	
	DILM95-XSP(RDC24) ¹⁾ 230080	DILM95-XSP(230V50HZ,240V60HZ) 230062	
	DILM150-XSP(RDC24) ¹⁾ 230115	DILM150-XSP(RAC240) ¹⁾ 230112	
	DILM225A-XSP(RDC24) ¹⁾ 139568	DILM225A-XSP(RAC240) ¹⁾ 139565	

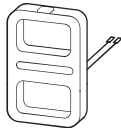
Notes ¹⁾ Incl. electronic module

Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29096
UL CCN	NLDX
CSA File No.	012528
CSA Class No.	2411-03, 3211-04
NA Certification	UL Listed, CSA certified

Contactor relays, contactors

Accessories

DILM...-XSP/E...

For use with	DC voltage Part no. Article no.	AC voltage Part no. Article no.	Notes	
Electronic modules including coils				
	DILM250 DILM300A	DILM250-XSP/E(RA250)¹⁾ 208252	For additional actuating voltages	
	DILM400 DILM500	DILM500-XSP/E(RA250)¹⁾ 208256		
	DILM580 DILM650 DILM750 DILM820 DILM1000	DILM1000-XSP/E(RA250)¹⁾ 289145		
	DILH1400	–		
	DILM250-S DILM300A-S	–		
	DILM400-S DILM500-S	–		
				DILM250-XSP/E(RA250)¹⁾ 208252
				DILM500-XSP/E(RA250)¹⁾ 208256
				DILM1000-XSP/E(RA250)¹⁾ 289145
				DILH1400-XSP/E(RAW250)²⁾ 289161
		DILM250-S-XSP/E(220-240V50/60HZ)²⁾ 274202		
		DILM500-S-XSP/E(220-240V50/60HZ)²⁾ 274205		

¹⁾

²⁾

Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05;
CE marking
UL File No. E29096
UL CCN NLDX
CSA File No. 1017510
CSA Class No. 3211-04
NA Certification UL Listed, CSA certified

Product Standards IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05;
CE marking
UL File No. E29096
UL CCN NLDX
CSA File No. 012528
CSA Class No. 3211-04
NA Certification UL Listed, CSA certified

Contactor monitoring devices

CMD

Description, ordering



General

For safety-related off switching to safety category 3 and 4 according to EN 954-1, at present two contactors must be used in series. Especially with larger contactors this is an expensive solution.

Application

This is where the CMD can be used. The function of the CMD is to monitor the main contacts of a contactor against welding. For this the control voltage of the contactor is compared with the state of the main contacts which is reliably monitored using a mirror contact (IEC EN 60947-4-1 Annex F). If the coil is de-energized and the contactor does not drop out the CMD trips the upstream circuit-breaker/motor protective circuit breaker/switch-disconnector via a shunt release.

Safety

The CMD has a safety-compliant design so that in safety combinations with a circuit-breaker/motor protective circuit breaker/switch disconnector the reliable switch off in the case of a "welded contactor" can be guaranteed. In this application it replaces the series connection of a second contactor. As a component it conforms to safety category 3 according to EN 954-1 and EN ISO 13849.

Mounting

The CMD can be combined with the following Eaton components:

- Contactors:
 - DILEM
 - DILM7 to DILM150
 - DILM185(-S) to DILM500(-S);
 - DILM580 to DILM1600
 - DILH1400 ... DILH2000
 - SE-1A-PKZ2 and S-PKZ2

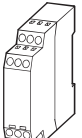
For the wiring of the CMD the auxiliary N/C contact, mirror contact must be according to IEC/EN 60947-4-1 and the auxiliary N/O contact must be interlocked and opposing according to IEC/EN 60947-5-1. Also the auxiliary N/C contact for the feedback circuit must have a mirror contact function according to IEC/EN 60947-4-1.

- Motor-protective circuit-breakers/circuit-breakers:
 - PKZ2 + U-PKZ2(18VDC)
 - NZM1 + NZM1-XUVL
 - NZM2 + NZM2/3-XUV
 - NZM3 + NZM2/3-XUV
 - NZM4 + NZM4-XUV
 - N1 + NZM1-XUVL
 - N2 + NZM2/3-XUV
 - N3 + NZM2/3-XUV
 - N4 + NZM4-XUV

Auxiliary contact requirements per contactor:

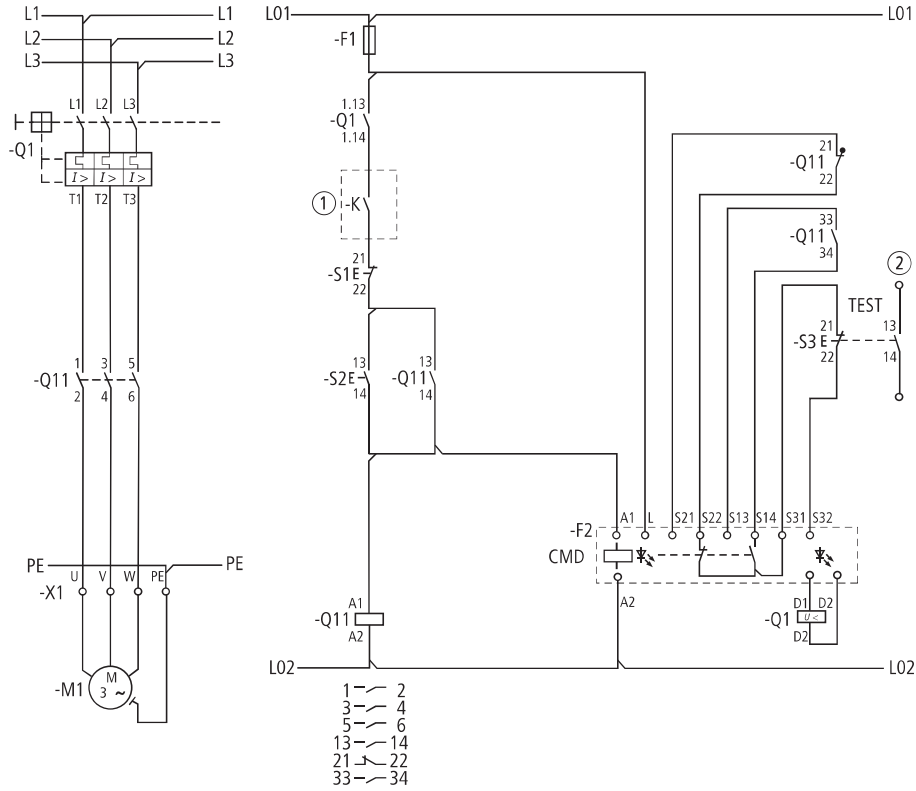
	CMD	Self maintaining	Feedback circuit	Electrical interlock
DOL starter	1 N/O + 1 N/C	1S	1 B	
Reversing starter	1 N/O + 1 N/C	1S	1 B	1 B

Ordering

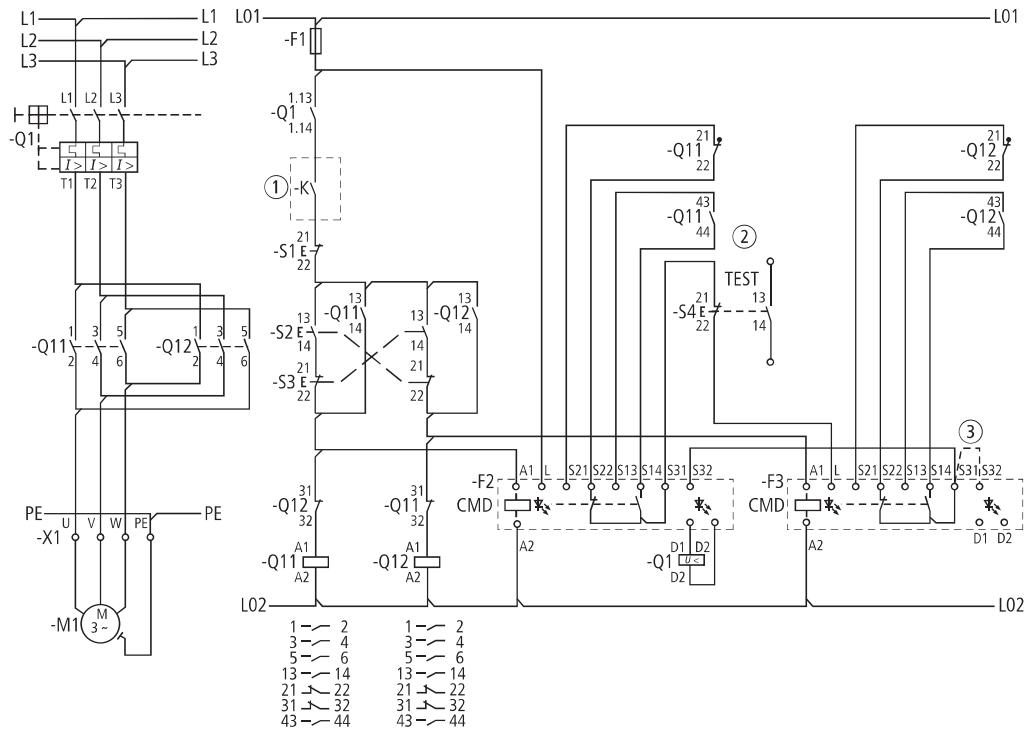
	Part no. Article no.
CMD contactor monitoring device	
	CMD(24VDC) 106170
	CMD(220-240VAC) 106172

Engineering

DOL starter



Reversing starter



- ① Switching by safety relay of safety PLC
- ② Signal contact to PLC evaluation
- ③ CMD (24VDC)

Mini contactor relays, contactor relays

Actuating voltages

DILER, DILEEM

Ordering

AC	DILER-40(...)	DILER-31(...)	DILER-22(...)	DILEEM-10(...)	DILEEM-01(...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list
24V 50Hz	010094	010251	010344	051604	051629
48V 50Hz	010190	010044	010201	051603	051628
240V 50Hz	010478	010300	010138	051602	051627
115V 60Hz	010270	010204	010211	051598	051624
42V 50Hz, 48V 60Hz	–	–	–	051612	051637
110V 50Hz, 120V 60Hz	051756	051765	051774	051611	051636
190V 50Hz, 220V 60Hz	051757	051766	051775	051610	051635
220V 50Hz, 240V 60Hz	051758	051767	051776	051609	051634
230V 50Hz, 240V 60Hz	051759	051768	051777	051608	051633
380V 50Hz, 440V 60Hz	051760	051769	051778	051607	051632
400V 50Hz, 440V 60Hz	051761	051770	051779	051606	051631
415V 50Hz, 480V 60Hz	051762	051771	051780	051605	051630
24V 50/60Hz	021924	021594	021704	051596	051621
42V 50/60Hz	033459	029869	029433	051595	051620
110V 50/60Hz	021961	021624	021871	051592	051618
230V 50/60Hz	052725	052509	052508	056674	058771
DC	DILER-40-G(...)	DILER-31-G(...)	DILER-22-G(...)	DILEEM-10-G(...)	DILEEM-01-G(...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list
12V DC	079711	079761	080728	051644	051649
24V DC	010223	010157	010042	051643	051650
48V DC	010255	010205	010346	051642	051648
110V DC	010287	010253	010043	051640	051646
220V DC	010303	010269	010091	051639	051645

Notes

¹⁾ To obtain the article number for ordering, read under selected part number and actuating voltage from the table.
Devices with dual-voltage coils are to be ordered under a single article number.

Mini contactor relays, contactor relays

Actuating voltages

DILEM

AC	DILEM-10(...)	DILEM-01(...)	DILEM12-10(...)	DILEM12-01(...)	DILEM4(...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list
24V 50Hz	010005	010086	127067	127083	014754
48V 50Hz	010020	010294	–	–	–
240V 50Hz	010032	010151	–	–	014305
115V 60Hz	010024	010470	–	–	–
42V 50Hz, 48V 60Hz	051782	051791	–	–	–
110V 50Hz, 120V 60Hz	051783	051792	127072	127088	051801
190V 50Hz, 220V 60Hz	051784	051793	–	–	–
220V 50Hz, 240V 60Hz	051785	051794	–	–	051803
230V 50Hz, 240V 60Hz	051786	051795	–	–	051804
380V 50Hz, 440V 60Hz	051787	051796	–	–	–
400V 50Hz, 440V 60Hz	051788	051797	–	–	051806
415V 50Hz, 480V 60Hz	051789	–	–	–	–
24V 50/60Hz	021417	020402	127079	127095	022044
42V 50/60Hz	032174	033233	–	–	–
110V 50/60Hz	021455	020436	127081	127097	–
230V 50/60Hz	052302	051114	127082	127098	052506
DC	DILEM-10-G(...)	DILEM-01-G(...)	DILEM12-10-G(...)	DILEM12-01-G(...)	DILEM4-G(...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list
12V DC	079594	079642	–	–	079680
24V DC	010213	010343	127132	127137	012701
48V DC	010245	010496	–	–	–
110V DC	010309	010136	–	–	–
220V DC	010325	010168	–	–	–

Notes

¹⁾ To obtain the article number for ordering, read under selected part number and actuating voltage from the table. Devices with **dual-voltage coils** are to be ordered under a **single** article number.

Contactor relays

Actuating voltages

DILA

AC	With screw terminals			With Spring-loaded terminals		
	DILA-40(...)	DILA-31(...)	DILA-22(...)	DILAC-40(...)	DILAC-31(...)	DILAC-22(...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list	See price list
24V 50Hz	276316	276351	276386	276431	276463	276495
240V 50Hz	276318	276353	276388	–	–	–
110V 50Hz 120V 60Hz	276326	276361	276396	276438	276470	276502
190V 50Hz 220V 60Hz	276327	276362	276397	–	–	–
220V 50Hz 240V 60Hz	276328	276363	276398	–	–	–
230V 50Hz 240V 60Hz	276329	276364	276399	276441	276473	276505
380V 50Hz 440V 60Hz	276330	276365	276400	–	–	–
400V 50Hz 440V 60Hz	276331	276366	276401	–	–	–
24V 50Hz/60Hz	276333	276368	276403	276445	276477	276509
42V 50Hz/60Hz	276334	276369	276404	–	–	–
110V 50Hz/60Hz	276335	276370	276405	–	–	–
220V 50Hz/60Hz	276336	276371	276406	–	–	–
230V 50Hz/60Hz	276337	276372	276407	276449	276481	276513
Special voltages other than the already shown normal voltages ²⁾	See price list	See price list	See price list	See price list	See price list	See price list
...V 50Hz(12-500V)³⁾	276341	276376	276411	276453	276485	276517
...V 60Hz(12-600V)³⁾	276342	276377	276412	276454	276486	276518
DC	With screw terminals			With Spring-loaded terminals		
	DILA-40(...)	DILA-31(...)	DILA-22(...)	DILAC-40(...)	DILAC-31(...)	DILAC-22(...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list	See price list
24V DC	276344	276379	276414	276456	276488	276520
48V DC	276345	276380	276415	–	–	–
110V DC	276347	276382	276417	276459	276491	276523
220V DC	276348	276383	276418	276460	276492	276524
Special voltages other than the already shown normal voltages ²⁾	See price list	See price list	See price list	See price list	See price list	See price list
...V DC(12-250V)³⁾	276349	276384	276419	276461	276493	276525

Notes

- ¹⁾ The article number is a combination of part no. and operating voltage devices with dual-voltage coils can be ordered under a single article no.
- ²⁾ With non-standard voltages the required actuating voltage from the defined range (...–...V) must be stated.
- ³⁾ Minimum order quantity 10 units

Contactors
Actuating voltages
DILM

AC	DILM7-10 (...)	DILM7-01 (...)	DILM9-10 (...)	DILM9-01 (...)	DILM12-10 (...)	DILM12-01 (...)	DILM15-10 (...)	DILM15-01 (...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list
24V 50Hz	276537	276572	276677	276712	276817	276852	290045	290080
240V 50Hz	276539	276574	276679	276714	276819	276854	–	–
42V 50Hz 48V 60Hz	276546	–	276686	–	276826	–	–	–
110V 50Hz 120V 60Hz	276547	276582	276687	276722	276827	276862	290055	290090
190V 50Hz 220V 60Hz	276548	276583	276688	276723	276828	276863	–	–
220V 50Hz 240V 60Hz	276549	276584	276689	276724	276829	276864	–	–
230V 50Hz 240V 60Hz	276550	276585	276690	276725	276830	276865	290058	290093
380V 50Hz 440V 60Hz	276551	276586	276691	276726	276831	276866	–	–
400V 50Hz 440V 60Hz	276552	276587	276692	276727	276832	276867	–	–
415V 50Hz 480V 60Hz	276553	–	276693	–	276833	–	–	–
24V 50Hz/60Hz	276554	276589	276694	276729	276834	276869	290062	290097
42V 50Hz/60Hz	276555	276590	276695	276730	276835	276870	–	–
110V 50Hz/60Hz	276556	276591	276696	276731	276836	276871	–	–
220V 50Hz/60Hz	276557	276592	276697	276732	276837	276872	–	–
230V 50Hz/60Hz	276558	276593	276698	276733	276838	276873	290066	290101
Special voltages other than the already shown normal voltages ²⁾	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list
...V 50Hz (12 – 600V)³⁾	276562	276597	276702	276737	276842	276877	290070	290105
...V 60Hz (12 – 600V)³⁾	276563	276598	276703	276738	276843	276878	290071	290106
DC	DILM7-10 (...)	DILM7-01 (...)	DILM9-10 (...)	DILM9-01 (...)	DILM12-10 (...)	DILM12-01 (...)	DILM15-10 (...)	DILM15-01 (...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list
24V DC	276565	276600	276705	276740	276845	276880	290073	290108
48V DC	276566	276601	276706	276741	276846	276881	–	–
110V DC	276568	276603	276708	276743	276848	276883	–	–
220V DC	276569	276604	276709	276744	276849	276884	–	–
Special voltages other than the already shown normal voltages ²⁾	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list
...V DC (12-250V)³⁾	276570	276605	276710	276745	276850	276885	290078	290113

Notes

- ¹⁾ To obtain the article number for ordering, read under selected part number and actuating voltage from the table. devices with dual-voltage coils can be ordered under a single article no.
- ²⁾ With non-standard voltages the required actuating voltage from the defined range (...-...V) must be stated.
- ³⁾ Minimum order quantity 10 units

Contactors

Actuating voltages

DILM

AC	DILM17-10 (...)	DILM17-01 (...)	DILM25-10 (...)	DILM25-01 (...)	DILM32-10 (...)	DILM32-01 (...)	DILM38-10(...)	DILM38-01(...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list
24V 50Hz	276991	277023	277119	277151	277247	277279	112378	112446
240V 50Hz	276993	–	277121	–	277249	–	112420	–
42V 50Hz 48V 60Hz	277000	–	277128	–	277256	–	112424	–
110V 50Hz 120V 60Hz	277001	277033	277129	277161	277257	277289	112425	112454
190V 50Hz 220V 60Hz	277002	–	277130	–	277258	–	112426	–
220V 50Hz 240V 60Hz	277003	–	277131	–	277259	–	112427	–
230V 50Hz 240V 60Hz	277004	277036	277132	277164	277260	277292	112428	112457
380V 50Hz 440V 60Hz	277005	–	277133	–	277261	–	112429	–
400V 50Hz 440V 60Hz	277006	277038	277134	277166	277262	277294	112430	112459
415V 50Hz 480V 60Hz	277007	–	277135	–	277263	–	112431	–
24V 50Hz/60Hz	277008	277040	277136	277168	277264	277296	112432	112461
42V 50Hz/60Hz	277009	–	277137	–	277265	–	112433	–
110V 50Hz/60Hz	277010	277042	277138	277170	277266	277298	112434	112463
220V 50Hz/60Hz	277011	277043	277139	277171	277267	277299	112435	112464
230V 50Hz/60Hz	277012	277044	277140	277172	277268	277300	112436	112465
Special voltages other than the already shown normal voltages ²⁾	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list
...V 50Hz (24 – 600V)	277016 ⁷⁾	277048 ⁷⁾	277144 ⁷⁾	277176 ⁷⁾	277272 ⁷⁾	277304 ⁸⁾	112440 ⁷⁾	112468 ⁷⁾
...V 60Hz (24 – 600V)	277017 ⁷⁾	277049 ⁷⁾	277145 ⁷⁾	277177 ⁷⁾	277273 ⁷⁾	277305 ⁸⁾	112441 ⁷⁾	112469 ⁷⁾
DC	DILM17-10(...)	DILM17-01(...)	DILM25-10(...)	DILM25-01(...)	DILM32-10(...)	DILM32-01(...)	DILM38-10(...)	DILM38-01(...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list
RDC 24 ³⁾	277018	277050	277146	277178	277274	277306	112442	112470
RDC 60 ⁴⁾	277019	277051	277147	277179	277275	277307	112443	112471
RDC 130 ⁵⁾	277020	277052	277148	277180	277276	277308	112444	112472
RDC 240 ⁶⁾	277021	277053	277149	277181	277277	277309	112445	112473

Notes

¹⁾ To obtain the article number for ordering, read under selected part number and actuating voltage from the table. devices with dual-voltage coils can be ordered under a single article no.

²⁾ With non-standard voltages the required actuating voltage from the defined range (...–...V) must be stated.

³⁾ 24 – 27 V DC

⁴⁾ 48 – 60 V DC

⁵⁾ 110 – 130 V DC

⁶⁾ 200 – 240 V DC

⁷⁾ Minimum order quantity 10 units

⁸⁾ Minimum order quantity 5 units

Contactors
Actuating voltages
DILM

AC	DILM40(...)	DILM50(...)	DILM65(...)	DILM72(...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list
24V 50Hz	277753	277817	277881	–
240V 50Hz	277755	277819	277883	109183
42V 50Hz 48V 60Hz	277762	277826	277890	–
110V 50Hz 120V 60Hz	277763	277827	277891	109191
190V 50Hz 220V 60Hz	277764	277828	277892	–
220V 50Hz 240V 60Hz	277765	277829	277893	–
230V 50Hz 240V 60Hz	277766	277830	277894	107670
380V 50Hz 440V 60Hz	277767	277831	277895	–
400V 50Hz 440V 60Hz	277768	277832	277896	109195
415V 50Hz 480V 60Hz	277769	277833	277897	–
24V 50Hz/60Hz	277770	277834	277898	109197
42V 50Hz/60Hz	277771	277835	277899	–
110V 50Hz/60Hz	277772	277836	277900	109199
220V 50Hz/60Hz	277773	277837	277901	109200
230V 50Hz/60Hz	277774	277838	277902	109201
Special voltages other than the already shown normal voltages ²⁾	See price list	See price list	See price list	See price list
...V 50Hz (24 – 600V)	277778 ⁸⁾	277842 ⁸⁾	277906 ⁸⁾	109205 ⁷⁾
...V 60Hz (24 – 600V)	277779 ⁸⁾	277843 ⁸⁾	277907 ⁸⁾	109206 ⁷⁾
DC	DILM40(...)	DILM50(...)	DILM65(...)	DILM72(...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list
RDC 24 ³⁾	277780	277844	277908	107671
RDC 60 ⁴⁾	277781	277845	277909	–
RDC 130 ⁵⁾	277782	277846	277910	–
RDC 240 ⁶⁾	277783	277847	277911	109209

Notes

- ¹⁾ To obtain the article number for ordering, read under selected part number and actuating voltage from the table.
devices with dual-voltage coils can be ordered under a single article no.
- ²⁾ With non-standard voltages the required actuating voltage from the defined range (...-...V) must be stated.
- ³⁾ 24 – 27 V DC
- ⁴⁾ 48 – 60 V DC
- ⁵⁾ 110 – 130 V DC
- ⁶⁾ 200 – 240 V DC
- ⁷⁾ Minimum order quantity 10 units

Contactors

Actuating voltages

DILM

AC	DILM80 (...)	DILM95 (...)	AC	DILM115 (...)	DILM150 (...)	DILM170 (...)	DILM185A/ 22(...)	DILM225A/ 22(...)
	Article no. ¹⁾	Article no. ¹⁾		Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	Standard voltages	See price list	See price list	See price list	See price list	See price list
24 V 50 Hz	235904	239467	RAC 24⁷⁾	239545	239585	107010	139534	139544
240V 50Hz	235910	239469	RAC 48⁸⁾	239546	239586	107011	139535	139545
42V 50Hz 48V 60Hz	239394	239476	RAC 120⁹⁾	239547	239587	107012	139536	139546
110V 50Hz 120V 60Hz	239399	239477	RAC 240¹⁰⁾	239548	239588	107013	139537	139547
190V 50Hz 220V 60Hz	239400	239478	RAC 440¹¹⁾	239549	239589	107014	139538	139548
220V 50Hz 240V 60Hz	239401	239479	RAC 500¹²⁾	239550	239590	107015	139539	139549
230V 50Hz 240V 60Hz	239402	239480	DC	DILM115 (...)	DILM150 (...)	DILM170 (...)	DILM185A/ 22(...)	DILM225A/ 22(...)
380V 50Hz 440V 60Hz	239403	239481		Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
400V 50Hz 440V 60Hz	239404	239482	Standard voltages	See price list	See price list	See price list	See price list	See price list
415V 50Hz 480V 60Hz	239405	239483	RDC 24³⁾	239555	239591	107016	139540	139550
24V 50Hz/60Hz	239406	239484	RDC 60⁴⁾	239560	239592	107017	139541	139551
42V 50Hz/60Hz	239407	239485	RDC 130⁵⁾	239567	239593	107018	139542	139552
110V 50Hz/60Hz	239408	239486	RDC 240⁶⁾	239572	239594	107019	139543	139553
220V 50Hz/60Hz	239409	239487	Notes	¹⁾ The article no. results from combining the part no. and the actuating voltage. Devices with dual-voltage coils must be ordered under a single article no. ²⁾ With non-standard voltages the required actuating voltage from the defined range (...-...V) must be stated. ³⁾ 24 - 27 V DC ⁴⁾ 48 - 60 V DC ⁵⁾ 110 - 130 V DC ⁶⁾ 200 - 240 V DC ⁷⁾ 24 V 50/60 Hz ⁸⁾ 42 - 48 V 50/60 Hz ⁹⁾ 100 - 120 V 50/60 Hz ¹⁰⁾ 190 - 240 V 50/60 Hz ¹¹⁾ 380 - 440 V 50/60 Hz ¹²⁾ 480 - 500 V 50/60 Hz ¹³⁾ Minimum order quantity 5 units				
230V 50Hz/60Hz	239410	239488						
Special voltages other than the already shown normal voltages ²⁾	See price list	See price list						
...V 50Hz (24 - 600V) ¹³⁾	239414	239504						
...V 60Hz (24 - 600V) ¹³⁾	239415	239509						
DC	DILM80 (...)	DILM95 (...)						
	Article no. ¹⁾	Article no. ¹⁾						
Standard voltages	See price list	See price list						
RDC 24³⁾	239416	239510						
RDC 60⁴⁾	239417	239511						
RDC 130⁵⁾	239418	239512						
RDC 240⁶⁾	239419	239513						

Contactors
Actuating voltages
DILM

AC	DILMC7-10 (...)	DILMC7-01 (...)	DILMC9-10 (...)	DILMC9-01 (...)	DILMC12-10 (...)	DILMC12-01 (...)	DILMC15-10 (...)	DILMC15-01 (...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list
24 V 50 Hz	277379	277411	277443	277475	277507	277539	293938	293933
110V 50Hz 120V 60Hz	277386	277418	277450	277482	277514	277546	293908	293943
230V 50Hz 240V 60Hz	277389	277421	277453	277485	277517	277549	293911	293946
24V 50Hz/60Hz	277393	277425	277457	277489	277521	277553	293915	293950
230V 50Hz/60Hz	277397	277429	277461	277493	277525	277557	293919	293954
Special voltages other than the already shown normal voltages ²⁾	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list
...V 50Hz (12 – 600V)⁶⁾	277401	277433	277465	277497	277529	277561	293923	293958
...V 60Hz (12 – 600V)⁶⁾	277402	277434	277466	277498	277530	277562	293924	293959
DC	DILMC7-10 (...)	DILMC7-01 (...)	DILMC9-10 (...)	DILMC9-01 (...)	DILMC12-10 (...)	DILMC12-01 (...)	DILMC15-10 (...)	DILMC15-01 (...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list
24V DC	277404	277436	277468	277500	277532	277564	293926	293961
110V DC	277407	277439	277471	277503	277535	277567	293929	293964
220V DC	277408	277440	277472	277504	277536	277568	293930	293965
Special voltages other than the already shown normal voltages ²⁾	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list
...VDC (12 – 250V)⁶⁾	277409	277441	277473	277505	277537	277569	293931	293966
AC	DILMC17-10 (...)	DILMC17-01(...)	DILMC25-10 (...)	DILMC25-01 (...)	DILMC32-10 (...)	DILMC32-01 (...)		
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾		
Standard voltages	See price list	See price list	See price list	See price list	See price list	See price list		
24 V 50 Hz	277570	277600	277630	277660	277690	277720		
110V 50Hz 120V 60Hz	277578	277608	277638	277668	277698	277728		
230V 50Hz 240V 60Hz	277581	277611	277641	277671	277701	277731		
24V 50Hz/60Hz	277585	277615	277645	277675	277705	277735		
220V 50Hz/60Hz	277588	277618	277648	277678	277708	277738		
230V 50Hz/60Hz	277589	277619	277649	277679	277709	277739		
Special voltages other than the already shown normal voltages ²⁾	See price list	See price list	See price list	See price list	See price list	See price list		
...V 50Hz (24 – 600V)⁶⁾	277593	277623	277653	277683	277713	277743		
...V 60Hz (24 – 600V)⁶⁾	277594	277624	277654	277684	277714	277744		
DC	DILMC17-10 (...)	DILMC17-01 (...)	DILMC25-10 (...)	DILMC25-01 (...)	DILMC32-10 (...)	DILMC32-01 (...)		
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾		
Standard voltages	See price list	See price list	See price list	See price list	See price list	See price list		
RDC 24³⁾	277595	277625	277655	277685	277715	277745		
RDC 130⁴⁾	277597	277627	277657	277687	277717	277747		
RDC 240⁵⁾	277598	277628	277658	277688	277718	277748		

Notes

- ¹⁾ The article no. results from combining the part no. and the actuating voltage. Devices with dual-voltage coils must be ordered under a single article no.
- ²⁾ With non-standard voltages the required actuating voltage from the defined range (...-...V) must be stated.
- ³⁾ 24 - 27 V DC
- ⁴⁾ 110 - 130 V DC
- ⁵⁾ 200 - 240 V DC
- ⁶⁾ Minimum order quantity 10 units

Contactors

Actuating voltages

DILMP20 ... DILMP200

AC	DILMP20 (...)	DILMP32-10	DILMP32-01	DILMP45-10	DILMP45-01	DILMP63 (...)	DILMP80 (...)	DILMP125 (...)	DILMP160 (...)	DILMP200 (...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list
240V 50Hz	–	109798	–	109827	–	109856	109885	–	–	–
110V 50Hz	276967	109790	118912	109819	118915	109848	109877	–	–	–
120V 60Hz										
230 V 50Hz	276970	109797	118911	109826	118914	109855	109884	–	–	–
240V 60Hz										
24V 50/60Hz	276974	109799	–	109828	–	109857	109886	–	–	–
230V 50/60Hz	276978	109796	–	109825	–	109883	109883	–	–	–
AC	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list
RAC 24⁴⁾	–	–	–	–	–	–	–	109904	109914	109924
RAC 120⁵⁾	–	–	–	–	–	–	–	109903	109913	109923
RAC 240⁶⁾	–	–	–	–	–	–	–	109905	109915	109925
AC	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Non-standard voltages ²⁾	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list
...V 50Hz (12 – 600V)³⁾	276982	109787	109787	109816	109816	109845	109874	–	–	–
...V 60Hz (12 – 600V)³⁾	276983	109788	109788	109817	109817	109846	109875	–	–	–
DC	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list
24V DC	276985	–	–	–	–	–	–	–	–	–
RDC 24⁷⁾	–	109811	118913	109840	118916	109869	109898	109910	109920	109930
DC	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Non-standard voltages ²⁾	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list
...V DC (12 – 250V)³⁾	276990	–	–	–	–	–	–	–	–	–

Notes

¹⁾ The article number is a combination of part no. and actuating voltage

²⁾ For non-standard voltages, state the actuating voltage selected from the range (...–...V) shown.

³⁾ Minimum order quantity: 10 units

⁴⁾ 24 V 50/60 Hz

⁵⁾ 100 – 120 V 50/60 Hz

⁶⁾ 190 – 240 V 50/60 Hz

⁷⁾ 24 – 27 V DC

Contactors

Actuating voltages
DILM...XSP...

AC	DILM32-XSP (...)	DILM65-XSP (...)	DILM95- XSP
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list
24V 50Hz	281130	281160	229984
240V 50Hz	281132	281162	229986
24V 60Hz	281134	281164	229988
115V 60Hz	281136	281166	229990
42V 50Hz 48V 60Hz	281137	281167	229994
110V 50Hz 120V 60Hz	281138	281168	230058
190V 50Hz 220V 60Hz	281139	281169	230059
220V 50Hz 240V 60Hz	281140	281170	230061
230V 50Hz 240V 60Hz	281141	281171	230062
380V 50Hz 440V 60Hz	281142	281172	230063
400V 50Hz 440V 60Hz	281143	281173	230064
415V 50Hz 480V 60Hz	281144	281174	230065
24V 50Hz/60Hz	281145	281175	230066
42V 50Hz/60Hz	281146	281176	230067
110V 50Hz/60Hz	281147	281177	230068
220V 50Hz/60Hz	281148	281178	230073
230V 50Hz/60Hz	281149	281179	230074
Special voltages other than the already shown normal-voltages ²⁾	See price list	See price list	See price list
...V 50Hz (24 – 600V)	281153 ¹³⁾	281183 ¹⁴⁾	230078 ¹⁴⁾
...V 60Hz (24 – 600V)	281154 ¹³⁾	281184 ¹⁴⁾	230079 ¹⁴⁾
DC	DILM32-XSP (...)	DILM65-XSP (...)	DILM95- XSP
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list
RDC 24³⁾	281155	281185	230080
RDC 60⁴⁾	281156	281186	230081
RDC 130⁵⁾	281157	281187	230082
RDC 240⁶⁾	281158	281188	230107

AC	DILM150-XSP (...)	DILM225A-XSP (...)
	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list
RAC 24⁷⁾	230109	139562
RAC 48⁸⁾	230110	139563
RAC 120⁹⁾	230111	139564
RAC 240¹⁰⁾	230112	139565
RAC 440¹¹⁾	230113	139566
RAC 500¹²⁾	230114	139567
DC	DILM150-XSP (...)	DILM225A-XSP (...)
	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list
RDC 24³⁾	230115	139568
RDC 60⁴⁾	230116	139569
RDC 130⁵⁾	230117	139570
RDC 240⁶⁾	230122	139571

Notes

- 1) To obtain the article number for ordering, read under selected part number and actuating voltage from the table.
Devices with dual-voltage coils are to be ordered under a single article number.
- 2) With non-standard voltages the required actuating voltage from the defined range (...-...V) must be stated.
- 3) 24 – 27 V DC
- 4) 48 – 60 V DC
- 5) 110 – 130 V DC
- 6) 200 – 240 V DC
- 7) 24 V 50/60 Hz
- 8) 42 – 48 V 50/60 Hz
- 9) 100 – 120 V 50/60 Hz
- 10) 190 – 240 V 50/60 Hz
- 11) 380 – 440 V 50/60 Hz
- 12) 480 – 500 V 50/60 Hz
- 13) Minimum order quantity 10 units
- 14) Minimum order quantity 5 units

Contactors for capacitors, contactor

Actuating voltages

DILK, DILMF

AC	DILK12-11 (...)	DILK20-11 (...)	DILK25-11 (...)	DILK33-10 (...)	DILK50-10 (...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list
110V 50Hz, 120V 60Hz	293985	294007	294029	294051	294073
190V 50Hz, 220V 60Hz	293986	294008	294030	294052	294074
230V 50Hz, 240V 60Hz	293988	294010	294032	294054	294076
400V 50Hz, 440V 60Hz	293990	294012	294034	294056	294078
Special voltages other than the already shown normal voltages ²⁾	See price list	See price list	See price list		
...V 50Hz (24 – 600V) ³⁾	293997	294019	294041	–	–
...V 60Hz (24 – 600V) ³⁾	293998	294020	294042	–	–

Notes

¹⁾ The article no. results from combining the part no. and the actuating voltage.

Devices with dual-voltage coils must be ordered under a single article no.

²⁾ With non-standard voltages the required actuating voltage from the defined range (...–...V) must be stated.

³⁾ Minimum order quantity 10 units

Contactors up to 150 A with electronic actuation							
AC	DILMF8-10 (...)	DILMF8-01 (...)	DILMF11-10 (...)	DILMF11-01 (...)	DILMF14-10 (...)	DILMF14-01 (...)	DILMF17-10 (...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list	See price list	See price list
RAC 24 ¹⁾	104410	104414	104418	104422	104426	104430	104434
RAC 48 ³⁾	104411	104415	104419	104423	104427	104431	104435
RAC 120 ⁴⁾	104412	104416	104420	104424	104428	104432	104436
RAC 240 ⁵⁾	104413	104417	104421	104425	104429	104433	104437

AC	DILMF17-01 (...)	DILMF25-10 (...)	DILMF25-01 (...)	DILMF32-10 (...)	DILMF32-01 (...)	DILMF40 (...)	DILMF50 (...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list	See price list	See price list
RAC 24 ²⁾	104438	104442	104446	104450	104454	104458	104462
RAC 48 ³⁾	104439	104443	104447	104451	104455	104459	104463
RAC 120 ⁴⁾	104440	104444	104448	104452	104456	104460	104464
RAC 240 ⁵⁾	104441	104445	104449	104453	104457	104461	104465

AC	DILMF65 (...)	DILMF80 (...)	DILMF95 (...)	DILMF115 (...)	DILMF150 (...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Standard voltages	See price list	See price list	See price list	See price list	See price list
RAC 24 ²⁾	104466	104470	104474	104478	104482
RAC 48 ³⁾	104467	104471	104475	104479	104483
RAC 120 ⁴⁾	104468	104472	104476	104480	104484
RAC 240 ⁵⁾	104469	104473	104477	104481	104485

Notes

¹⁾ The article no. results from combining the part no. and the actuating voltage.

²⁾ 24 - 24 V

³⁾ 42 - 48

⁴⁾ 100 - 120

⁵⁾ 190 - 240

Complete comfort devices	DILM250 /22(...)	DILM300A /22(...)	DILM400 /22(...)	DILM500 /22(...)	DILM580 /22(...)	DILM650 /22(...)	DILM750 /22(...)	DILM820 /22(...)	DILM1000 /22(...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Voltage variants	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list	See price list
RDC 48 ²⁾	208199	139554	208207	208211	–	–	–	–	–
RA 110 ³⁾	208200	139555	208208	208212	208215	208218	208221	208224	–
RA 250 ⁴⁾	208201	139556	208209	208213	208216	208219	208222	208225	267214
RAC 500 ^{5) 6)}	208202	139557	208210	208214	208217	208220	208223	208226	–

Complete units Standard	DILM250 -S/22(...)	DILM300A -S/22(...)	DILM400 -S/22(...)	DILM500 -S/22(...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Voltage variants	See price list	See price list	See price list	See price list
110-120V 50/60Hz	274189	139558	274195	274198
220-240V 50/60Hz	274190	139559	274196	274199

Electronic module, incl. coil, for comfort model	DILM250-XSP/E(...)	DILM500-XSP/E(...)	DILM1000-XSP/E(...)
	Article no. ¹⁾	Article no. ¹⁾	Article no. ¹⁾
Voltage variants	See price list	See price list	See price list
RDC 48 ²⁾	208250	208254	–
RA 110 ³⁾	208251	208255	289146
RA 250 ⁴⁾	208252	208256	289145
RAC 500 ^{5) 6)}	208253	208257	289147

Electronic module, incl. coil, for standard model	DILM250-S-XSP/E(...)	DILM500-S-XSP/E(...)
	Article no. ¹⁾	Article no. ¹⁾
Voltage variants	See price list	See price list
110-120V 50/60Hz	274201	274204
220-240V 50/60Hz	274202	274205

Notes

- ¹⁾ The article no. results from combining the part no. and the voltage variant.
- ²⁾ 24 – 48 V DC
- ³⁾ 48 – 110 V 40 – 60 Hz/48 – 110 V DC
- ⁴⁾ 110 – 250 V 40 – 60 Hz/110 – 250 V DC
- ⁵⁾ 250 – 500 V 40 – 60 Hz
- ⁶⁾ DC on request

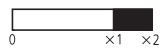
Contactors

Contact travel diagrams
DILM, DILA, DILE, DILH

Engineering

The diagrams show the closing and opening travel of the contacts at no load.

N/O



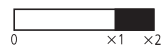
NC



		x1	x2
DILE AC	N/O	1.9	2.8
	NC	0.95	2.8
...DILE	N/O	1.9	2.8
	NC	0.9	2.8
...DDILE	NO early-make	1.06	2.9
	Late-break N/C contact	1.86	2.9
	N/O	1.9	2.8
	NC	0.9	2.8
DILE DC	N/O	1.9	2.85
	NC	0.95	2.85
DILE...	N/O	1.9	2.8
	NC	0.9	2.8
...DDILE	NO early-make	1.06	2.9
	Late-break N/C contact	1.86	2.9
	N/O	1.9	2.8
	NC	0.9	2.8
DILA-AC	N/O	3.3	4.5
	NC	1.0	4.5
DILA-XHI	N/O	3.2	4.5
	NC	1.6	4.5
DILA-XHIV	NO early-make	2.0	4.5
	Late-break N/C contact	2.8	4.5
	N/O	3.2	4.5
	NC	1.6	4.5
DILA-DC	N/O	2.1	2.9
	NC	0.7	2.9
DILA-XHI	N/O	2.3	2.9
	NC	0.7	2.9
DILA-XHIV	NO early-make	1.1	2.9
	Late-break N/C contact	1.9	2.9
	N/O	2.3	2.9
	NC	0.7	2.9
DILM7/9 AC	N/O	3.3	4.5
	NC	1.0	4.5
DILM32-XHI, DILA-XHI	N/O	3.2	4.5
	NC	1.6	4.5
DILA-XHIV	NO early-make	2.0	4.5
	Late-break N/C contact	2.8	4.5
	N/O	3.2	4.5
	NC	1.6	4.5
DILM7/9 DC	N/O	2.1	2.9
	NC	0.7	2.9
DILM32-XHI, DILA-XHI	N/O	2.3	2.9
	NC	0.7	2.9
DILA-XHIV	NO early-make	1.1	2.9
	Late-break N/C contact	1.9	2.9
	N/O	2.3	2.9
	NC	0.7	2.9
DILM12/15/P20 AC	N/O	3.3	4.5
	NC	1.0	4.5
DILM32-XHI, DILA-XHI	N/O	3.2	4.5
	NC	1.6	4.5
DILA-XHIV	NO early-make	2.0	4.5
	Late-break N/C contact	2.8	4.5
	N/O	3.2	4.5
	NC	1.6	4.5
DILM12/15/P20 DC	N/O	3.3	4.4
	NC	1.0	4.4
DILM32-XHI, DILA-XHI	N/O	3.2	4.4
	NC	1.6	4.4

The diagrams show the closing and opening travel of the contacts at no load.

N/O



NC



		x1	x2
DILA-XHIV	NO early-make	2.0	4.4
	Late-break N/C contact	2.8	4.4
	N/O	3.2	4.4
	NC	1.6	4.4
DILM17/25/32/P32/P45	N/O	4.0	6.0
	Auxiliary N/C	1.8	6.0
	Auxiliary N/O	3.2	6.0
DILM32-XHI, DILA-XHI	N/O	3.2	6.0
	NC	1.6	6.0
DILA-XHIV	NO early-make	2.0	6.0
	Late-break N/C contact	2.8	6.0
	N/O	3.2	6.0
	NC	1.6	6.0
DILM40/50/65/P63/P80	N/O	5.1	7.5
DILM150-XHI	N/O	5.7	7.5
	NC	3.9	7.5
DILM150-XHIV	NO early-make	3.8	7.5
	Late-break N/C contact	5.4	7.5
	N/O	5.7	7.5
	NC	3.9	7.5
DILM1000-XHI	N/O	5.5	7.5
	NC	3.6	7.5
DILM1000-XHIV	NO early-make	4.1	7.5
	Late-break N/C contact	5.0	7.5
DILM80/95/115/150/170/P125/P160/P200	N/O	8.0	11
DILM150-XHI	N/O	9.2	11
	NC	7.4	11
DILM150-XHIV	NO early-make	7.3	11
	Late-break N/C contact	8.9	11
	N/O	9.2	11
	NC	7.4	11
DILM1000-XHI	N/O	9.0	11
	NC	7.1	11
DILM1000-XHIV	NO early-make	7.6	11
	Late-break N/C contact	8.5	11
DILM185A/225A	N/O	10.0	13.0
DILM1000-XHI	N/O	10.0	13.0
	NC	8.1	13.0
DILM1000-XHIV	NO early-make	8.4	13.0
	Late-break N/C contact	9.5	13.0
DILM250/300A	N/O	10.1	13.1
DILM820-XHI	N/O	10.3	13.1
	NC	8.4	13.1
DILM820-XHIV	NO early-make	8.7	13.1
	Late-break N/C contact	9.8	13.1
DILM400/500/570	N/O	8.9	13.1
DILM820-XHI	N/O	10.3	13.1
	NC	8.4	13.1
DILM820-XHIV	NO early-make	8.7	13.1
	Late-break N/C contact	9.8	13.1
DILM580/650/750/820	N/O	2.0	4.1
DILM820-XHI	N/O	7.4	10.5
	NC	5.5	10.5
DILM820-XHIV	NO early-make	6.0	10.5
	Late-break N/C contact	6.8	10.5
DILM1000/1600, DILH1400/2000/2200/2600	N/O	2.0	4.1
DILM820-XHI	N/O	7.4	10.5
	NC	5.5	10.5
DILM820-XHIV	NO early-make	6.0	10.5
	Late-break N/C contact	6.8	10.5

Components	Contactor selection				
	With top mounting auxiliary contacts	With side mounting auxiliary contacts	With overload relay	With parallel connector	Insulated enclosures
Part no.					
DILE...(-G)(-C)	—	—	—	—	CI-K1-95-TS
DILE...(-G)(-C)	•	—	—	—	CI-K2-145-TS
DILE...(-G)	•	—	•	—	CI-K2-145-AD
DILE...(-G)	—	—	—	•	CI-K2-100-TS
DILE...(-G)	•	—	—	•	CI-K2-145-TS
DILM7 to DILM15	•	—	—	—	CI-K2-145-TS
DILM7 to DILM15	•	—	•	—	CI-K3-160-TS
DILM17 to DILM32	—	—	—	—	CI-K2-145-TS
DILM17 to DILM32	•	—	•	—	CI23E-150
DILM40 to DILM65	—	•	—	—	CI-K3-160-TS
DILM40 to DILM65	•	•	•	—	CI43E-150
DILM80 to DILM170	•	•	—	—	CI43E-200
DILM80 to DILM170	•	•	•	—	CI44E-200
DILM185A	—	•	—	—	CI48-250
DILM225A	—	•	—	—	CI48-250
DILM250	—	•	—	—	CI48-250
DILM300A	—	•	—	—	CI48-250
DILM400	—	•	—	—	CI48-250
DILM500	—	•	—	—	CI48-250
DILM580	—	•	—	—	CI48-250
DILM650	—	•	—	—	CI48-250
DILM750	—	•	—	—	CI48-250
DILM820	—	•	—	—	CI48-250
DIULE...	•	—	—	—	CI-K3-125-TS
DIULE...	•	—	•	—	CI-K3-125-TS
DIULM7 to DIULM12	•	—	—	—	CI-K4-160-TS
DIULM17 to DIULM32	•	—	—	—	CI23E-150
DIULM40 to DIULM65	•	—	—	—	CI43E-200
SDAINLEM...	•	—	—	—	CI-K5-125-TS CI-K5-125-M
SDAINLM12 to SDAINLM22	•	—	—	—	CI-K5-160-TS
SDAINLM30 to SDAINLM65	•	—	—	—	CI23E-150
SDAINLM70 to SDAINLM115	•	—	—	—	CI43E-200

Notes	CI-K small enclosure Terminal for CI-K enclosure CI enclosure	Insulated PE, N or PEN terminal for enclosure CI-K
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Contactors

UL/CSA-approved rating data

DILE, DILA, DILM

Maximum alternating current-motor rating Single-phase		3-phase				GENERAL USE Maximum motor-rated current I_{th} Open/enclosed A	Contactors Part no.	NEMA size
		200 V 208 V HP	230 V 240 V HP	460 V 480 V HP	575 V 600 V HP			
115 V 120 V HP	230 V 240 V HP	2	3	5	5	15/13.5	DILEM(4)	00
1/4	1	1 1/2	2	3	5	20	DILM7-...(...)	00
1/2	1 1/2	3	3	5	7 1/2	20	DILM9-...(...)	00
1	2	3	3	10	10	20	DILM12-...(...)	0
1	3		5	10	10	20	DILM15-...(...)	0
2	3	5	7 1/2	10	15	35	DILM17-...(...)	0
2	5	7 1/2	7 1/2	15	20	35	DILM25-...(...)	1
3	5	10	10	20	25	40	DILM32-...(...), DILM38-...(...)	1
3	7 1/2	10	15	30	40	55	DILM40(...)	2
3	10	15	20	40	50	65	DILM50(...)	2
5	15	20	25	40	60	80	DILM65(...), DILM70(...)	2
7 1/2	15	25	30	60	75	125	DILM80(...)	3
7 1/2	15	25	40	75	100	125	DILM95(...)	3
10	25	40	50	100	125	160	DILM115(...)	4
15	30	40	60	125	125	160	DILM150(...), DILM170(...)	4
-	-	50	60	125	150	225	DILM185(...)	4
-	-	60	75	150	200	250	DILM225(...)	4
-	-	75	100	200	250	350	DILM250(...)	5
-	-	100	125	250	300	350	DILM300(...)	5
-	-	125	150	300	400	450	DILM400(...)	5
-	-	150	200	400	500	550	DILM500(...)	6
-	-	200	200	400	600	630	DILM580(...)	6
-	-	200	250	500	600	700	DILM650(...)	6
-	-	250	300	600	700	800	DILM750(...)	6
-	-	290	350	700	860	850	DILM820(...)	6
-	-	350	400	800	1000	1000	DILM1000(...)	7
-	-	560	640	1200	1300	1600	DILM1600(...)	8

Further approvals

- Elevator control
- Refrigeration control
- Resistance air heating
- Incandescent lamps
- Electrical discharge lamps
- Capacitive switching

Part no.	Pilot Duty		General Use			
	AC	DC	AC V	A	DC V	A
DIL(E)EM-10(-01) DILER-40(31)(22) ...(D)DILE	A600	P300	600	10	250	0.5
DILM7-10(-01) To DILM32-10(-01) DILA...	A600	P300	600	15	250	1
DILA-XHI... DILM32-XHI...	A600	P300	600	15	250	1
DILM...-XHI11-SI DILM...-XHI11-SA DILM...-XHI11V-SI	A600	P600	600	10	-	-

	DIL	M7	M9	M12	M15	M17	M25 MP32 MP45	M32	M40 MP63	M50 MP80	M65 M72	M80 MP125	M95 MP160	M115	M150 M170 MP200
Electrical discharge lamps (ballast)															
480V 60Hz 3phase, 277V 60Hz 1phase	A	12	18	20	20	27	35	40	63	79	88	85	100	136	160
600V 60Hz 3phase, 347V 60Hz 1phase	A	12	18	20	20	27	35	40	63	79	88	85	100	136	160
Incandescent lamps (Tungsten)															
480V 60Hz 3phase, 277V 60Hz 1phase	A	8	11	14	14	23	32	40	55	74	88	85	100	136	160
600V 60Hz 3phase, 347V 60Hz 1phase	A	8	11	14	14	23	32	40	55	74	88	85	100	136	160
Resistance air heating															
480V60Hz 3phase, 277V60Hz 1phase	A	12	18	20	20	27	35	40	63	79	88	94	110	136	160
600V60Hz 3phase, 347V60Hz 1phase	A	12	18	20	20	27	35	40	63	79	88	94	110	136	160
Refrigeration control (CSA only)															
LRA 480V 60Hz 3phase	A	60	60	60	60	240	240	240	270	270	270	540	540	540	540
LRA 600V 60Hz 3phase	A	60	60	60	60	180	180	180	270	270	270	420	420	540	540
480V 60Hz 3phase	A	6	7.5	10	10	23	32	40	26	36	45	63	70	84	90
600V 60Hz 3phase	A	6	7.5	10	10	17	24	30	26	36	45	63	70	84	90
Elevator control															
200V 60Hz 3phase	HP (A)	¾ (3.7)	2 (7.8)	2 (7.8)	2 (7.8)	3 (11)	3 (11)	7½ (25.3)	7½ (25.3)	10 (32.2)	10 (32.2)	20 (62.1)	20 (62.1)	30 (92)	30 (92)
240V 60Hz 3phase	HP (A)	1½ (6.0)	2 (6.8)	2 (6.8)	3 (9.6)	3 (9.6)	5 (15.2)	7½ (22)	10 (28)	15 (42)	15 (42)	25 (68)	30 (80)	40 (104)	40 (104)
480V 60Hz 3phase	HP (A)	2 (3.4)	3 (4.8)	7½ (11)	7½ (11)	7½ (11)	10 (14)	20 (27)	25 (34)	30 (40)	30 (40)	50 (65)	60 (77)	75 (96)	75 (96)
600V 60Hz 3phase	HP (A)	3 (3.9)	5 (6.1)	7½ (9.6)	7½ (9.6)	10 (11)	15 (17)	20 (22)	30 (32)	40 (41)	40 (41)	60 (62)	75 (77)	100 (99)	100 (99)

	DIL	K12	K20	K25	K33	K50
Capacitor Switching						
240V 60Hz 3phase	A	18	28	36	48	72
480V 60Hz 3phase	A	18	28	36	48	72
600V 60Hz 3phase	A	14.4	28	38.4	48	72
240V 60Hz 3phase	kvar	7.5	12	15	20	30
480V 60Hz 3phase	kvar	15	20	30	40	60
600V 60Hz 3phase	kvar	15	30	40	50	75

Contactors

UL/CSA Short circuit current rating

DILM

Contactor	Basic Rating			480 V High Fault				600 V High Fault			
	kA	Max. fuse	Max. CB	kA	Max. fuse	kA	Max. CB	kA	Max. fuse	kA	Max. CB
		A	A		A		A		A		A
DILM7-...(…)	5	45	60	100	20 Class J	-	Fuse only	30	25	-	Fuse only
DILM9-...(…)	5	45	60	100	20 Class J	-	Fuse only	30	25	-	Fuse only
DILM12-...(…)	5	45	60	100	20 Class J	-	Fuse only	30	25	-	Fuse only
DILM15-...(…)	5	45	60	100	20 Class J	-	Fuse only	30	25	-	Fuse only
DILM17-...(…)	5	125	125	100	70 Class J	10	50	10	125	10	50
DILM25-...(…)	5	125	125	100	100 Class J	10	50	10	125	10	50
DILM32-...(…)	5	125	125	100	125 Class J	10	50	10	125	10	50
DILM38-...(…)	5	125	125	100	125 Class J	10	50	10	125	10	50
DILM40(…)	10	250	250	100	150 Class J	65	100	30	250	30	250
DILM50(…)	10	250	250	100	150 Class J	65	100	30	250	30	250
DILM65(…)	10	250	250	100	150 Class J	65	100	30	250	30	250
DILM72(…)	10	250	250	100	150 Class J	65	100	30	250	30	250
DILM80(…)	10	600	600	100	300 Class J	65	250	30	300	30	350
DILM95(…)	10	600	600	100	300 Class J	65	250	30	300	30	350
DILM115(…)	10	600	600	100	300 Class J	65	250	30	300	30	350
DILM150(…)	10	600	600	100	300 Class J	65	250	30	300	30	350
DILM170(…)	10	600	600	100	300 Class J	65	250	30	300	30	350
DILM185(…)	18	700	600	-	CB only	65	250	-	-	-	-
DILM225(…)	18	700	600	-	CB only	65	250	-	-	-	-
DILM250(…)	18	700	600	-	CB only	65	250	-	-	-	-
DILM300(…)	30	800	600	-	CB only	42	600	30	800	30	600
DILM400(…)	30	800	600	-	CB only	42	600	30	800	30	600
DILM500(…)	30	800	600	-	CB only	42	600	30	800	30	600
DILM570(…)	30	800	600	-	CB only	42	600	30	800	30	600
DILM580(…)	30	2000	1200	85	2000	85	1200	85	2000	85	1200
DILM650(…)	30	2000	1200	85	2000	85	1200	85	2000	85	1200
DILM750(…)	42	2000	1200	85	2000	85	1200	85	2000	85	1200
DILM820(…)	42	2000	1200	85	2000	85	1200	85	2000	85	1200
DILM1000(…)	85	2000	1200	85	2000	85	1200	85	2000	85	1200
DILM1600(…)	85	2000	-	85	2000	-	-	85	2000	85	-

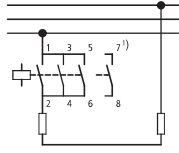
Contactors

Contactors for resistive load

DILM, DILEM

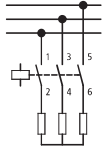
Rating data

Single-phase rating AC-1



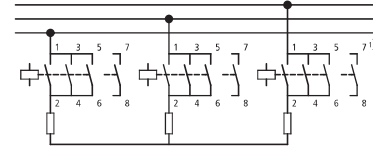
Voltage in V			Max. upstream fuse gG/gL	Rated operational current $I_e = I_{th}$ or I_{the}
220	380	660		
230	400	690		
240	440			
kW	kW	kW	A	A

Three-phase rating AC-1



Voltage in V			Max. upstream fuse gG/gL	Rated operational current $I_e = I_{th}$ or I_{the}
220	380	660		
230	400	690		
240	440			
kW	kW	kW	A	A

Three-phase rating AC-1



Voltage in V			Max. upstream fuse gG/gL	Rated operational current $I_e = I_{th}$ or I_{the}
220	380	660		
230	400	690		
240	440			
kW	kW	kW	A	A

Open version

10	18	31	50	50
10	18	31	50	50
12	21	37	63	60
10	18	31	—	50
13	22	38	—	60
18	32	55	—	88
21	36	63	—	100
26	45	78	—	125
34	59	102	—	163
42	72	125	—	200
47	81	141	—	225
57	99	172	—	275
68	117	204	—	325
84	144	251	—	400
101	175	317	—	460
144	248	431	800	688
165	284	494	800	788
172	297	516	1000	825
183	316	548	1000	875
261	451	784	1250	1250
366	632	1097	—	1750
418	722	1254	—	2000
444	767	1332	—	2125
470	812	1411	—	2250
523	903	1568	—	2500
732	1264	2195	—	3500
1045	1805	3135	—	5000
1150	1985	3449	—	5500
1358	2346	4075	—	6500

7	13	20	20	20
7	13	20	20	20
—	—	—	—	—
7	13	22	—	20
—	—	—	—	—
13	22	38	—	35
14	25	43	—	40
18	31	54	—	50
24	41	71	—	65
29	50	87	—	80
33	56	98	—	90
40	69	119	—	110
47	81	141	—	130
58	100	174	—	160
70	120	220	—	185
100	172	299	315	275
114	197	342	315	315
120	206	357	400	330
126	219	380	400	350
181	313	543	500	500
253	438	760	800	700
290	500	869	800	800
308	531	923	1000	850
326	563	977	1000	900
362	625	1086	1000	1000
507	875	1520	—	1400
724	1251	2172	—	2000
796	1376	2389	—	2200
941	1626	2827	—	2600

18	31	54	50	50
18	31	54	50	50
21	37	65	63	60
18	31	54	—	50
22	38	65	—	60
32	55	95	—	88
36	63	109	—	100
45	78	136	—	125
59	102	176	—	163
72	125	217	—	200
81	141	244	—	225
100	172	299	—	275
118	203	353	—	325
145	250	434	—	400
175	302	549	—	460
262	453	786	—	688
300	519	900	—	788
333	576	1000	—	875
381	658	1143	—	1000
476	825	1429	—	1250
667	1152	2000	—	1750
762	1316	2286	—	2000
810	1400	2429	—	2125
857	1480	2572	—	2250
953	1646	2858	—	2500
1334	2300	4000	—	3500
1905	3290	5716	—	5000
2095	3619	6288	—	5500
2476	4277	7430	—	6500

Notes

¹⁾ Contact 7 – 8 only with DILEM4(-G), DILMP20...

Part no.	Ordering data	Required accessories: Paralleling links	Notes
AC operated	Page	Part no.	
DILEM-10(...)	→ 5/4	P1DILEM	Accessories Auxiliary contact modules Set of paralleling links Enclosure Accessories
DILEM-01(...)	→ 5/4	P1DILEM	
DILEM4(...)	→ 5/4	P1DILEM	
DILM7-...(...)	→ 5/18	DILM12-XP1	
DILMP20(...)	→ 5/36	DILM12-XP1	
DILM17-...(...)	→ 5/18	DILM32-XP1	
DILM25-...(...)	→ 5/18	DILM32-XP1	
DILM40(...)	→ 5/20	DILM65-XP1	
DILM50(...)	→ 5/20	DILM65-XP1	
DILM65(...)	→ 5/20	DILM65-XP1	
DILM80(...)	→ 5/20	DILM150-XP1	
DILM95(...)	→ 5/20	DILM150-XP1	
DILM115(...)	→ 5/20	DILM150-XP1	
DILM150(...)	→ 5/20	DILM150-XP1	
DILM170(...)	→ 5/20	DILM150-KP1	
DILM185A(...)	→ 5/32	DILM185-XP1	
DILM225A(...)	→ 5/32	DILM185-XP1	
DILM250(...)	→ 5/32	-	
DILM300A(...)	→ 5/32	-	
DILM400(...)	→ 5/32	-	
DILM500(...)	→ 5/32	-	
DILM580(...)	→ 5/32	-	
DILM650(...)	→ 5/32	-	
DILM750(...)	→ 5/32	-	
DILM820(...)	→ 5/32	-	
DILH1400(...)	→ 5/34	-	
DILH2000(...)	→ 5/34	-	
DILH2200(...)	→ 5/34	-	
DILH2600(...)	→ 5/34	-	

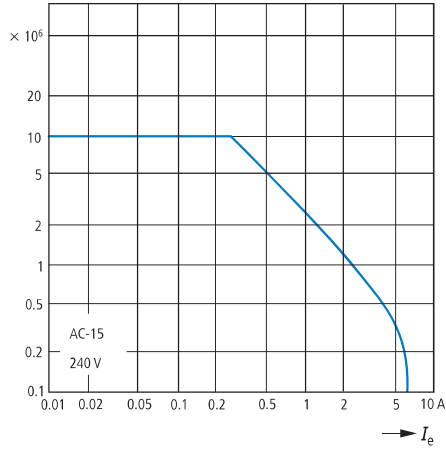
Mini contactor relays, contactor relays

Electrical lifespan

DILER, DILA

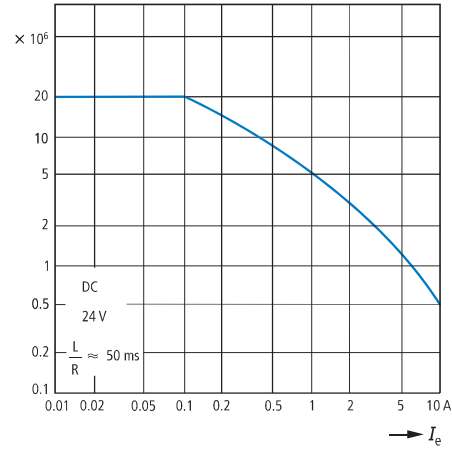
DILA (AC-15)

Component lifespan (operations)
 I_e = Rated operational current



DILA DC¹⁾

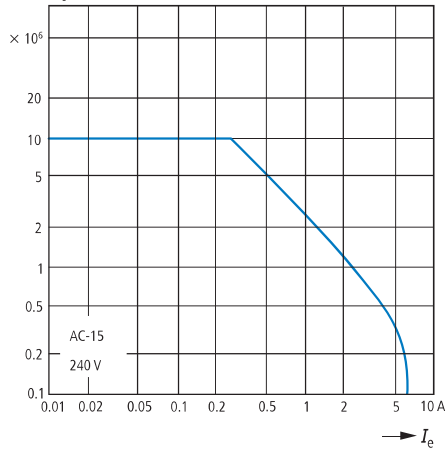
Component lifespan (operations)
 I_e = Rated operational current



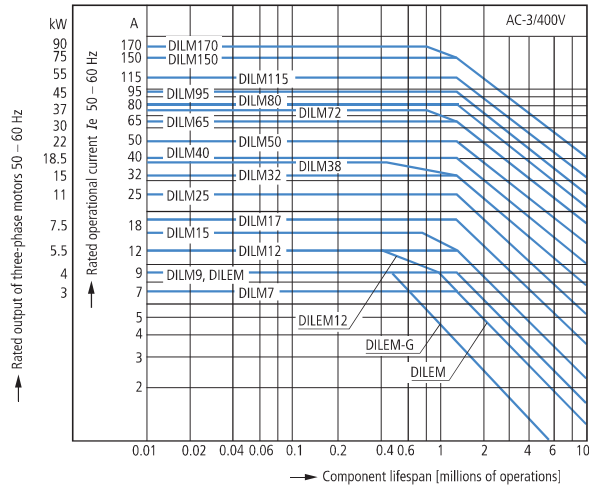
¹⁾ Three contacts in series

DILER (AC-15)

Component lifespan (operations)
 I_e = Rated operational current



Normal switching duty



Normal AC induction motor

Operating characteristics

Make: from stop

Break: during run

Electrical characteristics:

Make: up to 6 X rated motor current

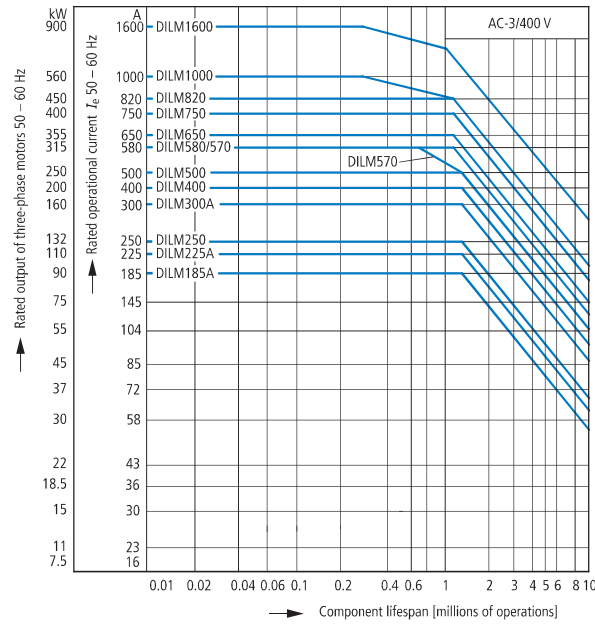
Break: 1 X rated motor current

Utilization category

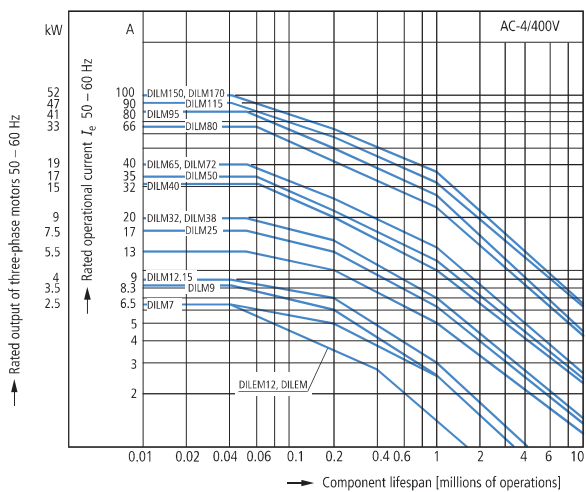
100 % AC-3

Typical applications:

- | | | |
|--|-----------------|-----------------------|
| Compressors | Lifts | Mixers |
| Pumps | Escalators | Agitators |
| Fan | Conveyor belts | Centrifuges |
| Hinged flaps | Bucket-elevator | Air conditioning sys- |
| General drives for manufacturing and processing machines | | |



Extreme switching duty



Normal AC induction motor

Operating characteristics

Inching, plugging, reversing

Electrical characteristics:

Make: up to 6 X rated motor current

Break: 6 X rated motor current

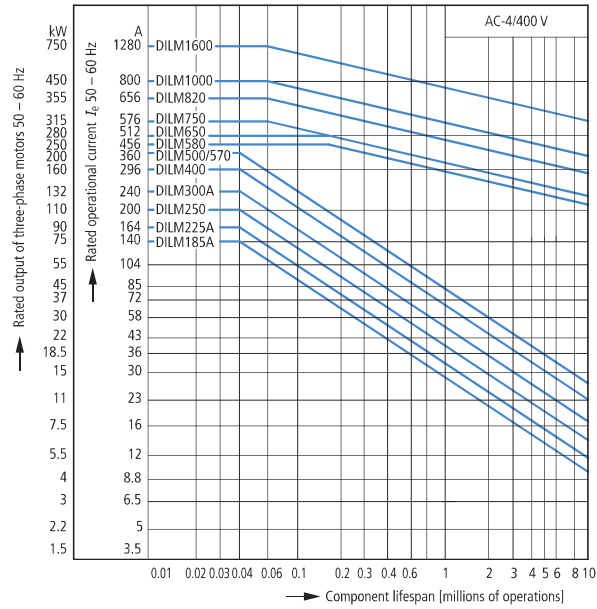
Utilization category

100 % AC-4

Typical applications:

- | | | |
|---|--------------|-------------|
| Printing machines | Wire-drawing | Centrifuges |
| Special drives on manufacturing and processing machines | | |

Extreme switching duty



Normal AC induction motor

Operating characteristics

Inching, plugging, reversing

Electrical characteristics:

Make: up to 6 X rated motor current

Break: 6 X rated motor current

Utilization category

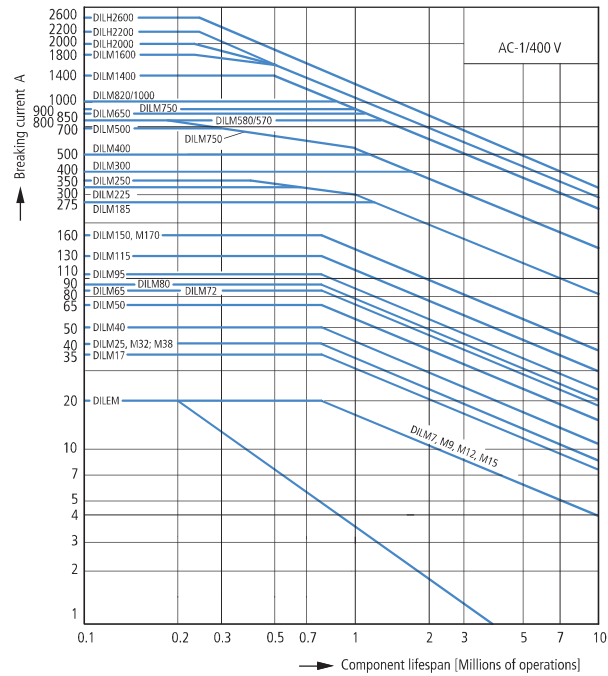
100 % AC-4

Typical applications:

Printing machines Wire-drawing machines Centrifuges

Special drives on manufacturing and processing machines

Switching conditions for 3 pole, non-motor loads



Operating characteristics

Non inductive and slightly inductive loads

Electrical characteristics:

Make: 1 X rated operational current

Break: 1 X rated operational current

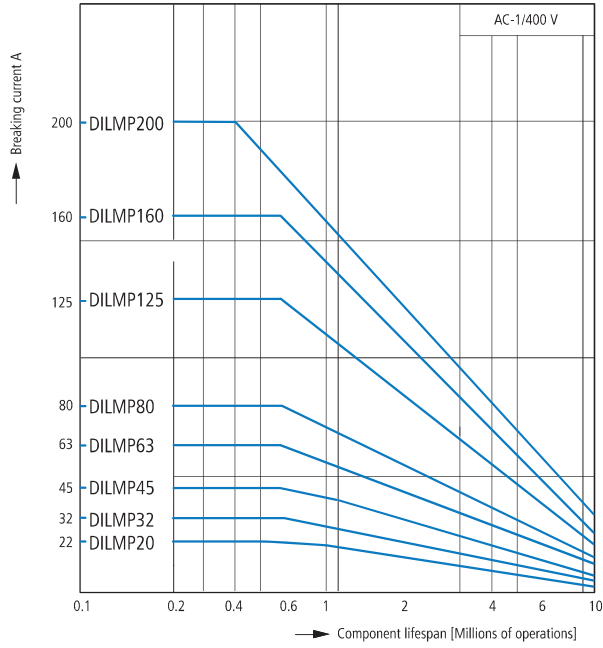
Utilization category

100 % AC-1

Typical applications:

Electric heat

Switching conditions for 4 pole, non-motor loads



- Operating characteristics
 - Non inductive and slightly inductive loads
- Electrical characteristics:
 - Make: 1 X rated operational current
 - Break: 1 X rated operational current
- Utilization category
 - 100 % AC-1
- Typical applications:
 - Electric heat

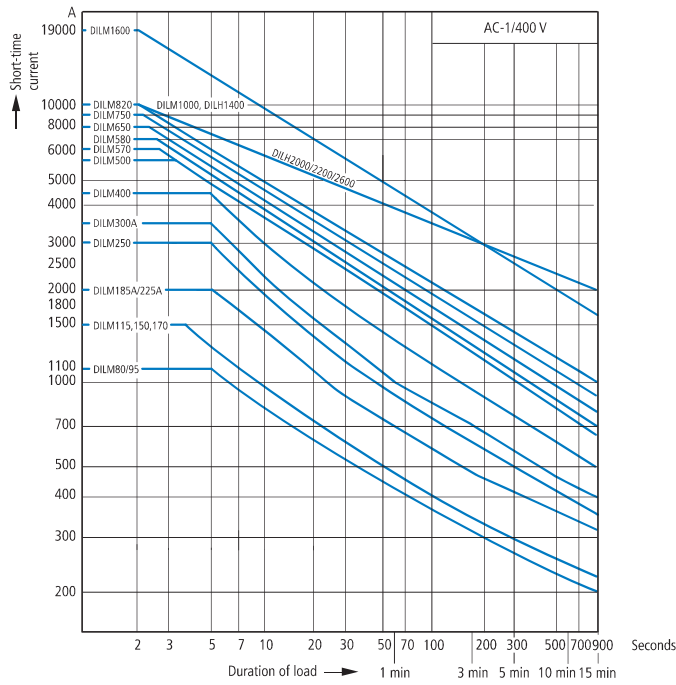
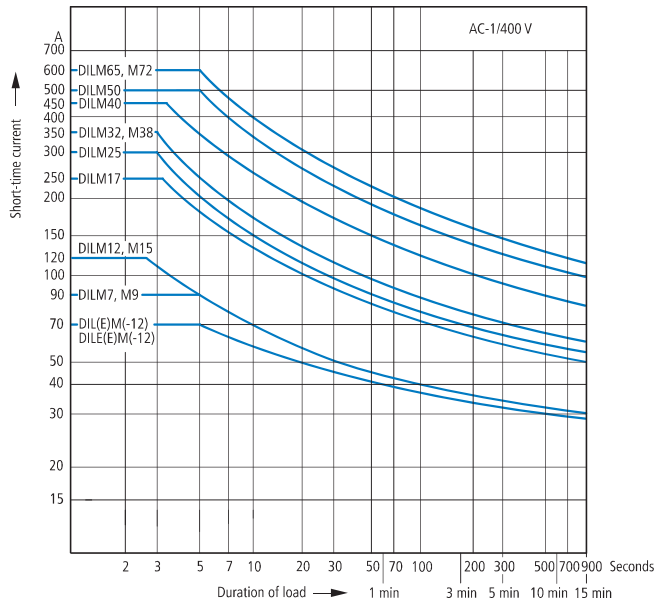
Contactors

Short-time loading

DILM, DLH

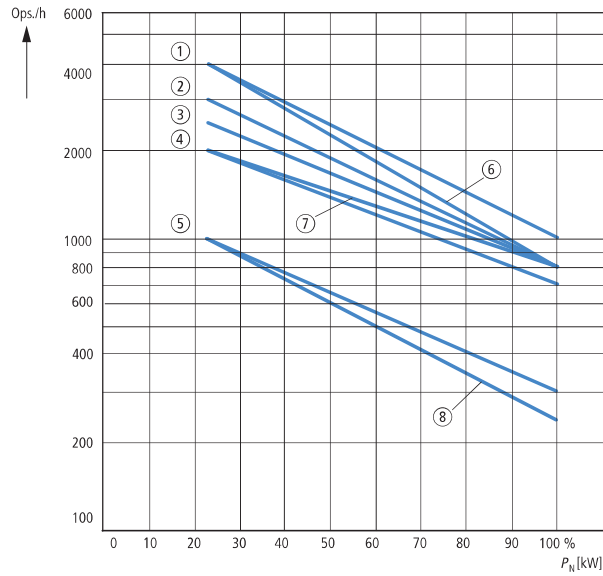
Short-time loading 3 pole

Time interval between two loads: 15 minutes



Determination of the maximum operating frequency dependent on the rating and utilization category (recommended values) for 400 V

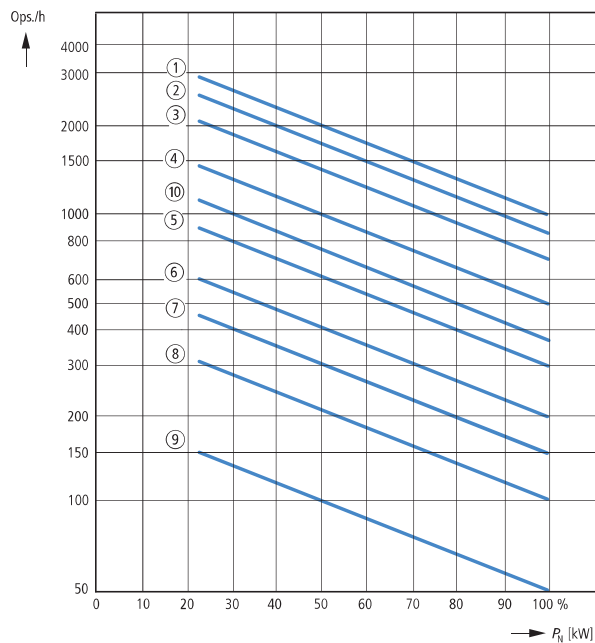
P_N = max. rated motor output (kW) of respective contactor according to
S/h = max. operation per hour



Part no.	Characteristic AC-1	AC-3	AC-2 AC-4
DILE(E)M(-12)	7	6	8
DILM7, 9, 12, 15	3	1	5
DILM17, 25, 32, 38	3	2	5
DILM40, 50, 65, 72	3	2	5
DILM80, 95, 115, 150, 170	3	4	5

Determination of the maximum operating frequency dependent on the rating and utilization category (recommended values)

P_N = max. rated motor output (kW) of respective contactor according to → Page 5/30 and → Page 5/34
S/h = max. operation per hour



Part no.	Characteristic AC-1	AC-3	AC-4
DILM185A	2	1	8
DILM225A	2	1	8
DILM250	2	1	8
DILM300A	3	2	9
DILM400	3	2	9
DILM500	3	2	9
DILM580	3	4	7
DILM650	3	4	7
DILM750	3	4	7
DILM820	3	4	7
DILM1000	3	4	7
DILM1600	10	10	7
DILH1400	10	—	—
DILH2000	10	—	—
DILH2200	10	—	—
DILH2600	10	—	—

Contactors

Switching of DC current

DILM, DILEM, DILMP

DC current switching

----- when necessary
conductor to be
supplied by customer

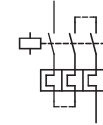
DILEEM ... DILM700

Without overload relay
≤ 60 V DC

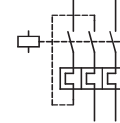
> 60 V DC

With overload relay
> 60 V DC

1 pole

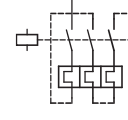
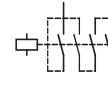


2 pole

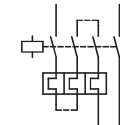


**DILEM4
DILMP...**

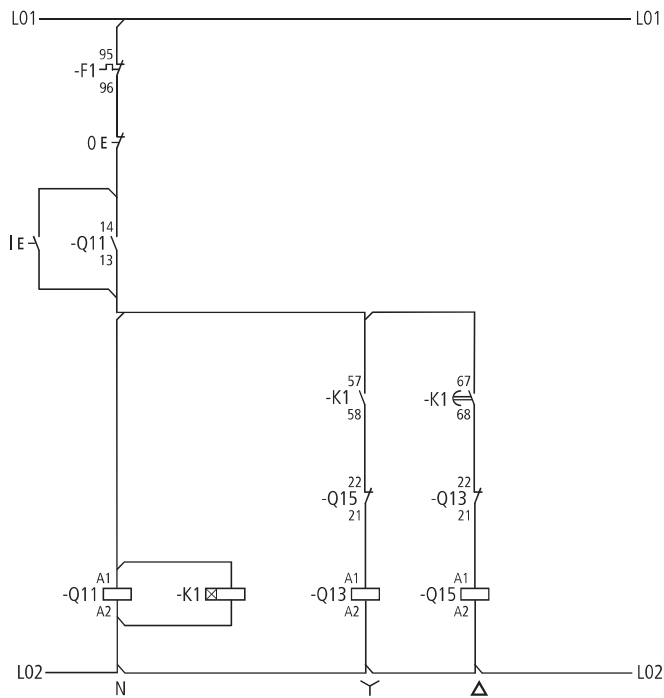
1 pole



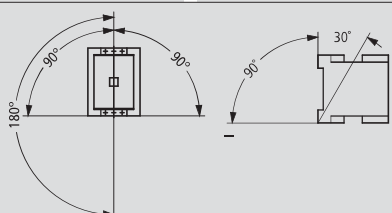
2 pole



Wiring, star-delta combination with DILM32-XTEY20



Technical data

			DILA	DILA...XHI	DILER	DILE...	
General							
Standards			IEC/EN 60947, VDE 0660, UL, CSA				
Lifespan, mechanical							
AC operated	Operations	x 10 ⁶	20	10	10	10	
DC operated	Operations	x 10 ⁶	20	10	20	20	
Maximum operating frequency							
Maximum operating frequency	Operations/h		9000	9000	9000	9000	
Climatic proofing			Damp heat, constant, to IEC 60068-2-78; Damp heat, cyclic, to IEC 60068-2-30				
Ambient temperature							
Open		°C	-25...60	-25...60	-25...50	-25...50	
Enclosed		°C	-25...40	-25...40	-25...40	-25...40	
Ambient temperature for storage		°C	-40 - 80	-40 - 80			
Mounting position						Any, except vertically with terminals A1/A2 below	
Mechanical shock resistance (IEC/EN 60068-2-27)							
Half-sinusoidal shock 10 ms							
Basic devices with auxiliary contact module							
N/O		g	7	7	10	10	
NC		g	5	5	8	8	
Protection type			IP20	IP20	IP20	IP20	
Protection against direct contact when actuated from front (EN 50274)			Finger- and back-of-hand proof				
Weight							
AC operated		kg	0.23	0.05	0.17	–	
DC operated		kg	0.28	0.05	0.2	–	
Terminal capacity							
Screw terminals							
Solid		mm ²	1 x (0.75 - 4) 2 x (0.75 - 2.5)	1 x (0.75 - 4) 2 x (0.75 - 2.5)	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)	
Flexible with ferrule		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)	1 x (0.75 - 1.5) 2 x (0.75 - 1.5)	1 x (0.75 - 1.5) 2 x (0.75 - 1.5)	
Solid or stranded		AWG	18 - 14	18 - 14	18 - 14	18 - 14	
Terminal screw			M3.5	M3.5	M3.5	M3.5	
Pozidriv screwdriver		Size	2	2	2	2	
Flat-blade screwdriver		mm	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	
Max. tightening torque		Nm	1.2	1.2	1.2	1.2	
Spring-loaded terminals							
Solid		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)	1 x (1 - 2.5) 2 x (1 - 2.5)	1 x (1 - 2.5) 2 x (1 - 2.5)	
Flexible with ferrule		mm ²	1 x (0.75 - 1.5) 2 x (0.75 - 1.5)	1 x (0.75 - 1.5) 2 x (0.75 - 1.5)	1 x (1 - 2.5) 2 x (1 - 2.5)	1 x (1 - 2.5) 2 x (1 - 2.5)	
Flexible without ferrule DIN 46228		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)	1 x (0.75 - 1.5) 2 x (0.75 - 1.5)	–	–	
Solid or stranded		AWG	18 - 14	18 - 14	1 x (16 - 14) 2 x (16 - 14)	1 x (16 - 14) 2 x (16 - 14)	
Flat-blade screwdriver		mm	0.6 x 3.5	0.6 x 3.5	0.6 x 3.5	0.6 x 3.5	

Mini contactor relays, contactor relays

DILER, DILA

				DILA	DILA...XHI	DILER	DILE...
Contacts							
Interlocked opposing contacts to EN 60947-4-1, Annex L, including auxiliary contact module				Yes	Yes	Yes	Yes
Rated impulse withstand voltage	U_{imp}	V AC		6000	6000	6000	6000
Overvoltage category/degree of pollution				III/3	III/3	III/3	III/3
Rated insulation voltage	U_i	V AC		690	690	690	690
Rated operating voltage	U_e	V AC		690	500	600	600
Safe isolation according to EN 61140							
Between coil and auxiliary contacts				400	400	300	300
Between the auxiliary contacts				400	400	300	300
Rated operational current							
AC-15							
220/240 V	I_e	A		4	4	6	4
380/415 V	I_e	A		4	4	3	2
500 V	I_e	A		1.5	1.5	1.5	1.5
DC ¹⁾							
L/R ≤ 15 ms							
Contacts in series:							
1	24 V	A		10	10	2.5	2.5
1	60 V	A		6	6	–	–
2	60 V	A		10	10	2.5	2.5
1	110 V	A		3	3	–	–
3	110 V	A		6	6	1.5	1.5
1	220 V	A		1	1	–	–
3	220 V	A		5	5	0.5	0.5
L/R ≤ 50 ms							
Contacts in series:							
3	24 V	A		4	2.5	–	–
3	60 V	A		4	1	–	–
3	110 V	A		2	0.5	–	–
3	220 V	A		1	0.25	–	–
DC-13 (6xP)							
Contacts in series:							
3	24 V	A		2.5	2.5	–	–
3	60 V	A		1	1	–	–
3	110 V	A		0.5	0.5	–	–
3	220 V	A		0.25	0.25	–	–
Control circuit reliability (at $U_e = 24$ V DC, $U_{min} = 17$ V, $I_{min} = 5.4$ mA)				Fault probability	λ	<10 ⁻⁹ , < one failure in 100 million operations	
Conventional thermal current				I_{th}	A	16	16
Short-circuit strength without welding							
Maximum overcurrent protection device							
220/240 V		PKZM 0		4	–	4	4
380/415 V		PKZM 0		4	–	4	4
Short-circuit protection rating maximum fuse ²⁾							
500 V		A gG/ gL		10	10	6	6
500 V		A fast		–	–	10	10
Current heat loss at load of I_{th}							
AC operated		W		0.3	0.3	0.2	0.2
DC operated		W		0.3	0.3	0.3	0.3

Notes

¹⁾ Switch-on and switch-off conditions based on DC-13, time constant as specified

²⁾ See characteristic curve "Fuses" for time/current characteristics (please enquire)

Mini contactor relays, contactor relays

DILER, DILA

				DILA	DILA...XHI	DILER	DILE...
Magnet systems							
Voltage tolerance							
AC operated							
Single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz	Pick-up	x U _c	0.8...1.1	–	0.8...1.1	–	
Dual-frequency coil 50/60 Hz	Pick-up	x U _c	0.8...1.1	–	0.85...1.1	–	
DC operated ¹⁾							
Starting voltage	Pick-up	x U _c	0.8...1.1	–	0.85...1.3	–	
At 24 V: without auxiliary contact module (40 °C)	Pick-up	x U _c	0.7 - 1.3	–	0.7 - 1.3	–	
Power consumption							
50 Hz	Pick-up	VA	24	–	25	–	
50 Hz	Sealing	VA	3.4	–	4.6	–	
50 Hz	Sealing	W	1.2	–	1.3	–	
60 Hz	Pick-up	VA	30	–	25	–	
60 Hz	Sealing	VA	4.4	–	4.6	–	
60 Hz	Sealing	W	1.4	–	1.3	–	
50/60 Hz	Pick-up	VA	27 25	–	30 29	–	
50/60 Hz	Sealing	VA	4.2 3.3	–	5.4 3.9	–	
50/60 Hz	Sealing	W	1.4 1.2	–	1.6 1.1	–	
DC operated	Pick-up = sealing	W	3	–	2.6	–	
Duty factor		% DF	100	–	100	–	
Changeover times at 100 % U _c (recommended values)							
AC operated closing delay		ms	15 - 21	–	14 - 21	–	
AC operated normally open contact opening delay		ms	9 - 18	–	8 - 18	–	
AC operated with auxiliary contact module, max. closing delay		ms	–	–	45	45	
DC operated closing delay		ms	31	–	26 - 35	–	
DC operated normally open contact opening delay		ms	12	–	15 - 25	–	
DC operated with auxiliary contact module, max. closing delay		ms	–	–	70	70	

Notes

¹⁾ Smoothed DC, three-phase bridge rectifier or smoothed two-phase bridge rectifier

Contactors

Amplifier modules, electronic timer module, contactor monitoring device

ETS-VS3, DILM, CMD

			ETS4-VS3	DILM32-XTE	CMD(24VDC) CMD(220-240VAC)
General					
Standards			IEC/EN 60947, VDE 0660, UL, CSA	DIN EN 61812, IEC/EN 60947, VDE 0660, UL, CSA	IEC/EN 60947 UL CSA
Lifespan, mechanical					
AC operated	c (contacts)	x 10 ⁶	–	3	10
DC operated	c (contacts)	x 10 ⁶	30	3	3
Maximum operating frequency					
DC operated	c (contacts)	x 10 ⁶	72000	–	9000
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30		
Ambient temperature					
Storage		°C	–	-40 - 80	-40 - 80
Open		°C	-25 - 60	-25 - 60	-25 - 50
Enclosed		°C	-25 - 45	-25 - 40	–
Mounting position			Any	As required, except suspended	Any
Mechanical shock resistance (IEC/EN 60068-2-27)					
Half-sinusoidal shock 20 ms					
N/O		g	10	–	–
Half-sinusoidal shock 10 ms					
N/O		g	–	6	4
NC		g	–	6	4
Protection type			IP20	IP20	IP20
Protection against direct contact when actuated from front (EN 50274)			Finger- and back-of-hand proof		
Weight		kg	0.09	0.08	0.1
Terminal capacity					
Solid		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 2.5) ¹⁾	1 x (0.75 - 2.5) 2 x (0.75 - 1.5)	1 x (0.75...2.5) 2 x (0.75...1.5)
Flexible with ferrule		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 1.5) ¹⁾	1 x (0.75 - 1.5) 2 x (0.75 - 1.5)	1 x (0.75...1.5) 2 x (0.75...1.5)
Solid or stranded		AWG	16 - 14	18 - 14	18...14
Terminal screw			M3.5	M3.5	M3.5
Pozidriv screwdriver		Size	2	2	2
Flat-blade screwdriver		mm	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6
Max. tightening torque		Nm	1.2	1.2	1.2

Notes

¹⁾ Use equal cross-sections only

			ETS4-VS3	DILM32-XTE	CMD(24VDC)	CMD(220-240VAC)
Contacts						
Rated impulse withstand voltage	U_{imp}	V AC	6000	6000	8000	4000
Overvoltage category/degree of pollution			III/2	III/3	III/3	III/3
Rated insulation voltage	U_i	V AC	440	600	100	250
Rated operating voltage	U_e	V	440 AC	400 AC	24 DC	250 AC
Rated operational current						
AC-15						
220/240 V	I_e	A	2	3	–	–
380/415 V	I_e	A	2	–	–	–
DC-13 ¹⁾						
DC-13 L/R ≤ 15 ms						
Contacts in series:						
1	24 V	A	2.6	1	–	–
1	60 V	A	1	0.2	–	–
1	110 V	A	0.6	0.2	–	–
1	220 V	A	0.2	0.1	–	–
DC-13 L/R ≤ 50 ms						
Contacts in series:						
1	24 V	A	2	1	–	–
1	60 V	A	0.6	0.2	–	–
1	110 V	A	0.08	0.2	–	–
1	220 V	A	0.08	0.1	–	–
DC-13 L/R ≤ 300 ms						
Contacts in series:						
1	24 V	A	0.6	1	–	–
1	60 V	A	0.2	0.2	–	–
1	110 V	A	0.08	0.2	–	–
1	220 V	A	0.03	0.1	–	–
Safe isolation according to EN 61140						
Between coil and auxiliary contacts		V AC	–	250	–	–
Between the auxiliary contacts		V AC	–	250	–	–
Control circuit reliability (at $U_e = 24$ V DC, $U_{min} = 17$ V, $I_{min} = 5.4$ mA)	Fault probability	λ	<10 ⁻⁸ , < one failure in 100 million operations	–	–	–
Conventional thermal current	I_{th}	A	6	4	–	–
Component lifespan						
AC-15						
230 V, $I_e = 0.1$ A	Switch operations	x 10 ⁶	7	–	–	–
230 V, $I_e = 1.2$ A	Switch operations	x 10 ⁶	1	–	–	–
Short-circuit rating without welding						
Short-circuit protection rating maximum fuse ²⁾						
500 V		A gG/gL	–	4	2	2
500 V		A fast	4	–	–	–

Notes

- ¹⁾ Switch-on and switch-off conditions based on DC-13, time constant as specified
²⁾ See transparent overlay "Fuses" for time/current characteristics (please enquire)

Contactors

Amplifier modules, electronic timer module, contactor monitoring device

ETS-VS3, DILM, CMD


			ETS4-VS3	DILM32-XTE	CMD(24VDC) CMD(220-240VAC)
Magnet systems					
Voltage tolerance					
Starting voltage					
AC operated	Pick-up	$x U_c$	–	0.85 - 1.1	0.85 - 1.1
DC operated ¹⁾	Pick-up	$x U_c$	0.85 - 1.2	0.7 - 1.2	0.85 - 1.1
Power consumption					
AC operated	Sealing	VA	–	2	4
AC operated	Sealing	W	–	1.8	4
DC operated	Pick-up = sealing	W	0.6	–	4
Duty factor					
		% DF	100	100	100
Changeover times at 100 % U_c (recommended values)					
DC operated closing delay		ms	7	–	–
DC operated opening delay		ms	3	–	–
Maximum operating frequency					
Max. operating frequency		Ops/h	–	3600	–
6 A/250 V		Ops/h	–	360	–
Minimum on duration					
On-delayed		ms	–	< 50	–
Off-delayed		ms	–	< 200	–
Repetition accuracy (with constant parameters)					
	Deviation	%	–	< 5	–
Recovery time (after 100% time delay)					
		ms	–	70	–
Contact changeover time					
DILM32-XTEE11/DILM32-XTED11	t_u	ms	–	10	–
DILM32-XTEY20	t_u	ms	–	50	–
CMD	t_u	ms	–	–	100 ± 20%

Notes

¹⁾ Smoothed DC, three-phase bridge rectifier or smoothed two-phase bridge rectifier

Mini contactor relays

DILEEM, DILEM

			DILEEM DILEM DILEM12	DILEEM-G DILEM-G DILEM12-G	DILEM4	DILEM4-G
General						
Standards			IEC/EN 60947, VDE 0660, CSA, UL			
Lifespan, mechanical; Coil 50/60 Hz	at 50 Hz		7	—	7	—
Lifespan, mechanical	c (contacts)	x 10 ⁶	10	20	20	—
Maximum operating frequency			9000			
Mechanical		Ops/h	→ Characteristic curves Page 5/95			
Electrical (Contactor without overload relay)			Damp heat, constant, to IEC 60068-2-78			
Climatic proofing			Damp heat, cyclic, to IEC 60068-2-30			
Ambient temperature						
Open		°C	-25 - 50			
Enclosed		°C	-25 - 40			
Mounting position			Any, except for vertically with terminals A1/A2 below			
						
Mechanical shock resistance (IEC/EN 60068-2-27)						
Half-sinusoidal shock 10 ms						
Basic device without auxiliary contact module						
Main circuit normally open contact		g	10			
Auxiliary contacts NC/Normally open contact		g	10/8	10/8	—	—
Basic devices with auxiliary contact module						
Main circuit normally open contact		g	10			
Auxiliary contacts Normally open contact/NC		g	20/20			
Protection type			IP20			
Protection against direct contact when actuated from front (EN 50274)			Finger- and back-of-hand proof			
Weight		kg	0.2	0.17	0.2	0.17
Terminal capacity: main and auxiliary contacts						
Solid		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)			
Flexible with ferrule		mm ²	1 x (0.75 - 1.5) 2 x (0.75 - 1.5)			
Solid or stranded		AWG	18 - 14			
Terminal screw			M3.5			
Pozidriv screwdriver		Size	2			
Flat-blade screwdriver		mm	0.8 x 5.5 1 x 6			
Max. tightening torque		Nm	1.2			
Terminal capacity springloaded terminals main and control circuits						
Solid		mm ²	1 x (1 - 2.5) 2 x (1 - 2.5)			
Flexible with ferrule		mm ²	1 x (1 - 2.5) 2 x (1 - 2.5)			
Flat-blade screwdriver		mm	0.6 x 3.5			

Mini contactor relays

DILEEM, DILEM

				DILEEM DILEEM-G	DILEM DILEM-G	DILEM4	DILEM4-G	DILEM12 DILEM12-G			
Main contacts											
Rated impulse withstand voltage	U_{imp}	V AC		6000	6000	6000	6000	6000			
Overvoltage category/pollution degree				III/3	III/3	III/3	III/3	III/3			
Rated insulation voltage	U_i	V AC		690	690	690	690	690			
Rated operating voltage	U_e	V AC		690	690	690	690	690			
Safe isolation according to EN 61140											
	Between coil and contacts	V AC		300	300	300	300	300			
	Between the contacts	V AC		300	300	300	300	300			
Making capacity of up to 440 V (cos ϕ as specified in IEC/EN 60947)					110	110	110	120			
Breaking capacity	220/230 V	A		90	90	90	90	96			
	380/400 V	A		90	90	90	90	96			
	500 V	A		64	64	64	64	72			
	660/690 V	A		42	42	42	42	42			
Devices lifespan	AC-1			→ Engineering							
	AC-3			→ Engineering							
	AC-4			→ Engineering							
Short-circuit protection rating maximum fuse											
	Type "2" coordination 500 V	gL/gG	A	10	10	10	10	20			
	Type "1" coordination 500 V	gL/gG	A	20	20	20	20	35			
AC voltage											
AC-1 operation											
Conventional thermal current 3 pole 50 - 60 Hz											
Open	at 40 °C	I_{th}	A	22	22	22	22	22			
				at 50 °C	I_{th}	A	20	20	20	20	20
				at 55 °C	I_{th}	A	19	19	19	19	19
Enclosed ¹⁾				I_{th}	A	16	16	16	16	16	
Conventional thermal current, 1-pole											
Open ¹⁾				I_{th}	A	50	50	60	60	50	
Enclosed ¹⁾				I_{th}	A	40	40	50	50	40	
AC-3 operation											
Rated operational current AC-3 open, 50 - 60 Hz, 3-pole1)	220/230 V	I_e	A	6.6	9	9	9	12			
	240 V	I_e	A	6.6	9	9	9	12			
	380/400 V	I_e	A	6.6	9	9	9	12			
	415 V	I_e	A	6.6	9	9	9	12			
	440 V	I_e	A	6.6	9	9	9	10.5			
	500 V	I_e	A	5	6.4	6.4	6.4	9			
Motor rating	660/690 V	I_e	A	3.5	4.8	4.8	4.8	5.2			
	220/230 V	P	kW	1.5	2.2	2.2	2.2	3.5			
	240 V	P	kW	1.8	2.5	2.5	2.5	3			
	380/400 V	P	kW	3	4	4	4	5.5			
	415 V	P	kW	3.1	4.3	4.3	4.3	5.5			
	440 V	P	kW	3.3	4.6	4.6	4.6	5.5			
	500 V	P	kW	3	4	4	4	5.5			
	660/690 V	P	kW	3	4	4	4	4			
AC-4 operation											
Rated operational current AC-4 open, 50 - 60 Hz, 3-pole1)	220/230 V	I_e	A	5	6.6	6.6	6.6	6.6			
	240 V	I_e	A	5	6.6	6.6	6.6	6.6			
	380/400 V	I_e	A	5	6.6	6.6	6.6	6.6			
	415 V	I_e	A	5	6.6	6.6	6.6	6.6			
	440 V	I_e	A	5	6.6	6.6	6.6	6.6			
	500 V	I_e	A	3.7	5	5	5	5			
	660/690 V	I_e	A	2.9	3.4	3.4	3.4	3.4			
Rated operational power	220/230 V	P	kW	1.1	1.5	1.5	1.5	1.5			
	240 V	P	kW	1.3	1.8	1.8	1.8	1.8			
	380/400 V	P	kW	2.2	3	3	3	3			
	415 V	P	kW	2.3	3.1	3.1	3.1	3.1			
	440 V	P	kW	2.4	3.3	3.3	3.3	3.3			
	500 V	P	kW	2.2	3	3	3	2.2			
	660/690 V	P	kW	2.2	3	3	3	2.2			

Notes

¹⁾ At maximum permissible ambient air temperature

DILEEM, DILEM

				DILEEM	DILEEM-G	DILEM	DILEM-G	DILEM4	DILEM4-G	DILEM12	DILEM12-G
DC voltage											
Operations				→ Engineering Page 5/96							
Rated operational current open											
DC-1	12 V	I_e	A	20	20	20	20	20	20	20	20
	24 V	I_e	A	20	20	20	20	20	20	20	20
	60 V	I_e	A	20	20	20	20	20	20	20	20
	110 V	I_e	A	20	20	20	20	20	20	20	20
	220 V	I_e	A	20	20	20	20	20	20	20	20
DC-3	12 V	I_e	A	6	6	8	8	8	8	8	8
	24 V	I_e	A	6	6	8	8	8	8	6	8
	60 V	I_e	A	3	3	4	4	4	4	4	4
	110 V	I_e	A	2	2	3	3	3	3	3	3
	220 V	I_e	A	–	–	–	–	1	1	–	–
DC-5	12 V	I_e	A	1.8	1.8	2.5	2.5	2.5	2.5	2.5	2.5
	24 V	I_e	A	1.8	1.8	2.5	2.5	2.5	2.5	2.5	2.5
	60 V	I_e	A	1.8	1.8	2.5	2.5	2.5	2.5	2.5	2.5
	110 V	I_e	A	1.8	1.8	1.5	1.5	2.5	2.5	1.5	1.5
	220 V	I_e	A	0.2	0.2	0.3	0.3	1	1	0.3	0.3
Current heat loss (3-pole or 4-pole)											
At I_{th}			W	2	3.5	2	3.5	2.7	4.7	2	3.5
At I_e to AC-3/400 V			W	0.5	0.7	0.5	0.7	–	–	0.5	0.7
Magnet systems											
Voltage tolerance											
Single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz		Pick-up	$x U_c$	0.8 - 1.1	–	0.8 - 1.1	–	0.8 - 1.1	–	0.8 - 1.1	–
Dual-frequency coil 50/60 Hz		Pick-up	$x U_c$	0.8 - 1.1	–	0.85 - 1.1	–	0.85 - 1.1	–	0.8 - 1.1	–
DC operated		Pick-up	$x U_c$	–	0.8 - 1.1	–	0.8 - 1.1	–	0.85 - 1.1	–	0.8 - 1.1
Power consumption											
AC operation	Single-voltage coil, 50 Hz, and dual-voltage coil, 50 Hz, 60 Hz	Pick-up	VA	25	–	25	–	25	–	25	–
		Pick-up	W	22	–	22	–	22	–	22	–
		Sealing	VA	4.6	–	4.6	–	4.6	–	4.6	–
		Sealing	W	1.3	–	1.3	–	1.3	–	1.3	–
	Dual-frequency coil 50/60 Hz at 50 Hz	Pick-up	VA	30	–	30	–	30	–	30	–
		Pick-up	W	26	–	26	–	26	–	26	–
		Sealing	VA	5.4	–	5.4	–	5.4	–	5.4	–
		Sealing	W	1.6	–	1.6	–	1.6	–	1.6	–
	Dual-frequency coil 50/60 Hz at 60 Hz	Pick-up	VA	29	–	29	–	29	–	29	–
		Pick-up	W	24	–	24	–	24	–	24	–
		Sealing	VA	3.9	–	3.9	–	3.9	–	3.9	–
		Sealing	W	1.1	–	1.1	–	1.1	–	1.1	–
	Single-voltage coil, 50 Hz, and dual-voltage coil, 50 Hz, 60 Hz	Pick-up	VA	25	–	25	–	25	–	25	–
		Pick-up	VA	30	–	30	–	30	–	30	–
		Pick-up	VA	29	–	29	–	29	–	29	–
		Pick-up	VA	29	–	29	–	29	–	29	–
DC operation ¹⁾	Power consumption pick-up = sealing	VA/W	–	2.6	–	2.6	–	2.6	–	2.6	
		% DF	100	100	100	100	100	100	100	100	
Duty factor											
Switching times at 100 % U_c											
N/O	Closing delay min.	ms	14	26	14	26	14	26	14	26	
	Closing delay max.	ms	21	35	21	35	21	35	21	35	
	Opening delay min.	ms	8	15	8	15	8	15	8	15	
	Opening delay max.	ms	18	25	18	25	18	25	18	25	
	Closing delay with top mounting auxiliary contact	ms	Max. 45	Max. 70	Max. 45	Max. 70	Max. 45	Max. 70	Max. 45	Max. 70	
Reversing contactors	Changeover time at 110 % U_c	Changeover time min.	ms	16	40	16	40	16	40	16	40
		Changeover time max.	ms	21	50	21	50	21	50	21	50
	Arcing time at 690 V AC	ms	Max. 12	Max. 12	Max. 12	Max. 12	Max. 12	Max. 12	Max. 12	Max. 12	
Coil	Lifespan, mechanical; Coil 50/60 Hz	c (contacts)	$x 10^6$	7	–	7	–	7	–	7	–

Notes

¹⁾ Smoothed DC or three-phase bridge rectifier

Mini contactor relays

DILEEM, DILEM

			DILE(E)M(-12)...	...DILEM
Auxiliary contact				
Interlocked opposing contacts to EN 60947-5-1 Annex L, including auxiliary contact module			Yes	Yes
Rated impulse withstand voltage	U_{imp}	V AC	6000	6000
Overtoltage category/pollution degree			III/3	III/3
Rated insulation voltage	U_i	V AC	690	690
Rated operating voltage	U_e	V AC	600	600
Safe isolation according to EN 61140				
Between coil and auxiliary contacts			300	300
Between the auxiliary contacts			300	300
Rated operational current				
AC-15				
220/240 V			I_e	A
380/415 V			I_e	A
500 V			I_e	A
DC				
L/R ≤ 15 ms				
Contacts in series:				
1			24 V	A
2			60 V	A
3			100 V	A
3			220 V	A
Conventional thermal current			I_{th}	A
Control circuit reliability (at $U_e = 24$ V DC, $U_{min} = 17$ V, $I_{min} = 5.4$ mA)			Fault probability	λ
			<10 ⁻⁸ , < one failure in 100 million operations	
Component lifespan at $U_e = 240$ V				
AC-15			c (contacts)	x 10 ⁶
DC ¹⁾				
L/R = 50 ms: 2 contacts in series at $I_e = 0.5$ A			c (contacts)	x 10 ⁶
Short-circuit rating without welding				
Maximum overcurrent protective device			PKZM0-4	PKZM0-4
Short-circuit protection rating maximum fuse				
500 V			A gG/gL	6
500 V			A fast	10
Current heat loss at load of I_{th}				
Per contact			W	0.2

Notes

¹⁾ Switch-on and switch-off conditions based on DC-13, time constant as specified

Contactors

Basic devices up to 170 A

DILM7 ... DILM170

			DILM7	DILM9	DILM12	DILM15	DILM17	DILM25
General								
Standards			IEC/EN 60947, VDE 0660, UL, CSA					
Lifespan, mechanical								
AC operated	c (contacts)	x 10 ⁶	10	10	10	10	10	10
DC operated	c (contacts)	x 10 ⁶	10	10	10	10	10	10
Operating frequency, mechanical								
Mechanical, AC operated	Operations/h		9000	9000	9000	5000	5000	5000
DC operated	Operations/h		9000	9000	9000	5000	5000	5000
Maximum operating frequency			→ Characteristic curves Page 5/78					
Electrical (Contactor without overload relay)								
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30					
Ambient temperature								
Open		°C	-25...60	-25...60	-25...60	-25...60	-25...60	-25...60
Enclosed		°C	-25...40	-25...40	-25...40	-25...40	-25...40	-25...40
Storage		°C	-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80
Mounting position AC- and DC operated								
Mechanical shock resistance (IEC/EN 60068-2-27)								
Half-sinusoidal shock 10 ms								
Main contacts								
N/O		g	10	10	10	10	10	10
Auxiliary contacts								
N/O		g	7	7	7	7	7	7
NC		g	5	5	5	5	5	5
Mechanical shock resistance (IEC/EN 60068-2-27) with table mounting								
Half-sinusoidal shock 10 ms								
Main contacts								
N/O		g	5.7	5.7	5.7	5.7	6.9	6.9
Auxiliary contacts								
N/O		g	3.4	3.4	3.4	3.4	5.3	5.3
NC		g	3.4	3.4	3.4	3.4	3.5	3.5
Protection type			IP20	IP20	IP20	IP20	IP00	IP00
Protection against direct contact when actuated from front (EN 50274)			Finger- and back-of-hand proof					
Weight								
AC operated		kg	0.23	0.23	0.23	0.23	0.42	0.42
DC operated		kg	0.28	0.28	0.28	0.28	0.48	0.48
Terminal type, screw connection								
Terminal capacity of main cable								
Solid		mm ²	1 x (0.75 - 4) 2 x (0.75 - 2.5)			1 x (0.75 - 16) 2 x (0.75 - 10)		
Flexible with ferrule		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 2.5) ¹⁾			1 x (0.75 - 16) 2 x (0.75 - 10)		
Stranded		mm ²	-			1 x 16 1 x 16		
Solid or stranded		AWG	18 - 10	18 - 10	18 - 10	18 - 10	18 - 6	18 - 6
Flat conductor	Number of layers x width x thickness	mm	-			-		
Terminal capacity of control circuit cable								
Solid		mm ²	1 x (0.75 - 4) 2 x (0.75 - 2.5)			1 x (0.75 - 4) 2 x (0.75 - 4)		
Flexible with ferrule		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)			1 x (0.75 - 2.5) 2 x (0.75 - 2.5)		
Solid or stranded		AWG	18 - 10	18 - 10	18 - 10	18 - 10	18 - 14	18 - 14

Notes

¹⁾ Also without ferrule.

Contactors

Basic devices up to 170 A
DILM7 ... DILM170

DILM32	DILM38	DILM40	DILM50	DILM65	DILM72	DILM80	DILM95	DILM115	DILM150	DILM170
IEC/EN 60947, VDE 0660, UL, CSA										
10	10	10	10	10	10	10	10	10	10	10
10	10	10	10	10	10	10	10	10	10	10
5000	5000	5000	5000	5000	5000	3600	3600	3600	3600	3000
5000	5000	5000	5000	5000	5000	3600	3600	3600	3600	3000
→ Characteristic curves Page 5/78										
Damp heat, constant, to IEC 60068-2-78										
Damp heat, cyclic, to IEC 60068-2-30										
-25...60	-25...60	-25...60	-25...60	-25...60	-25...60	-25...60	-25...60	-25...60	-25...60	-25...60
-25...40	-25...40	-25...40	-25...40	-25...40	-25...40	-25...40	-25...40	-25...40	-25...40	-25...40
-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80
10	10	10	10	10	10	10	10	10	10	10
7	7	7	7	7	7	7	7	7	7	7
5	5	5	5	5	5	5	5	5	5	5
6.9	6.9	10	10	10	10	10	10	10	10	10
5.3	5.3	7	7	7	7	7	7	7	7	7
3.5	3.5	5	5	5	5	5	5	5	5	5
IP00	IP00	IP00	IP00	IP00	IP00	IP00	IP00	IP00	IP00	IP00
Finger- and back-of-hand proof										
0.42	0.42	0.9	0.9	0.9	0.9	2	2	2	2	2
0.48	0.48	1.1	1.1	1.1	1.1	2.1	2.1	2.1	2.1	2.1
1 x (0.75 - 16) 2 x (0.75 - 10)		1 x (0.75 - 16) 2 x (0.75 - 16)				-				
1 x (0.75 - 16) 2 x (0.75 - 10)		1 x (0.75 - 35) 2 x (0.75 - 25)				1 x (10 - 95) 2 x (10 - 70)				
1 x 16	1 x 16	1 x (16 - 50) 2 x (16 - 35)				1 x (16 - 95) 2 x (16 - 70)				
18 - 6	18 - 6	12 - 2	12 - 2	12 - 2	12 - 2	8...3/0	8...3/0	8...3/0	8...3/0	8...3/0
-	-	2 x (6 x 9 x 0.8)				2 x (6 x 16 x 0.8)				
1 x (0.75 - 4) 2 x (0.75 - 4)										
1 x (0.75 - 2.5) 2 x (0.75 - 2.5)										
18 - 14	18 - 14	18 - 14	18 - 14	18 - 14	18 - 14	18 - 14	18 - 14	18 - 14	18 - 14	18 - 14

Contactors

Basic devices up to 170 A

DILM7 ... DILM170

				DILM7	DILM9	DILM12	DILM15	DILM17	DILM25
General									
Main cable connection screw/bolt				M3.5	M3.5	M3.5	M3.5	M5	M5
Tightening torque		Nm		1.2	1.2	1.2	1.2	3.2	3.2
Control circuit cable connection screw/bolt				M3.5	M3.5	M3.5	M3.5	M3.5	M3.5
Tightening torque		Nm		1.2	1.2	1.2	1.2	1.2	1.2
Tools									
Main conductors									
	Pozidriv screwdriver	Size		2	2	2	2	2	2
	Internal hexagon	SW	mm	–	–	–	–	–	–
	Flat-blade screwdriver		mm	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6
Auxiliary conductors									
	Pozidriv screwdriver	Size		2	2	2	2	2	2
	Flat-blade screwdriver		mm	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6
Terminal type spring-cage terminal									
Terminal capacity of main cable									
	Solid		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)				–	–
	Flexible		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)				–	–
	Flexible with ferrule		mm ²	1 x (0.75 - 1.5) 2 x (0.75 - 1.5)				–	–
	Flexible without ferrule		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)				–	–
	Solid or stranded		AWG	18 - 14	18 - 14	18 - 14	18 - 14	–	–
Terminal capacity of control circuit cable									
	Solid		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)				–	–
	Flexible		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)				–	–
	Flexible with ferrule		mm ²	1 x (0.75 - 1.5) 2 x (0.75 - 1.5)				–	–
	Flexible without ferrule		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)				–	–
	Solid or stranded		AWG	18 - 14	18 - 14	18 - 14	18 - 14	18 - 14	18 - 14
Tools									
	Strip length		mm	10	10	10	10	10	10
	Screwdriver blade width		mm	3.5	3.5	3.5	3.5	3.5	3.5
Main contacts									
Rated impulse withstand voltage	U_{imp}	V AC		8000	8000	8000	8000	8000	8000
Overtoltage category/pollution degree				III/3	III/3	III/3	III/3	III/3	III/3
Rated insulation voltage	U_i	V AC		690	690	690	690	690	690
Rated operating voltage	U_e	V AC		690	690	690	690	690	690
Safe isolation according to EN 61140									
	Between coil and contacts		V AC	400	400	400	400	440	440
	Between the contacts		V AC	400	400	400	400	440	440
Making capacity (cos ϕ to IEC/EN 60947)	To 690 V	A		112	112	144	155	238	350
Breaking capacity									
	230 V		A	70	90	120	124	170	250
	380/400 V		A	70	90	120	124	170	250
	500 V		A	50	70	100	100	170	250
	660/690 V		A	40	50	70	70	120	150
Short-circuit rating									
Short-circuit protection rating maximum fuse									
Type "2" coordination									
	400 V	gG/gL 500 V	A	20	20	20	20	35	35
	690 V	gG/gL 690 V	A	16	16	20	20	35	35
Type "1" coordination									
	400 V	gG/gL 500 V	A	35	35	35	63	63	100
	690 V	gG/gL 690 V	A	20	20	25	50	50	50

Contactors
Basic devices up to 170 A
DILM7 ... DILM170

DILM32	DILM38	DILM40	DILM50	DILM65	DILM72	DILM80	DILM95	DILM115	DILM150	DILM170
M5	M5	M6	M6	M6	M6	M10	M10	M10	M10	M10
3.2	3.2	3.3	3.3	3.3	3.3	14	14	14	14	14
M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5
1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
2	2	2	2	2	2	–	–	–	–	–
–	–	–	–	–	–	5	5	5	5	5
0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	–	–	–	–	–
2	2	2	2	2	2	2	2	2	2	2
0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
1 x (0.75 - 2.5) 2 x (0.75 - 2.5)										
1 x (0.75 - 2.5) 2 x (0.75 - 2.5)										
1 x (0.75 - 1.5) 2 x (0.75 - 1.5)										
–	–	–	–	–	–	–	–	–	–	–
18 - 14	18 - 14	18 - 14	18 - 14	18 - 14	18 - 14	18 - 14	18 - 14	18 - 14	18 - 14	18 - 14
10	10	10	10	10	10	10	10	10	10	10
3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000
III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3
690	690	690	690	690	690	690	690	690	690	690
690	690	690	690	690	690	690	690	690	690	690
440	440	440	440	440	440	690	690	690	690	690
440	440	440	440	440	440	690	690	690	690	690
384	384	560	700	910	910	1120	1330	1610	2100	2100
320	320	400	500	650	650	800	950	1150	1500	1500
320	320	400	500	650	650	800	950	1150	1500	1500
320	320	400	500	650	650	800	950	1150	1500	1500
180	180	250	320	370	370	650	800	1100	1200	1320
63	63	63	80	125	125	160	160	250	250	250
35	35	50	63	80	80	160	160	250	250	250
125	125	125	160	250	250	250	250	250	250	250
63	63	80	80	100	100	200	200	250	250	250

Contactors

Basic devices up to 170 A

DILM7 ... DILM170

					DILM7	DILM9	DILM12	DILM15	DILM17	DILM25
AC voltage										
AC-1 operation										
Conventional free air thermal current 3 pole 50 - 60 Hz	Open	at 40 °C	I_{th}	A	22	22	22	22	40	45
		at 50 °C	I_{th}	A	21	21	21	21	38	43
		at 55 °C	I_{th}	A	21	21	21	21	37	42
		at 60 °C	I_{th}	A	20	20	20	20	35	40
		Enclosed	I_{th}	A	18	18	18	18	32	36
Conventional free air thermal current 1 pole	Open		I_{th}	A	50	50	50	50	88	100
	Enclosed		I_{th}	A	45	45	45	45	80	90
AC-3 operation										
Rated operational current AC -3 open, 50 - 60 Hz, 3 pole	220/230 V		I_e	A	7	9	12	15.5	18	25
	240 V		I_e	A	7	9	12	15.5	18	25
	380/400 V		I_e	A	7	9	12	15.5	18	25
	415 V		I_e	A	7	9	12	15.5	18	25
	440 V		I_e	A	7	9	12	15.5	18	25
	500 V		I_e	A	5	7	10	12.5	18	25
660/690 V		I_e	A	4	5	7	9	12	15	
Rated operational power	220/230 V		P	kW	2.2	2.5	3.5	4	5	7.5
	240 V		P	kW	2.2	3	4	4.6	5.5	8.5
	380/400 V		P	kW	3	4	5.5	7.5	7.5	11
	415 V		P	kW	4	5.5	7	8	10	14.5
	440 V		P	kW	4.5	5.5	7.5	8.4	10.5	15.5
	500 V		P	kW	3.5	4.5	7	7.5	12	17.5
	660/690 V		P	kW	3.5	4.5	6.5	7	11	14
AC-4 operation										
Rated operational current AC-4 open, 50 - 60 Hz, 3 pole	220/230 V		I_e	A	5	6	7	7	10	13
	240 V		I_e	A	5	6	7	7	10	13
	380/400 V		I_e	A	5	6	7	7	10	13
	415 V		I_e	A	5	6	7	7	10	13
	440 V		I_e	A	5	6	7	7	10	13
	500 V		I_e	A	4.5	5	6	6	10	13
660/690 V		I_e	A	4	4.5	5	5	8	10	
Rated operational power	220/230 V		P	kW	1	1.5	2	2	2.5	3.5
	240 V		P	kW	1.5	1.6	2.2	2.2	3	4
	380/400 V		P	kW	2.2	2.5	3	3	4.5	6
	415 V		P	kW	2.3	2.8	3.4	3.4	5	6.5
	440 V		P	kW	2.4	3	3.6	3.6	5.5	7
	500 V		P	kW	2.5	2.8	3.5	3.5	6	8
	660/690 V		P	kW	2.9	3.6	4.4	4.4	6.5	8.5
DC voltage										
Operations										
Rated operational current I_e open										
DC-1 operation	60 V		I_e	A	20	20	20	20	35	40
	110 V		I_e	A	20	20	20	20	35	40
	220 V		I_e	A	15	15	15	15	35	40
	440 V		I_e	A	1	1.3	1.3	1.3	2.9	2.9
DC-3 operation	60 V		I_e	A	20	20	20	20	35	35
	110 V		I_e	A	20	20	20	20	35	35
	220 V		I_e	A	1.5	1.5	1.5	1.5	10	10
	440 V		I_e	A	0.2	0.2	0.2	0.2	0.6	0.6
DC-5 operation	60 V		I_e	A	20	20	20	20	35	35
	110 V		I_e	A	20	20	20	20	35	35
	220 V		I_e	A	1.5	1.5	1.5	1.5	10	10
440 V		I_e	A	0.2	0.2	0.2	0.2	0.6	0.6	

DILM32	DILM38	DILM40	DILM50	DILM65	DILM72	DILM80	DILM95	DILM115	DILM150	DILM170
45	45	60	80	98	98	110	130	160	190	225
43	43	57	71	88	88	98	125	142	180	200
42	42	55	68	83	83	94	115	135	170	190
40	40	50	65	80	80	90	110	130	160	185
36	36	45	58	72	72	80	100	115	144	166
100	100	125	162	200	200	225	275	325	400	460
90	90	112	145	180	180	200	250	285	360	415
32	38	40	50	65	72	80	95	115	150	170
32	38	40	50	65	72	80	95	115	150	170
32	38	40	50	65	72	80	95	115	150	170
32	38	40	50	65	72	80	95	115	150	170
32	38	40	50	65	72	80	95	115	150	170
18	22.5	25	32	37	37	65	80	93	100	150
10	11	12.5	15.5	20	22	25	30	37	48	52
11	12	13.5	17	22	25	27.5	32	40	52	57
15	18.5	18.5	22	30	37	37	45	55	75	90
19	20	24	30	39	41	48	57	70	91	100
20	21	25	32	41	44	51	60	75	95	105
23	24	28	36	47	50	58	70	85	110	120
17	21	23	30	35	35	63	75	90	96	140
15	15	18	21	25	25	40	50	55	65	65
15	15	18	21	25	25	40	50	55	65	65
15	15	18	21	25	25	40	50	55	65	65
15	15	18	21	25	25	40	50	55	65	65
15	15	18	21	25	25	40	50	55	65	65
12	12	14	17	20	20	27	37	45	50	50
4	4	5	6	7	7	12	16	17	20	20
4.5	4.5	5.5	6.5	7.5	7.5	13	17	19	22	22
7	7	9	10	12	12	20	26	28	33	33
7.5	7.5	9.5	11	13	13	24	30	33	39	39
8	8	10	12	14	14	25	32	35	41	41
9	9	11	13	16	16	29	36	40	47	47
10	10	12	14	17	17	26	35	43	48	48
40	40	50	60	72	72	110	110	160	160	160
40	40	50	50	72	72	110	110	160	160	160
40	40	45	45	65	65	70	70	90	90	90
2.9	2.9	2.9	2.9	2.9	2.9	4.5	4.5	4.5	4.5	4.5
40	40	50	60	72	72	110	110	160	160	160
40	40	50	50	72	72	110	110	160	160	160
25	25	25	25	35	35	35	35	40	40	40
0.6	0.6	0.6	0.6	0.6	0.6	1	1	1	1	1
40	40	50	60	72	72	110	110	160	160	160
40	40	50	50	72	72	110	110	160	160	160
10	10	25	25	35	35	35	35	40	40	40
0.6	0.6	0.6	0.6	0.6	0.6	1	1	1	1	1

Contactors

Basic devices up to 170 A

DILM7 ... DILM170

				DILM7	DILM9	DILM12	DILM15	DILM17	DILM25
Current heat loss (3 pole)									
Current heat loss at I_{th}		W		3	3	3	3	7.3	9.6
Current heat loss at I_e to AC-3/400 V		W		0.37	0.6	1.1	1.8	1.9	3.8
Impedance per pole		mΩ		2.5	2.5	2.5	2.5	2	2
Magnet systems									
Voltage tolerance									
AC operated	Pick-up	$x U_c$		0.8 - 1.1	0.8 - 1.1	0.8 - 1.1	0.8 - 1.1	0.8 - 1.1	0.8 - 1.1
AC operated	Drop-out	$x U_c$		0.3 - 0.6	0.3 - 0.6	0.3 - 0.6	0.3 - 0.6	0.3 - 0.6	0.3 - 0.6
DC operated ³⁾	Pick-up	$x U_c$		0.8 - 1.1	0.8 - 1.1 ¹⁾	0.8 - 1.1 ¹⁾	0.8 - 1.1 ¹⁾	0.7 - 1.2 ²⁾	0.7 - 1.2 ²⁾
DC operated ³⁾	Drop-out	$x U_c$		0.15 - 0.6	0.15 - 0.6	0.15 - 0.6	0.15 - 0.6	0.15 - 0.6	0.15 - 0.6
Power consumption of the coil in a cold state and $1.0 \times U_c$									
50 Hz	Pick-up	VA		24	24	24	24	52	52
50 Hz	Sealing	VA		3.4	3.4	3.4	3.4	7.1	7.1
50 Hz	Sealing	W		1.2	1.2	1.2	1.2	2.1	2.1
60 Hz	Pick-up	VA		30	30	30	30	67	67
60 Hz	Sealing	VA		4.4	4.4	4.4	4.4	8.7	8.7
60 Hz	Sealing	W		1.4	1.4	1.4	1.4	2.6	2.6
50/60 Hz	Pick-up	VA		27	27	27	27	62	62
				25	25	25	25	58	58
50/60 Hz	Sealing	VA		4.2	4.2	4.2	4.2	9.1	9.1
				3.3	3.3	3.3	3.3	6.5	6.5
50/60 Hz	Sealing	W		1.4	1.4	1.4	1.4	2.5	2.5
				1.2	1.2	1.2	1.2	2	2
DC operated	Pick-up	W		3	3	4.5	4.5	12	12
DC operated	Sealing	W		3	3	4.5	4.5	0.5	0.5
Duty factor		% DF		100	100	100	100	100	100
Changeover times at 100 % U_c (recommended values)									
Main contacts									
	AC operated	Closing delay	ms	15...21	15...21	15...21	15...21	16...22	16...22
		Opening delay	ms	9...18	9...18	9...18	9...18	8...14	8...14
	DC operated	Closing delay	ms	31	31	31	31	47	47
		Opening delay	ms	12	12	12	12	30	30
Arcing time				ms	10	10	10	10	10
Permissible residual current when A1 - A2 are actuated from the electronic system (with 0 signal)				mA	—	—	—	—	—
Lifespan, mechanical; Coil 50/60 Hz				At 50 Hz	Mechanical lifespan at 50 Hz approx. 30% lower than under → Technical data general				
Electromagnetic compatibility (EMC)									
Emitted interference					To EN 60947-1				
Interference immunity					To EN 60947-1				

Notes

¹⁾ At 24 V DC: 0.7 – 1.3 without auxiliary contact module and at ambient temperature + 40 °C

²⁾ RDC 24 (Umin 24 V DC/Umax 27 V DC)

RDC 60 (Umin 48 V DC/Umax 60 V DC)

RDC 130 (Umin 110 V DC/Umax 130 V DC)

RDC 240 (Umin 200 V DC/Umax 240 V DC)

Example: $U_c = 0.7 \times U_{min} - 1.2 \times U_{max} / U_c = 0.7 \times 24 \text{ V} - 1.2 \times 27 \text{ V DC}$

³⁾ At least: smoothed two-phase bridge rectifier or three-phase rectifier

Contactors
Basic devices up to 170 A
DILM7 ... DILM170

DILM32	DILM38	DILM40	DILM50	DILM65	DILM72	DILM80	DILM95	DILM115	DILM150	DILM170
12.1	12.1	11.3	19	28.8	28.8	12.2	18.2	20.3	30.7	41.1
6.1	6.1	7.2	11.3	19	23	9.6	13.5	15.9	27	34.7
2	2	1.5	1.5	1.5	1.5	0.5	0.5	0.4	0.4	0.4
0.8 - 1.1	0.8 - 1.1	0.8 - 1.1	0.8 - 1.1	0.8 - 1.1	0.8 - 1.1	0.8 - 1.1	0.8 - 1.1	0.8 - 1.15	0.8 - 1.15	0.8 - 1.15
0.3 - 0.6	0.3 - 0.6	0.3 - 0.6	0.3 - 0.6	0.3 - 0.6	0.3 - 0.6	0.3 - 0.6	0.3 - 0.6	0.25 - 0.6	0.25 - 0.6	0.25 - 0.6
0.7 - 1.2 ²⁾	0.7 - 1.2 ²⁾	0.7 - 1.2 ²⁾	0.7 - 1.2 ²⁾	0.7 - 1.2 ²⁾	0.7 - 1.2 ²⁾	0.7 - 1.2 ²⁾	0.7 - 1.2 ²⁾	0.7 - 1.2 ²⁾	0.7 - 1.2 ²⁾	0.7 - 1.2 ²⁾
0.15 - 0.6	0.15 - 0.6	0.15 - 0.6	0.15 - 0.6	0.15 - 0.6	0.15 - 0.6	0.15 - 0.6	0.15 - 0.6	0.15 - 0.6	0.15 - 0.6	0.15 - 0.6
52	52	149	149	149	149	310	310	180	180	180
7.1	7.1	16	16	16	16	26	26	3.1	3.1	3.1
2.1	2.1	4.3	4.3	4.3	4.3	5.8	5.8	2.1	2.1	2.1
67	67	178	178	178	178	345	345	170	170	170
8.7	8.7	19	19	19	19	30	30	3.1	3.1	3.1
2.6	2.6	5.3	5.3	5.3	5.3	7.1	7.1	2.1	2.1	2.1
62	62	168	168	168	168	372	372	170	170	170
58	58	154	154	154	154	328	328	170	170	170
9.1	9.1	22	22	22	22	37.1	37.1	3.1	3.1	3.1
6.5	6.5	14	14	14	14	22.6	22.6	3.1	3.1	3.1
2.5	2.5	5.3	5.3	5.3	5.3	7.5	7.5	2.1	2.1	2.1
2	2	4.3	4.3	4.3	4.3	6.1	6.1	2.1	2.1	2.1
12	12	24	24	24	24	90	90	149	149	149
0.5	0.5	0.5	0.5	0.5	0.5	1.3	1.3	2.1	2.1	2.1
100	100	100	100	100	100	100	100	100	100	100
16...22	16...22	12...18	12...18	12...18	12...18	14...20	14...20	28...33	28...33	28...33
8...14	8...14	8...13	8...13	8...13	8...13	9...14	9...14	35...41	35...41	35...41
47	47	54	54	54	54	45	45	35	35	35
30	30	24	24	24	24	34	34	30	30	30
10	10	10	10	10	10	15	15	15	15	15
–	–	–	–	–	–	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1
Mechanical lifespan at 50 Hz approx. 30% lower than under → Technical data general										
To EN 60947-1										
To EN 60947-1										

Contactors

Comfort devices and standard devices greater than 170 A

DILM185...DILM1600, DILH

			Contactors						
			DILM185A	DILM225A	DILM250	DILM300A	DILM400	DILM500	DILM570
General									
Standards			IEC/EN 60947, VDE 0660, UL, CSA						
Lifespan, mechanical									
AC operated	c (contacts)	x 10 ⁶	10	10	10	10	7	7	7
DC operated	c (contacts)	x 10 ⁶	10	10	10	10	7	7	7
Operating frequency, mechanical									
AC operated	Operations/h		3000	3000	3000	3000	2000	2000	2000
DC operated	Operations/h		3000	3000	3000	3000	2000	2000	2000
Maximum operating frequency									
Electrical (Contactor without overload relay)			→ Engineering Page 5/95						
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30						
Ambient temperature									
Open		°C	-25...60	-25...60	-25...60	-25...60	-25...60	-25...60	-25...60
Enclosed		°C	-25...40	-25...40	-25...40	-25...40	-25...40	-25...40	-25...40
Storage		°C	-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80
Mounting position: AC and DC-actuated									
Mechanical shock resistance (IEC/EN 60068-2-27)									
Half-sinusoidal shock 10 ms									
Main contacts									
N/O		g	10	10	10	10	10	10	10
Auxiliary contacts									
N/O		g	10	10	10	10	10	10	10
NC		g	8	8	8	8	8	8	8
Protection type			IP00						
Protection against direct contact when actuated from front (EN 90274)			Finger- and back-of-hand proof with cover or terminal block						
Weight									
Weight		kg	3.2	3.2	6.5	6.5	8	8	8
Terminal capacity of main cable									
Flexible with cable lug		mm ²	50 - 185	50 - 185	50 - 240	50 - 240	50 - 240	50 - 240	50 - 240
Stranded with cable lug		mm ²	50 - 185	70 - 185	70 - 240	70 - 240	70 - 240	70 - 240	70 - 240
Solid or stranded		AWG	1/0 - 350 MCM	2/0 - 250 MCM	2/0 - 500 MCM	2/0 - 500 MCM	2/0 - 500 MCM	2/0 - 500 MCM	2/0 - 500 MCM
Busbar	Width	mm	32	32	25	25	25	30	30
Main cable connection screw/bolt			M10						
Tightening torque			24						
Terminal capacity of control circuit cable									
Solid		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)						
Flexible with ferrule		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)						
Solid or stranded		AWG	2 x (18 - 12)	2 x (18 - 12)	2 x (18 - 12)	2 x (18 - 12)	2 x (18 - 12)	2 x (18 - 12)	2 x (18 - 12)
Control circuit cable connection screw/bolt			M3.5						
Tightening torque			1.2						
Tools									
Main conductors									
Wrench		mm	16	16	16	16	16	16	16
Auxiliary conductors									
Pozidriv screwdriver		Size	2	2	2	2	2	2	2

DILM580	DILM650	DILM750	DILM820	DILM1000	DILM1600	DILH1400	DILH2000	DILH2200	DILH2600
IEC/EN 60947, VDE 0660, UL, CSA									
5	5	5	5	5	5	5	5	5	5
5	5	5	5	5	5	5	5	5	5
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
→ Engineering Page 5/95									
Damp heat, constant, to IEC 60068-2-78									
Damp heat, cyclic, to IEC 60068-2-30									
-25...60	-25...60	-25...60	-25...60	-25...60	-25...60	-25...60	-25...60	-25...60	-25...60
-25...40	-25...40	-25...40	-25...40	-25...40	-25...40	-25...40	-25...40	-25...40	-25...40
-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80
10	10	10	10	10	10	10	10	10	10
10	10	10	10	10	10	10	10	10	10
8	8	8	8	8	8	8	8	8	8
IP00	IP00	IP00	IP00	IP00	IP00	IP00	IP00	IP00	IP00
Finger- and back-of-hand proof with cover or terminal block									
15	15	15	15	15	32	15	32	32	32
50 - 240	50 - 240	50 - 240	50 - 240	50 - 240	–	–	–	–	–
70 - 240	70 - 240	70 - 240	70 - 240	70 - 240	–	–	–	–	–
2/0 - 500 MCM	2/0 - 500 MCM	2/0 - 500 MCM	2/0 - 500 MCM	2/0 - 500 MCM	–	–	–	–	–
50	50	60	60	60	100	80	100	100	100
M10	M10	M12	M12	M12	M12	M12	M12	M12	M12
24	24	35	35	35	35	35	35	35	35
1 x (0.75 - 2.5)									
2 x (0.75 - 2.5)									
1 x (0.75 - 2.5)									
2 x (0.75 - 2.5)									
2 x (18 - 12)	2 x (18 - 12)	2 x (18 - 12)	2 x (18 - 12)	2 x (18 - 12)	2 x (18...12)	2 x (18 - 12)	2 x (18 - 12)	2 x (18 - 12)	2 x (18 - 12)
M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5
1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
16	16	18	18	18	18	18	18	18	18
2	2	2	2	2	2	2	2	2	2

Contactors

Comfort devices and standard devices greater than 170 A

DILM185...DILM1600, DILH

			Contactors						
			DILM185A	DILM225A	DILM250	DILM300A	DILM400	DILM500	DILM570
Main contacts									
Rated impulse withstand voltage	U_{imp}	V AC	8000	8000	8000	8000	8000	8000	8000
Overvoltage category/pollution degree			III/3	III/3	III/3	III/3	III/3	III/3	III/3
Rated insulation voltage	U_i	V AC	1000	1000	1000	1000	1000	1000	1000
Rated operating voltage	U_e	V AC	1000	1000	1000	1000	1000	1000	1000
Safe isolation according to EN 61140									
Between coil and contacts		V AC	500	500	500	500	500	500	500
Between the contacts		V AC	500	500	500	500	500	500	500
Making capacity (cos ϕ to IEC/EN 60947)		A	2700	2700	3000	3600	5500	5500	6000
Breaking capacity									
220/230 V		A	2250	2250	2500	3000	5000	5000	5800
380/400 V		A	2250	2250	2500	3000	5000	5000	5800
500 V		A	2250	2250	2500	3000	5000	5000	5800
660/690 V		A	2250	2250	2500	3000	5000	5000	5800
1000 V		A	760	760	760	950	950	950	950
Component lifespan			→ Page 5/91						
Short-circuit rating									
Short-circuit protection rating maximum fuse									
Type "2" coordination									
400 V	gG/gL 500 V	A	250	250	315	315	500	500	500
690 V	gG/gL 690 V	A	250	250	315	315	500	500	500
1000 V	gG/gL 1000 V	A	160	160	160	160	200	200	200
Type "1" coordination									
400 V	gG/gL 500 V	A	400	400	400	400	630	630	800
690 V	gG/gL 690 V	A	315	315	400	400	630	630	630
1000 V	gG/gL 1000 V	A	200	200	200	200	250	250	250
AC voltage									
AC-1 operation									
Conventional thermal current 3 pole 50 - 60 Hz									
Open									
at 40 °C	I_{th}	A	337	356	400	430	612	857	920
at 50 °C	I_{th}	A	301	310	360	385	548	767	821
at 55 °C	I_{th}	A	287	295	340	365	522	731	783
at 60 °C	I_{th}	A	275	285	330	350	500	700	750
Enclosed ¹⁾	I_{th}	A	245	275	300	315	450	650	–
Conventional thermal current, 1-pole									
Open ¹⁾	I_{th}	A	685	707	825	875	1250	1750	1875
Enclosed ¹⁾	I_{th}	A	625	636	742	785	1125	1600	–
AC-3 operation									
Rated operational current AC -3 open, 50 – 60 Hz, 3 pole									
220/230 V	I_e	A	185	225	250	300	400	500	580
240 V	I_e	A	185	225	250	300	400	500	580
380/400 V	I_e	A	185	225	250	300	400	500	580
415 V	I_e	A	185	225	250	300	400	500	580
440 V	I_e	A	185	225	250	300	400	500	580
500 V	I_e	A	185	225	250	300	400	500	500
660/690 V	I_e	A	150	160	250	210	360	360	360
1000 V	I_e	A	76	76	76	95	95	95	95
Rated operational power									
220/230 V	P	kW	55	70	75	90	125	155	185
240 V	P	kW	62	75	85	100	132	170	200
380/400 V	P	kW	90	110	132	160	200	250	315
415 V	P	kW	110	132	148	180	240	300	348
440 V	P	kW	115	138	132	185	200	250	370
500 V	P	kW	132	160	180	215	290	360	360
660/690 V	P	kW	140	150	240	195	344	344	344
1000 V	P	kW	108	108	108	132	132	132	132

Notes

¹⁾ At maximum permissible ambient air temperature

²⁾ To 690 V

DILM580	DILM650	DILM750	DILM820	DILM1000	DILM1600	DILH1400	DILH2000	DILH2200	DILH2600
8000	8000	8000	8000	8000	8000	8000	8000	8000	8000
III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
500	500	500	500	500	500	500	500	500	500
500	500	500	500	500	500	500	500	500	500
7800	7800	9840	9840	9840	19000	9840	9840	9840	9840
6500	6500	8200	8200	8200	16000	8200	8200	8200	8200
6500	6500	8200	8200	8200	16000	8200	8200	8200	8200
6500	6500	8200	8200	8200	16000	8200	8200	8200	8200
6500	6500	8200	8200	8200	16000	8200	8200	8200	8200
4350	4350	5800	5800	5800	5800	5800	5800	5800	5800
→ Page 5/91									
630	630	630	630	630	-	-	-	-	-
630	630	630	630	630	-	-	-	-	-
500	500	630	630	630	-	-	-	-	-
1000	1000	1200	1200	1200	-	-	-	-	-
1000	1000	1200	1200	1200	-	-	-	-	-
630	630	800	800	800	-	-	-	-	-
980	1041	1102	1225	1225	2200 ²⁾	1714 ²⁾	2450 ²⁾	2700 ²⁾	3185 ²⁾
876	931	986	1095	1095	1970 ²⁾	1533 ²⁾	2190 ²⁾	2400 ²⁾	2847 ²⁾
836	888	940	1044	1044	1880 ²⁾	1462 ²⁾	2089 ²⁾	2300 ²⁾	2716 ²⁾
800	850	900	1000	1000	1800 ²⁾	1400 ²⁾	2000 ²⁾	2200 ²⁾	2600 ²⁾
-	-	-	-	-	-	-	-	-	-
2000	2125	2250	2500	2500	4500	3500	5000	5500	6500 ²⁾
-	-	-	-	-	-	-	-	-	-
580	650	750	820	1000	1600	-	-	-	-
580	650	750	820	1000	1600	-	-	-	-
580	650	750	820	1000	1600	-	-	-	-
580	650	750	820	1000	1600	-	-	-	-
580	650	750	820	1000	1600	-	-	-	-
580	650	750	820	1000	1600	-	-	-	-
435	435	580	580	750	1200	-	-	-	-
185	205	240	260	315	500	-	-	-	-
200	225	260	285	340	550	-	-	-	-
315	355	400	450	560	900	-	-	-	-
348	390	455	500	610	930	-	-	-	-
370	420	480	450	650	1000	-	-	-	-
420	470	550	600	730	1180	-	-	-	-
560	630	720	750	1000	1600	-	-	-	-
600	600	800	800	1100	1770	-	-	-	-

Contactors

Comfort devices and standard devices greater than 170 A

DILM185...DILM1600, DILH

			Contactors						
			DILM185A	DILM225A	DILM250	DILM300A	DILM400	DILM500	DILM570
AC voltage									
AC-4 operation									
Rated operational current AC -4 open, 50 – 60 Hz, 3 pole									
220/230 V	I_e	A	136	164	200	240	296	360	360
240 V	I_e	A	136	164	200	240	296	360	360
380/400 V	I_e	A	136	164	200	240	296	360	360
415 V	I_e	A	136	164	200	240	296	360	360
440 V	I_e	A	136	164	200	240	296	360	360
500 V	I_e	A	136	164	200	240	296	360	360
660/690 V	I_e	A	110	120	200	170	296	296	296
1000 V	I_e	A	55	55	76	76	95	95	95
Rated operational power									
220/230 V	P	kW	41	51	62	75	92	112	112
240 V	P	kW	45	54	68	82	101	122	122
380/400 V	P	kW	75	90	110	132	160	200	200
415 V	P	kW	80	96	117	142	176	216	216
440 V	P	kW	85	102	125	150	186	229	229
500 V	P	kW	96	116	143	172	214	260	260
660/690 V	P	kW	102	110	189	160	283	344	344
1000 V	P	kW	77	77	108	109	132	132	132
Capacitor operation									
Individual compensation rated operational current I_e of alternating current capacitor									
Open									
To 525 V		A	220	220	220	307	307	307	307
690 V		A	133	133	133	177	177	177	177
Max. peak inrush current		$x I_e$	30	30	30	30	30	30	30
Component lifespan	c (contacts)	$x 10^6$	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Max. operating frequency		Ops/h	200	200	200	200	200	200	200
DC voltage									
Operations									
Rated operational current I_e open									
DC-1 operation									
60 V	I_e	A	300	300	300	400	400	400	400
110 V	I_e	A	300	300	300	400	400	400	400
220 V	I_e	A	300	300	300	400	400	400	400
440 V	I_e	A	11	11	11	11	11	11	11
DC-3 operation									
60 V	I_e	A	300	300	300	400	400	400	400
110 V	I_e	A	300	300	300	400	400	400	400
220 V	I_e	A	300	300	300	400	400	400	400
DC-5 operation									
60 V	I_e	A	300	300	300	400	400	400	400
110 V	I_e	A	300	300	300	400	400	400	400
220 V	I_e	A	300	300	300	400	400	400	400
Current heat loss (3 pole)									
Current heat loss at I_{th}		W	34	45	55	37	58	113	130
Current heat loss at I_e to AC-3/400 V		W	16	23	28	21	37	58	78

DILM580	DILM650	DILM750	DILM820	DILM1000	DILM1600	DILH1400	DILH2000	DILH2200	DILH2600
456	512	576	656	800	1280	–	–	–	–
456	512	576	656	800	1280	–	–	–	–
456	512	576	656	800	1280	–	–	–	–
456	512	576	656	800	1280	–	–	–	–
456	512	576	656	800	1280	–	–	–	–
456	512	576	656	800	1280	–	–	–	–
456	512	576	656	800	1280	–	–	–	–
348	348	464	464	700	1120	–	–	–	–
143	161	181	209	260	430	–	–	–	–
156	176	200	228	280	450	–	–	–	–
250	280	315	355	450	750	–	–	–	–
274	307	346	394	490	770	–	–	–	–
290	326	367	418	520	830	–	–	–	–
330	370	417	474	590	940	–	–	–	–
440	494	556	633	780	1300	–	–	–	–
509	509	678	678	1000	1650	–	–	–	–
463	463	463	463	463	–	–	–	–	–
265	265	265	265	265	–	–	–	–	–
30	30	30	30	30	–	–	–	–	–
0.1	0.1	0.1	0.1	0.1	–	–	–	–	–
200	200	200	200	200	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
61	69	78	96	96	155	188	192	232	250
32	41	54	65	96	123	–	–	–	–

Contactors

Comfort devices and standard devices greater than 170 A

DILM185...DILM1600, DILH

				Contactors						
				DILM185A	DILM225A	DILM250	DILM300A	DILM400	DILM500	DILM570
Magnet systems										
Voltage tolerance ¹⁾	AC operated	Pick-up	$x U_c$	0.8 - 1.15	0.8 - 1.15					
	AC operated	Drop-out	$x U_c$	0.25 - 0.6	0.25 - 0.6					
	DC operated	Pick-up	$x U_c$	0.7 - 1.2	0.7 - 1.2					
	DC operated	Drop-out	$x U_c$	0.15 - 0.6	0.15 - 0.6					
Power consumption of the coil in a cold state and $1.0 x U_c$	50/60 Hz	Pick-up	VA	210	210	—	—	—	—	—
	50/60 Hz	Sealing	VA	2.6	2.6	—	—	—	—	—
	50/60 Hz	Sealing	W	2.6	2.6	—	—	—	—	—
	DC operated	Pick-up	W	180	180	—	—	—	—	—
	DC operated	Sealing	W	2.1	2.1	—	—	—	—	—
Voltage tolerance	Comfort series DILM...	Pick-up	$x U_c$	—	—	$0.7 x U_{c \min} - 1.15 x U_{c \max}$				
	Standard range DILM...-S	Pick-up	$x U_c$	—	—	$0.85 x U_{c \min} - 1.1 x U_{c \max}$				
	Comfort series DILM...	Drop-out	$x U_c$	—	—	$0.2 x U_{c \min} - 0.6 x U_{c \min}$				
	Standard range DILM...-S	Drop-out	$x U_c$	—	—	$0.2 x U_{c \min} - 0.4 x U_{c \min}$				
Power consumption of the coil in a cold state and $1.0 x U_c$	Comfort series DILM...	Pick-up	VA	—	—	380 ²⁾	380 ²⁾	450 ²⁾	450 ²⁾	450 ²⁾
	Comfort series DILM...	Pick-up	W	—	—	250	250	350	350	350
	Comfort series DILM...	Sealing	VA	—	—	4.3	4.3	4.3	4.3	4.3
	Comfort series DILM...	Sealing	W	—	—	3.3	3.3	3.3	3.3	3.3
	Standard range DILM...-S	Pick-up	VA	—	—	360 ⁴⁾	360 ⁴⁾	715 ⁴⁾	715 ⁴⁾	715 ⁴⁾
	Standard range DILM...-S	Pick-up	W	—	—	325	625	645	645	645
	Standard range DILM...-S	Sealing	VA	—	—	4.3	4.3	4.3	4.3	4.3
	Standard range DILM...-S	Sealing	W	—	—	3.3	3.3	3.3	3.3	3.3
Duty factor			% DF	—	—	100	100	100	100	100
Changeover time at 100 % U_c (recommended values), main circuit										
Comfort series DILM...	Closing delay		ms	—	—	< 100	< 80	< 80	< 80	< 80
	Opening delay		ms	—	—	< 110	< 110	< 110	< 110	< 110
Standard range DILM...-S	Closing delay		ms	< 60	< 60	< 55	< 55	< 55	< 55	< 55
	Opening delay		ms	< 40	< 40	< 40	< 40	< 50	< 50	< 50
Behavior in limit range and transition area, hold state										
Voltage interruption	$(0 - 0.2 x U_{c \min}) \leq 10 \text{ ms}$			—	—	Targeted bridging during this time				
	$(0 - 0.2 x U_{c \min}) > 10 \text{ ms}$					Drop-out of the contactor				
Voltage drops	$(0.2 - 0.6 x U_{c \min}) \leq 12 \text{ ms}$					Targeted bridging during this time				
	$(0.2 - 0.6 x U_{c \min}) > 12 \text{ ms}$					Drop-out of the contactor				
	$(0.6 - 0.7 x U_{c \min})$					Contactor remains switched on				
Excess voltage	$(1.15 - 1.3 x U_{c \max})$					Contactor remains switched on				
	$(> 1.3 x U_{c \max}) \leq 3 \text{ s}$					Contactor remains switched on				
	$(> 1.3 x U_{c \max}) > 3 \text{ s}$					Drop-out of the contactor				
Pick-up phase	$(0 - 0.7 x U_{c \min})$					Contactor does not switch on				
	$(0.7 x U_{c \min} - 1.15 x U_{c \max})$					Contactor switches on safely				
	$(> 1.15 x U_{c \max})$					Contactor switches on safely				
Permissible transitional contact resistance (of external control unit when A11 is actuated)			mΩ	—	—	≤ 500	≤ 500	≤ 500	≤ 500	—
Permissible residual current (when A11 is actuated from the electronic system in the event of a 0 signal)			mA	—	—	≤ 1	≤ 1	≤ 1	≤ 1	—
PLC signal level (A3 - A4) to IEC/EN 61131-2 (part no. 2)										
High			V	15	15	15	15	15	15	—
Low			V	5	5	5	5	5	5	—
Electromagnetic compatibility (EMC)										
Electromagnetic compatibility				This product is designed for operation in industrial environments (environment 2). The use in residential environments (environment 1) could cause electrical interference so that addition suppression must be planned.						
Notes										
				¹⁾ $U_{c \min}$, $U_{c \max}$,						
				²⁾ Control transformer with $u_k \leq 0.6$						
				³⁾ Control transformer with $u_k \leq 0.7$						
				⁴⁾ $u_k \leq 10 \%$						

DILM580	DILM650	DILM750	DILM820	DILM1000	DILM1600	DILH1400	DILH2000	DILH2200	DILH2600
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
0.7 x U _{c min} - 1.15 x U _{c max}									
0.85 x U _{c min} - 1.1 x U _{c max}									
0.2 x U _{c min} - 0.6 x U _{c min}									
0.2 x U _{c min} - 0.4 x U _{c min}									
800 ³⁾	800 ³⁾	800 ³⁾	800 ³⁾	800 ³⁾	1600 ³⁾	800 ³⁾	1600 ³⁾	1600 ³⁾	-
700	700	700	700	700	1400	700	1400	1400	-
7.5	7.5	7.5	7.5	7.5	15	7.5	15	15	-
6.5	6.5	6.5	6.5	6.5	13	6.5	13	13	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
100	100	100	100	100	100	100	100	100	100
< 70	< 70	< 70	< 70	< 70	< 70	< 70	< 70	< 70	-
< 110	< 110	< 110	< 110	< 110	< 40	< 40	< 40	< 40	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
Targeted bridging during this time									
Drop-out of the contactor									
Targeted bridging during this time									
Drop-out of the contactor									
Contactor remains switched on									
Contactor remains switched on									
Contactor remains switched on									
Drop-out of the contactor									
Contactor does not switch on									
Contactor switches on safely									
Contactor switches on safely									
≤ 500	≤ 500	≤ 500	≤ 500	≤ 500	≤ 500	≤ 500	≤ 500	≤ 500	≤ 500
≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1
15	15	15	15	15	15	15	15	15	15
5	5	5	5	5	5	5	5	5	5
This product is designed for operation in industrial environments (environment 2). The use in residential environments (environment 1) could cause electrical interference so that addition suppression must be planned.									

Contactors

Basic devices up to 200 A, 4 pole

DILMP20 ... DILMP200

			DILMP20	DILMP32 DILMP45	DILMP63 DILMP80	DILMP125 DILMP160 DILMP200
General						
Standards			IEC/EN 60947, VDE 0660, UL, CSA			
Lifespan, mechanical						
AC operated	c (contacts)	x 10 ⁶	10			
DC operated	c (contacts)	x 10 ⁶	10			
Operating frequency, mechanical						
Mechanical, AC operated	Operations/h		5000		3600	
DC operated	Operations/h		5000		3600	
Maximum operating frequency						
Electrical (Contactor without overload relay)			600			
Climatic proofing						
			Damp heat, constant, to IEC 60068-2-3 Damp heat, cyclic, to IEC 60068-2-30			
Ambient temperature						
Open		°C	-25...60			
Enclosed		°C	-25...40			
Storage		°C	-40 - 80			
Mounting position AC- and DC operated						
Mechanical shock resistance (IEC/EN 60068-2-27)						
Half-sinusoidal shock 10 ms						
Main contacts						
	N/O	g	10			
Auxiliary contacts						
	N/O	g	7			
	NC	g	5			
Protection type			IP20		IP00	
With accessories			-		IP20	
Protection against direct contact when actuated from front (EN 50274)			Finger- and back-of-hand proof			
Terminal type, screw connection						
Terminal capacity of main cable						
Solid			mm ²		mm ²	
			1 x (0.75 - 4) 2 x (0.75 - 2.5)	1 x (0.75 - 16) 2 x (0.75 - 10)	1 x (2.5 - 16) 2 x (2.5 - 16)	-
Flexible with ferrule			mm ²		mm ²	
			1 x (0.75 - 2.5) 2 x (0.75 - 2.5)	1 x (0.75 - 16) 2 x (0.75 - 10)	1 x (2.5 - 35) 2 x (2.5 - 25)	1 x (10 - 95) 2 x (10 - 70)
Stranded			mm ²		mm ²	
			-	1 x 16	1 x (16 - 50) 2 x (16 - 35)	1 x (16 - 120) 2 x (16 - 95)
Solid or stranded			AWG		AWG	
			18 - 14	18 - 6	12 - 2	8 - 250MCM
Flat conductor			mm		mm	
	Number of layers x width x thickness		-	-	2 x (6 x 9 x 0.8)	2 x (6 x 16 x 0.8)
Terminal capacity of control circuit cable						
Solid			mm ²		mm ²	
			1 x (0.75 - 4) 2 x (0.75 - 2.5)	1 x (0.75 - 4) 2 x (0.75 - 2.5)	1 x (0.75 - 4) 2 x (0.75 - 4)	1 x (0.75 - 4) 2 x (0.75 - 4)
Flexible with ferrule			mm ²		mm ²	
			1 x (0.75 - 2.5) 2 x (0.75 - 2.5)	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)
Solid or stranded			AWG		AWG	
			18 - 14	18 - 14	18 - 14	18 - 14
Main cable connection screw/bolt			M3.5		M5	
Tightening torque			Nm		Nm	
			1.2	3	3.3	14
Control circuit cable connection screw/bolt			M3.5		M3.5	
Tightening torque			Nm		Nm	
			1.2	1.2	1.2	1.2
Tools						
Main conductors						
Poizidriv screwdriver			Size		Size	
			2	2	2	-
Internal hexagon			mm		mm	
	SW		-	-	-	5
Flat-blade screwdriver			mm		mm	
			0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	-
Auxiliary conductors						
Poizidriv screwdriver			Size		Size	
			2	2	2	2
Flat-blade screwdriver			mm		mm	
			0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6	0.8 x 5.5 1 x 6

			DILMP20	DILMP32 DILMP45	DILMP63 DILMP80	DILMP125 DILMP160 DILMP200				
Main contacts										
Rated impulse withstand voltage	U_{imp}	V AC	8000							
Overvoltage category/pollution degree			III/3							
Rated insulation voltage	U_i	V AC	690							
Rated operating voltage	U_e	V AC	690							
Safe isolation according to EN 61140										
Between coil and contacts		V AC	400	440						
Between the contacts		V AC	400	440						
Making capacity (cos ϕ to IEC/EN 60947)	To 690 V	A	144	238	350	560	700	1120	1330	1800
Breaking capacity										
220/230 V		A	120	180	250	400	500	800	950	1150
380/400 V		A	120	180	250	400	500	800	950	1150
500 V		A	100	180	250	400	500	800	950	1150
660/690 V		A	70	120	144	250	296	650	750	800
Short-circuit rating										
Short-circuit protection rating maximum fuse										
Type "2" coordination										
400 V	gG/gL 500 V	A	20	35	35	63	80	160	160	250
690 V	gG/gL 690 V	A	20	35	35	50	63	160	160	200
Type "1" coordination										
400 V	gG/gL 500 V	A	35	63	100	125	160	250	250	250
690 V	gG/gL 690 V	A	25	50	50	80	80	200	200	200
AC voltage										
AC-1 operation										
Conventional thermal current 3 pole 50 - 60 Hz										
Open										
at 40 °C	I_{th}	A	22	32	45	63	80	125	160	200
at 50 °C	I_{th}	A	21	30	41	60	76	116	150	188
at 60 °C	I_{th}	A	20	28	39	54	69	108	138	172
Enclosed	I_{th}	A	18	27	36	50	64	100	128	160
Conventional thermal current, 1 pole										
Open	I_{th}	A	60	84	117	162	207	325	415	516
Enclosed	I_{th}	A	54	76	105	146	186	292	373	464
Rated operational power										
220/230 V	P	kW	8	12	16	23	29	45	58	72
240 V	P	kW	9	13	18	25	32	49	63	79
380/400 V	P	kW	14	20	28	39	50	78	100	125
415 V	P	kW	15	22	31	43	55	85	109	137
440 V	P	kW	16	23	33	46	58	90	116	145
500 V	P	kW	18	26	37	52	66	103	132	165
690 V	P	kW	24	35	49	68	87	136	174	217
AC-3 operation										
Rated operational current AC -3 open, 50 - 60 Hz, 3 pole										
220/230 V	I_e	A	12	18	25	40	50	80	95	115
240 V	I_e	A	12	18	25	40	50	80	95	115
380/400 V	I_e	A	12	18	25	40	50	80	95	115
415 V	I_e	A	12	18	25	40	50	80	95	115
440 V	I_e	A	12	18	25	40	50	80	95	115
500 V	I_e	A	10	18	25	40	50	80	95	115
660/690 V	I_e	A	7	12	15	25	32	65	80	93
Rated operational power										
220/230 V	P	kW	3.5	5	7.5	12.5	15.5	25	30	37
240 V	P	kW	4	5.5	8.5	13.5	17	27.5	33	40
380/400 V	P	kW	5.5	7.5	11	18.5	22	37	45	55
415 V	P	kW	7	10	14.5	24	30	48	57	70
440 V	P	kW	7.5	10.5	15.5	25	32	51	60	75
500 V	P	kW	7	12	17.5	28	36	58	70	85
660/690 V	P	kW	6.5	11	14	23	30	63	75	90

Contactors

Basic devices up to 200 A, 4 pole

DILMP20 ... DILMP200

				DILMP20	DILMP32 DILMP45		DILMP63 DILMP80		DILMP125 DILMP160 DILMP200			
DC voltage												
Rated operational current I_e open												
DC-1 operation												
60 V	I_e	A	22	32	45	63	80	125	160	200		
110 V	I_e	A	22	32	45	63	80	125	160	200		
220 V	I_e	A	6	32	45	63	80	125	160	200		
440 V	I_e	A	1.3	3	3	5	5	10	10	10		
DC-3 operation												
60 V	I_e	A	20	32	45	63	80	125	160	200		
110 V	I_e	A	20	32	45	63	80	125	160	200		
220 V	I_e	A	1.5	32	45	63	80	125	160	200		
440 V	I_e	A	0.2	6	6	8	8	9	9	9		
DC-5 operation												
60 V	I_e	A	20	32	45	63	80	125	160	200		
110 V	I_e	A	20	25	32	50	80	125	160	200		
220 V	I_e	A	1.5	15	22	38	70	100	125	150		
440 V	I_e	A	0.2	4	4	8	8	8	8	8		
Current heat loss (3 pole)												
Current heat loss at I_{th}				4.7	8.2	12	16	23	29	46	60	
Impedance per pole				2.5	2	1.5	1	0.7	0.6	0.6	0.5	
Magnet systems												
Voltage tolerance												
AC operated 50 Hz	Pick-up	$x U_c$	0.8 - 1.1	0.8 - 1.1		0.8 - 1.1		0.8 - 1.1				
AC operated 50/60 Hz		$x U_c$	0.8 - 1.1	0.85 - 1.1		0.85 - 1.1		0.8 - 1.1				
AC operated	Drop-out	$x U_c$	0.4 - 0.6	0.4 - 0.6		0.4 - 0.6		0.4 - 0.6				
DC operated ¹⁾	Pick-up	$x U_c$	0.8 - 1.1	0.7 - 1.2		0.7 - 1.2		0.7 - 1.2				
DC operated ¹⁾	Drop-out	$x U_c$	0.2 - 0.6	0.2 - 0.6		0.2 - 0.6		0.2 - 0.6				
Power consumption of the coil in a cold state and $1.0 \times U_c$												
AC operated 50/60 Hz	Pick-up	VA	24	50		150		180				
AC operated 50/60 Hz	Pick-up	W	19	40		95		150				
AC operated 50/60 Hz	Sealing	VA	4	8		16		3.1				
AC operated 50/60 Hz	Sealing	W	1.2	2.4		4		2.1				
DC operated ¹⁾	Pick-up	W	4.5	12		24		149				
DC operated ¹⁾	Sealing	W	4.5	0.5		0.5		2.1				
Duty factor				100	100		100		100			
Changeover times at 100 % U_c (recommended values)												
Main contacts												
AC operated												
	Closing delay	ms	15...21	16...22		12...18		28...33				
	Opening delay	ms	9...18	8...14		8...13		35...41				
DC operated ¹⁾												
	Closing delay	ms	31	47		54		35				
	Opening delay	ms	12	30		24		30				
Arcing time				10	10		10		15			
Permissible residual current when A1 - A2 are actuated from the electronic system (with 0 signal)				≤ 1	≤ 1		≤ 1		≤ 1			

Notes

¹⁾ At least double-pulse bridge rectifier

Contactors

Contactor for capacitors

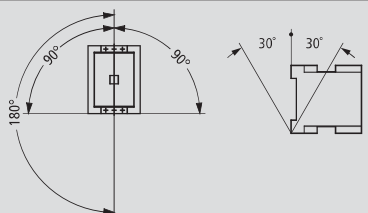
DILK

			DILK12	DILK20	DILK25	DILK33	DILK50
General							
Standards			IEC/EN 60947, VDE 0660				
Ambient temperature							
Open		°C	-25...60	-25...60	-25...60	-25...60	-25...60
Enclosed		°C	-25...40	-25...40	-25...40	-25...40	-25...40
Mounting position							
Protection type			IP00	IP00	IP00	IP00	IP00
Protection against direct contact when actuated from front (EN 50274)			Finger- and back-of-hand proof				
Weight basic device							
AC operated		kg	0.55	0.55	0.55	1	1
Terminal capacity of main cable							
Solid		mm ²	1 x (0.75 - 16)	1 x (0.75 - 16)	1 x (0.75 - 16)	1 x (2.5 - 16)	1 x (2.5 - 16)
Flexible with ferrule		mm ²	1 x (0.75 - 16)	1 x (0.75 - 16)	1 x (0.75 - 16)	1 x (2.5 - 35)	1 x (2.5 - 35)
Stranded		mm ²	1 x 16	1 x 16	1 x 16	1 x (16 - 50)	1 x (16 - 50)
Solid or stranded		AWG	18 - 16	18 - 6	18 - 6	12 - 2	12 - 2
Flat conductor	Number of layers x width x thickness	mm	-	-	-	1 x (6 x 9 x 0.8)	1 x (6 x 9 x 0.8)
Group compensation							
60 Hz							
230 V		kvar	7.5	11	15	20	25
400 V		kvar	12.5	20	25	33.3	50
525 V		kvar	16.7	25	33.3	40	65
690 V		kvar	20	33.3	40	55	85
50/60 Hz							
Open							
230 V	I_e	A	18	29	38	50	72
400 V	I_e	A	18	29	38	50	72
525 V	I_e	A	18	29	38	50	72
690 V	I_e	A	18	29	38	50	72
Enclosed							
230 V	I_e	A	16	26	34	45	65
400 V	I_e	A	16	26	34	45	65
525 V	I_e	A	16	26	34	45	65
690 V	I_e	A	16	26	34	45	65
Making capacity (i-peak value) without damping			$x I_e$				
			180	180	180	180	180
Component lifespan			c (contacts) x 10 ⁶				
			0.15	0.15	0.15	0.15	0.15
Maximum operating frequency			Ops/h				
			120	120	120	120	120

Contactors

Contactor for capacitors
DILK

			DILK12	DILK20	DILK25	DILK33	DILK50
Magnet systems							
Voltage tolerance							
AC operated	Pick-up	$x U_c$	0.8 - 1.1	0.8 - 1.1	0.8 - 1.1	0.8 - 1.15	0.8 - 1.15
AC operated	Drop-out	$x U_c$	0.3 - 0.6	0.3 - 0.6	0.3 - 0.6	0.3 - 0.6	0.3 - 0.6
Power consumption of the coil in a cold state and $1.0 x U_c$							
50 Hz	Pick-up	VA	58	58	58	45	45
50 Hz	Sealing	VA	7.6	7.6	7.6	1.5	1.5
50 Hz	Sealing	W	2.3	2.3	2.3	1.5	1.5
60 Hz	Pick-up	VA	71	71	71	45	45
60 Hz	Sealing	VA	9.3	9.3	9.3	1.5	1.5
60 Hz	Sealing	W	2.8	2.8	2.8	1.5	1.5
50/60 Hz	Pick-up	VA	65	65	65	45	45
			59	59	59	45	45
50/60 Hz	Sealing	VA	9.6	9.6	9.6	1.5	1.5
			7	7	7	1.5	1.5
50/60 Hz	Sealing	W	2.7	2.7	2.7	1.5	1.5
			2.2	2.2	2.2	1.5	1.5
Duty factor		% DF	100	100	100	100	100
Changeover times at 100 % U_c (recommended values)							
Main contacts							
AC operated							
	Closing delay	ms	16...22	16...22	16...22	50	50
	Opening delay	ms	8...14	8...14	8...14	40	40
Arcing time		ms	10	10	10	10	10
Electromagnetic compatibility (EMC)							
Emitted interference			To EN 60947-1	To EN 60947-1	To EN 60947-1	To EN 60947-1	To EN 60947-1
Interference immunity			To EN 60947-1	To EN 60947-1	To EN 60947-1	To EN 60947-1	To EN 60947-1
Further technical data							
As per contactor	DIL		M17	M25	M32	M50	M65

			DILL12	DILL18	DILL20
General					
Standards			IEC/EN 60947, VDE 0660, UL, CSA		
Lifespan, mechanical					
AC operated	c (contacts)	x 10 ⁶	1	1	1
Operating frequency, mechanical					
Mechanical, AC operated	Operations/h		60	60	60
Maximum operating frequency					
Electrical	Operations/h		60	60	60
Climatic proofing			Damp heat, constant, to IEC 60068-2-78; Damp heat, cyclic, to IEC 60068-2-30		
Ambient temperature	Open	°C	-25...60	-25...60	-25...60
	Enclosed	°C	-25...40	-25...40	-25...40
	Storage	°C	-40 - 80	-40 - 80	-40 - 80
Mounting position					
Mechanical shock resistance (IEC/EN 60068-2-27)					
Half-sinusoidal shock 10 ms			6.9	6.9	6.9
Protection type			IP00	IP00	IP00
Weight					
AC operated		kg	0.42	0.42	0.42
Main contacts					
Rated impulse withstand voltage	U_{imp}	V AC	8000	8000	8000
Overvoltage category/pollution degree			III/3	III/3	III/3
Rated insulation voltage	U_i	V AC	690	690	690
Rated operating voltage	U_e	V AC	690	690	690
Making capacity		A	238	350	550
Breaking capacity	380/400 V	A	170	250	320
Lifespan, electrical	c (contacts)		10000	10000	10000
Short-circuit protection rating maximum fuse					
400 V	gG/gL 500 V	A	63	100	125
AC voltage					
AC-1 operation					
Conventional thermal current					
	at 40 °C	I_{th} A	27	40	45
	at 60 °C	I_{th} A	24	35	40
	230 V	I_e A	12	18	20
	400 V	I_e A	12	18	20
AC-1 operation					
	220/230 V	I_e A	14	21	27
	400 V	I_e A	14	21	27
Electric lamps					
	Filament bulbs	A	14	21	27
	Mercury blended lamps	A	12	16	23
	Fluorescent lamp load				
	Conventional reactor starter connection	A	20	26	35
	Duo circuit	A	20	26	35
	Electronic upstream devices	A	12	18	20
	High-pressure mercury vapour lamps	A	12	18	20
	Metal-halide lamps	A	12	18	20
	High-pressure sodium lamps	A	12	18	20
	Low-pressure sodium lamps	A	7.5	10	12
	Maximum permissible compensation capacitance	µF	470	470	470
Further technical data					
As per contactor	DIL		M17	M25	M32

Contactors

Contactors up to 150 A with electronic actuation

DILMF

				DILMF8	DILMF11	DILMF14	DILMF17
General							
Mounting position							
AC voltage							
AC-3 operation							
Rated operational current AC -3 open, 50 – 60 Hz, 3 pole	220/230 V	I_e	A	7	9	12	18
	240 V	I_e	A	7	9	12	18
	380/400 V	I_e	A	7	9	12	18
	415 V	I_e	A	7	9	12	18
	440 V	I_e	A	7	9	12	18
	500 V	I_e	A	5	7	10	18
	660/690 V	I_e	A	4	5	7	12
Rated operational power	220/230 V	P	kW	2.2	2.5	3.5	5
	240 V	P	kW	2.2	3	4	5.5
	380/400 V	P	kW	3	4	5.5	7.5
	415 V	P	kW	4	5.5	7	10
	440 V	P	kW	4.5	5.5	7.5	10.5
	500 V	P	kW	3.5	4.5	7	12
	660/690 V	P	kW	3.5	4.5	6.5	11
AC-4 operation							
Rated operational current AC-4 open, 50 - 60 Hz, 3 pole	220/230 V	I_e	A	5	6	7	10
	240 V	I_e	A	5	6	7	10
	380/400 V	I_e	A	5	6	7	10
	415 V	I_e	A	5	6	7	10
	440 V	I_e	A	5	6	7	10
	500 V	I_e	A	4.5	5	6	10
	660/690 V	I_e	A	4	4.5	5	8
Rated operational power	220/230 V	P	kW	1	1.5	2	2.5
	240 V	P	kW	1.5	1.6	2.2	3
	380/400 V	P	kW	2.2	2.5	3	4.5
	415 V	P	kW	2.3	2.8	3.4	5
	440 V	P	kW	2.4	3	3.6	5.5
	500 V	P	kW	2.5	2.8	3.5	6
	660/690 V	P	kW	2.9	3.6	4.4	6.5
Current heat loss (3 pole)							
Current heat loss at I_{th}			W	2.4	2.4	2.4	7.3
Current heat loss at I_e to AC-3/400 V			W	0.3	0.6	1	1.9
Magnet systems							
Voltage tolerance	AC operated	Pick-up	$x U_c$	0.8 - 1.15	0.8 - 1.15	0.8 - 1.15	0.8 - 1.15
	AC operated	Drop-out	$x U_c$	0.2 - 0.5	0.2 - 0.5	0.2 - 0.5	0.2 - 0.5
Power consumption of the coil in a cold state and $1.0 x U_c$	Electronic actuation	Pick-up	VA	14	14	14	14
	Electronic actuation	Sealing	VA	0.7	0.7	0.7	0.7
	Electronic actuation	Sealing	W	0.7	0.7	0.7	0.7
	Duty factor		% DF	100	100	100	100
Switching times	Closing delay		ms	40	40	40	40
	Opening delay		ms	45	45	45	45
suitable according to				SEMI F47	SEMI F47	SEMI F47	SEMI F47
Electromagnetic compatibility (EMC)							
Emitted interference				To EN 60947-1			
Interference immunity				To EN 60947-1			
Further technical data							
As per contactor			DIL	M7	M9	M12	M17
Terminal type							
As per contactor			DIL	M17	M17	M17	M17

DILMF25	DILMF32	DILMF40	DILMF50	DILMF65	DILMF80	DILMF95	DILMF115	DILMF150
25	32	40	50	65	80	95	115	150
25	32	40	50	65	80	95	115	150
25	32	40	50	65	80	95	115	150
25	32	40	50	65	80	95	115	150
25	32	40	50	65	80	95	115	150
15	18	25	32	37	65	80	93	100
7.5	10	12.5	15.5	20	25	30	37	48
8.5	11	13.5	17	22	27.5	4	40	52
11	15	18.5	22	30	37	45	55	75
14.5	19	24	30	39	48	57	70	91
15.5	20	25	32	41	51	60	75	95
17.5	23	28	36	47	58	70	85	110
14	17	23	30	35	63	75	90	96
13	15	18	21	25	40	50	55	65
13	15	18	21	25	40	50	55	65
13	15	18	21	25	40	50	55	65
13	15	18	21	25	40	50	55	65
13	15	18	21	25	40	50	55	65
13	15	18	21	25	40	50	55	65
10	12	14	17	20	27	37	45	50
3.5	4	5	6	7	12	16	17	20
4	4.5	5.5	6.5	7.5	13	17	19	22
6	7	9	10	12	20	26	28	33
6.5	7.5	9.5	11	13	24	30	33	39
7	8	10	12	14	25	32	35	41
8	9	11	13	16	29	36	40	47
8.5	10	12	14	17	26	35	43	48
9.6	12.1	11.3	19	28.8	14.6	21.8	30.4	46.1
3.8	6.1	7.2	11.3	19	11.5	16.2	23.8	40.5
0.8 - 1.15	0.8 - 1.15	0.8 - 1.15	0.8 - 1.15	0.8 - 1.15	0.8 - 1.15	0.8 - 1.15	0.8 - 1.15	0.8 - 1.15
0.2 - 0.5	0.2 - 0.5	0.2 - 0.5	0.2 - 0.5	0.2 - 0.5	0.2 - 0.5	0.2 - 0.5	0.2 - 0.5	0.2 - 0.5
14	14	45	45	45	75	75	180	180
0.7	0.7	1.5	1.5	1.5	2	2	3.1	3.1
0.7	0.7	1.5	1.5	1.5	2	2	2.1	2.1
100	100	100	100	100	100	100	100	100
40	40	50	50	50	55	55	40	40
45	45	45	45	45	40	40	40	40
SEMI F47	SEMI F47	SEMI F47	SEMI F47	SEMI F47	SEMI F47	SEMI F47	SEMI F47	SEMI F47
To EN 60947-1								
To EN 60947-1								
M25	M32	M40	M50	M65	M80	M95	M115	M150
M25	M32	M40	M50	M65	M80	M95	M115	M150

Contactors

Auxiliary contact modules

DILM..., DILA...

			DILM7-... - DILM38-...	DILA- XHI(C)...(-S)	DILM32- XHI(C)...(-S)	DILM150- XHI...	DILM1000-XHI... DILM820-XHI...
Auxiliary contact							
Interlocked opposing contacts within an auxiliary contact module (to IEC 60947-5-1 Annex L) ¹⁾			-	Yes	Yes	Yes	Yes
Normally closed (not late-normally closed) suitable as a mirror contact (to IEC/EN 60947-4-1, Annex F)			DILM7 - DILM38	DILM7 - DILM38	DILM7 - DILM38	DILM40 - DILM170	DILM40 - DILM225A DILM250 - DILM1000
Rated impulse withstand voltage	U_{imp}	V AC	6000	6000	6000	6000	6000
Overtoltage category/pollution degree			III/3	III/3	III/3	III/3	III/3
Rated insulation voltage	U_i	V AC	690	690	690	690	690
Rated operating voltage	U_e	V AC	500	500	500	500	500
Safe isolation according to EN 61140							
Between coil and auxiliary contacts		V AC	400	400	400	440	440
Between the auxiliary contacts		V AC	400	400	400	440	440
Rated operational current							
AC-15							
230 V	I_e	A	4	4	4	4	4
380/415 V	I_e	A	4	4	4	4	4
500 V	I_e	A	1.5	-	1.5	1.5	1.5
DC L/R ≤ 15 ms ²⁾							
24 V	I_e	A	10	10	10	10	10
60 V	I_e	A	6	6	6	6	6
110 V	I_e	A	3	3	3	3	3
220 V	I_e	A	1	1	1	1	1
DC-13 (6xP)							
Contacts in series:							
3	24 V	A	2.5	2.5	2.5	-	-
3	60 V	A	1	1	1	-	-
3	110 V	A	0.5	0.5	0.5	-	-
3	220 V	A	0.25	0.25	0.25	-	-
Conventional thermal current	I_{th}	A	10	16	16	16	10
Control circuit reliability (at $U_e = 24$ V DC, $U_{min} = 17$ V, $I_{min} = 5.4$ mA)	Fault probability	λ	< 10 ⁻⁸ , < 1 one failure in 100 million operations				
Component lifespan							
at $U_e = 230$ V, AC-15, 3 A	c (contacts)	x 10 ⁶	1.3	1.3	1.3	1.3	1.3
Short-circuit rating without welding							
Max. fuse		A gG/gL	10	10	10	16	16

Notes

¹⁾ Not with DIL...XHIV and DIL...XHICV.

²⁾ Switch-on and switch-off conditions based on DC-13, time constant as specified.

Contactors
Paralleling link
P1SIL...M, DILM...-XP1

			P1DILEM DILM12-XP1	DILM32-XP1	DILM65-XP1	DILM150-XP1	DILM185-XP1
Parallel connector							
Terminal capacity							
Solid		mm ²	1 - 16	16	16	–	–
Flexible with ferrule		mm ²	1 x (0.5 - 25) 2 x (0.5 - 16)	1 x (16 - 35)	1 x (16 - 120)	–	–
Stranded		mm ²	1 x (0.5 - 25) 2 x (0.5 - 16)	1 x (16 - 50)	1 x (16 - 120)	1 x (35 - 300) 2 x (35 - 120)	–
Flat conductor	Number of layers x width x thickness	mm	6 x 9 x 0.8	–	–	2 x (11 x 21 x 1)	1 x (6 x 16 x 0.8) 2 x (20 x 32 x 0.5) 2 x (11 x 21 x 1)
Tightening torque		Nm	4	4	14	14	6
Terminal capacity of control circuit cable							
Solid		mm ²	–	–	–	–	1 x (0.75 - 4) 2 x (0.75 - 4)
Flexible with ferrule		mm ²	–	–	–	–	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)
Tools							
Pozidriv screwdriver		Size	2	2	–	–	–
Internal hexagon	SW	mm	–	–	5	6	5
Conventional thermal current							
3 pole	I _{th}	A	50	100	180	400	700
4 pole	I _{th}	A	60	–	–	–	–

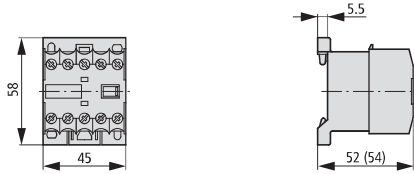
Contactors

Minicontactor relay, contactor combination
DILER..., DILE(E)M..., DIULEM, SDAINLEM

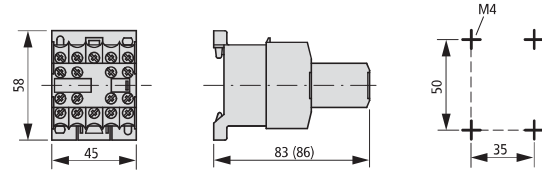
Dimensions

Mini contactor relays

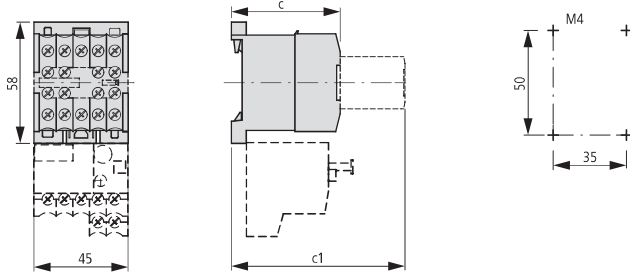
DILER...(-C)
 DILER...-G(-C)



DILER...(-C) + ...DILE(-C)
 DILER...-G(-C) + ...DILE(-C)



DILEEM..., DILEM...(-C), DILEM-12...
 DILEEM...-G, DILEM...-G(-C), DILEM-12...-G



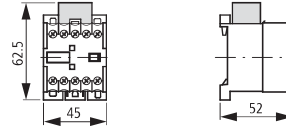
Part no.	c	c1
DILE(E)M...(-G)	52	83
DILE(E)M...-G(-C)	54	86

DILER... + HDILE
 DILER...-G + HDILE

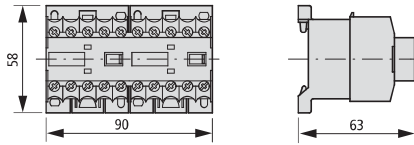


Suppressor circuit

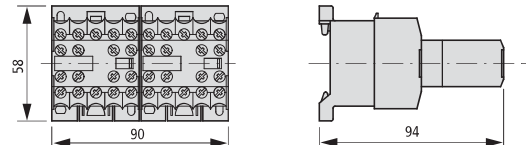
RCDILE...
 VGDILE



2DILE... + MVDILE
 2DILE...-G + MVDILE

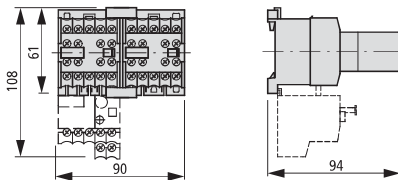


2DILE... + MVDILE + ...DILE
 2DILE...-G + MVDILE + ...DILE



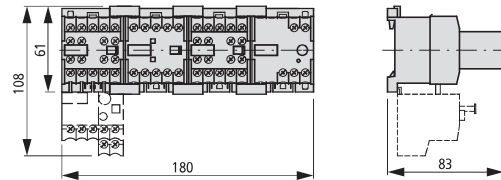
Reversing contactors

DIULEM

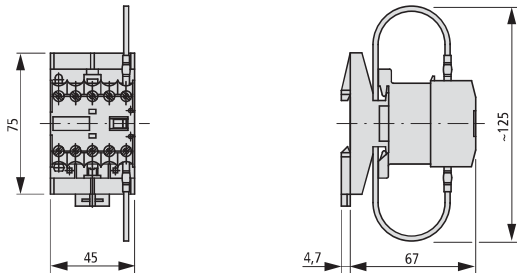


Star-delta contactors

SDAINLEM

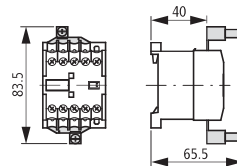


DILER... + TDDILE24



Parallel connector

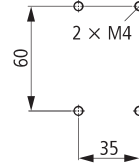
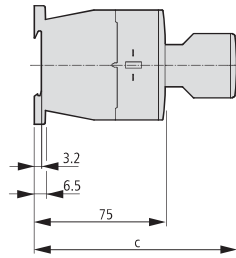
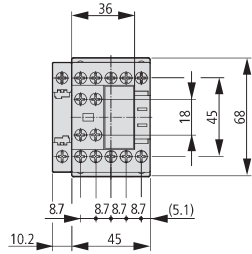
P1DILEM



Contactor with auxiliary contact module

DILM7...DILM15

DILA...

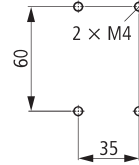
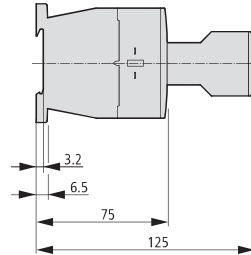
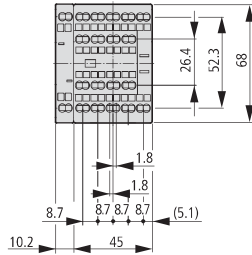


Part no.	c
DILM32-XHI	117
DILA-XHI	117
DILA-XHI...T	125

DILM7...DILM15

DILAC...

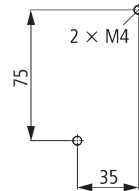
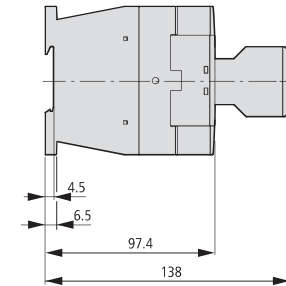
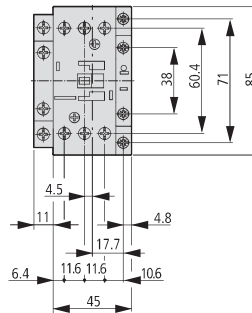
DILA-XHIC...



DILM17...DILM38

DILMC17...DILMC32

DILMF8...DILMF32



Clearance at side to grounded parts: 6 mm

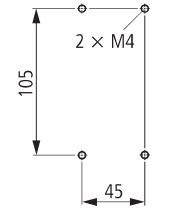
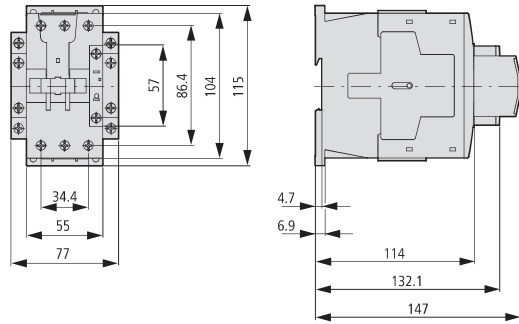
Contactors

Basic devices up to 170 A, suppressor circuit

DILM..., **DILMF...**, **DILM...XSP...**

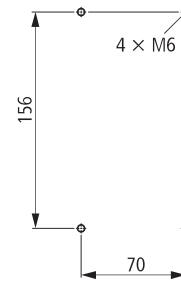
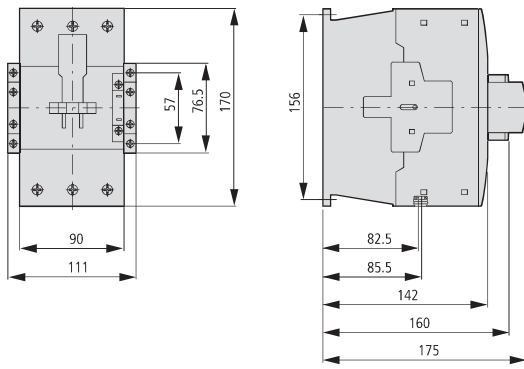
Contactors

DILM40...DILM72
DILMC40...DILMC65
DILMF40...DILMF65



Clearance at side to grounded parts: 6 mm

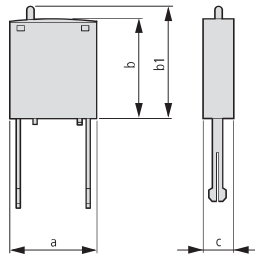
DILM80...DILM170
DILMC80...DILMC150
DILMF80...DILMF150



Clearance at side to grounded parts: 10 mm

Suppressor circuits

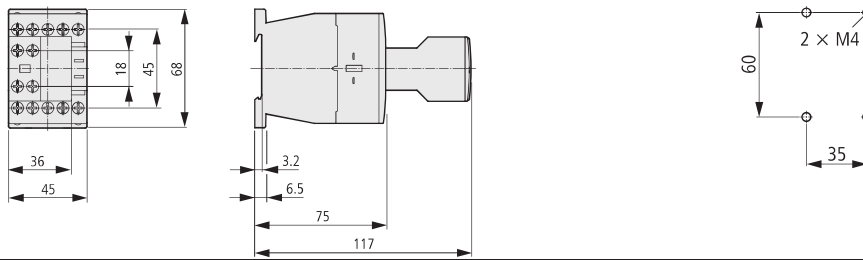
DILM...XSP...



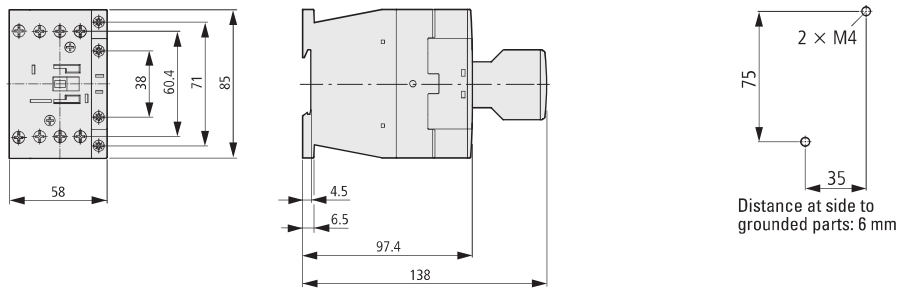
Part no.	a	b	b1	c
DILM12-XSP...	25	28	≈32	9
DILM32-XSP...	25	28	≈32	9
DILM95-XSP...	25	28	≈32	9

Contactor with auxiliary contact module

DILMP20

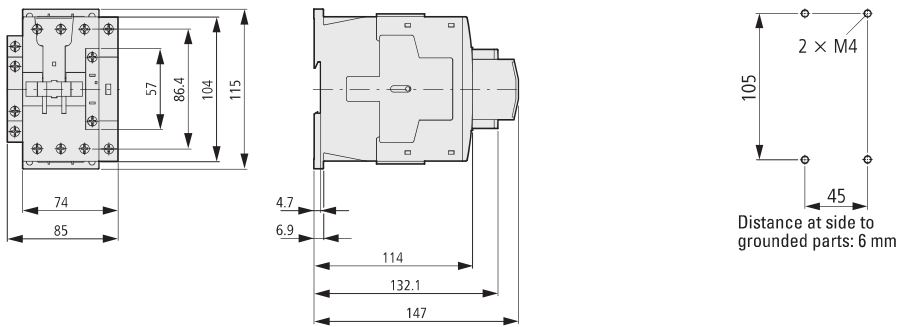


DILMP32 DILMP45

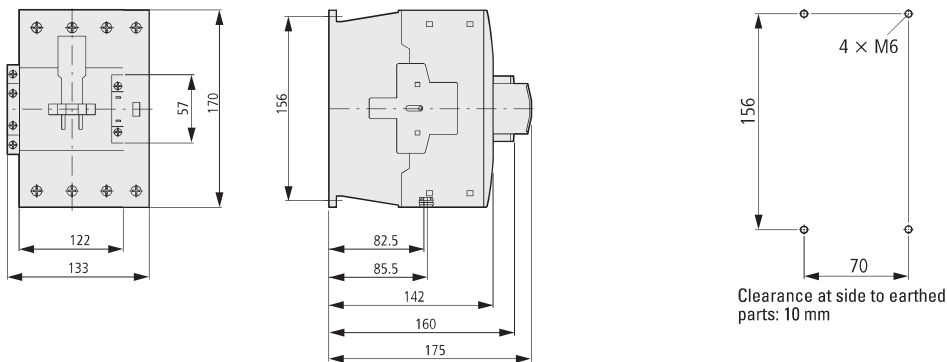


Contactors

DILMP63 DILMP80

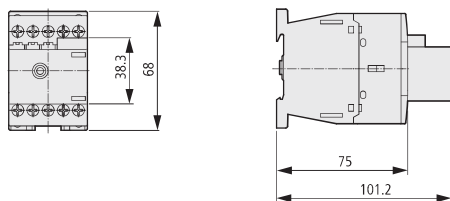


DILMP125 DILMP160 DILMP200



Motor suppressor module

DILM12-XMSM



Contactors

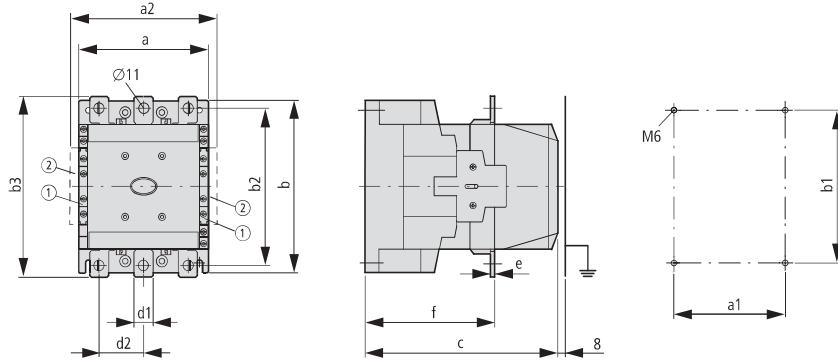
Complete units for currents greater than 170 A

...DILM

Complete units

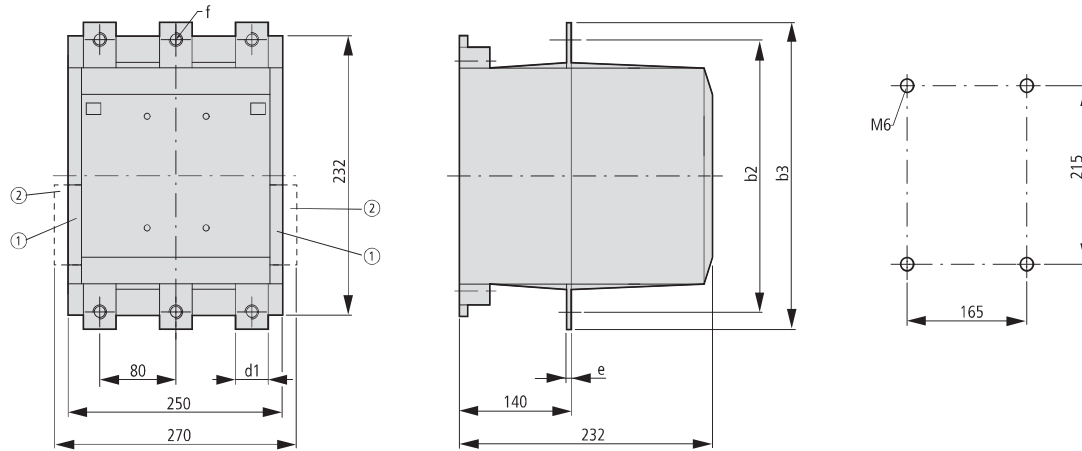
DILM185A...DILM500
DILM250-S...DILM570-S

① DILM1000-XHI...-SI
② DILM1000-XHI11-SA



Part no.	a	a1	a2	b	b1	b2	b3	d1	d2	e	c	f
DILM185A	140	120	160	180	160	165	190	20	41	5	158	83
DILM225A	140	120	160	180	160	165	190	20	41	5	158	83
DILM250	140	120	160	180	160	164	189	25	48	5	208	140
DILM300A	140	120	160	180	160	164	189	25	48	5	208	140
DILM400	160	130	180	200	180	184	209	25	48	6	216	140
DILM500	160	130	180	200	180	189	219	38	57	6	216	140
DILM570	160	130	180	200	180	189	219	38	57	6	216	140

DILM580...DILM1000

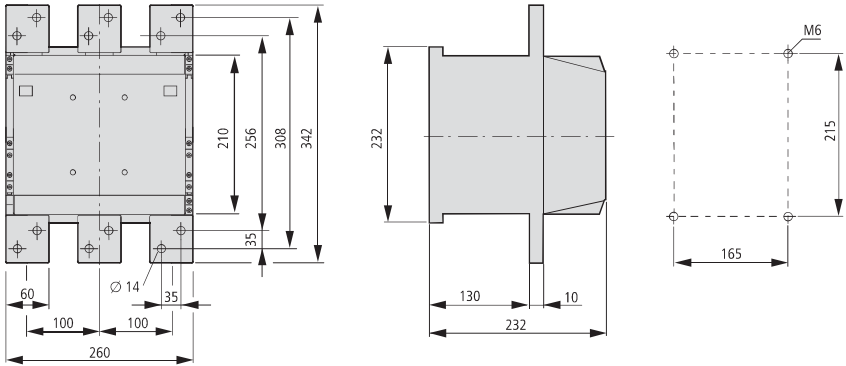


① DILM820-XHI...-SI
② DILM820-XHI11-SA

Part no.	b2	b3	d1	e	f
DILM580	256	296	45	6	13.5
DILM650	256	296	45	6	13.5
DILM750	256	296	45	6	13.5
DILM820	256	296	45	6	13.5
DILM1000	256	296	45	10	13.5

AC -1 contactors greater than 1000 A

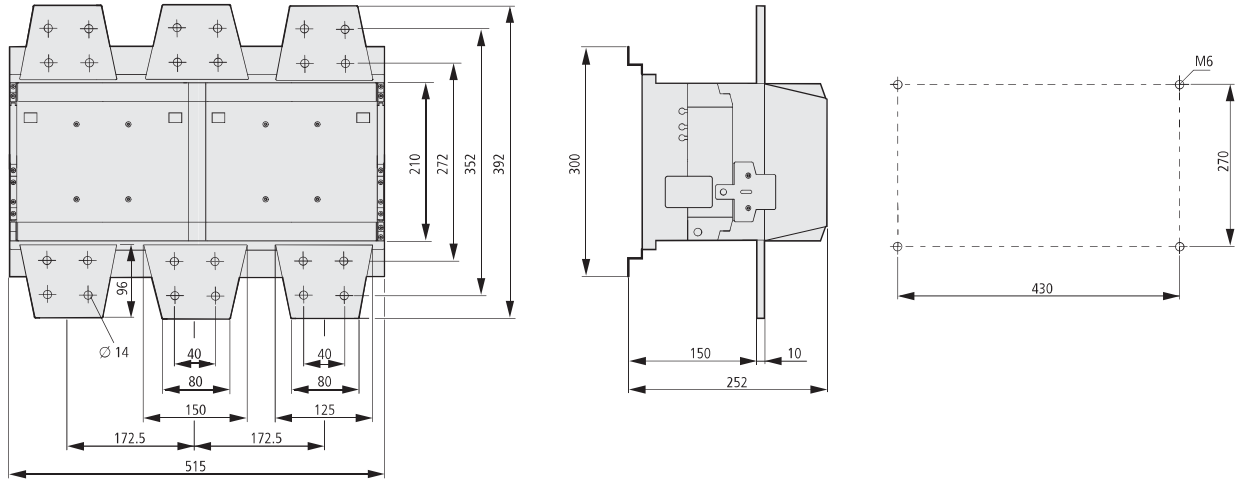
DILH1400



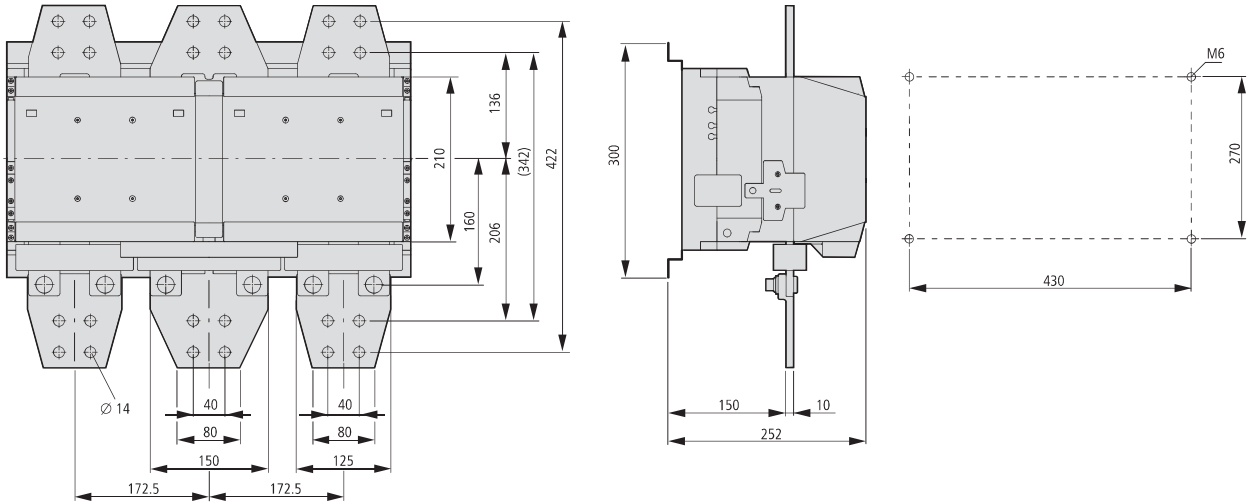
DILM1600

DILH2000

DILH2200



DILH2600

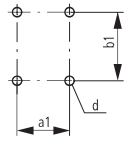
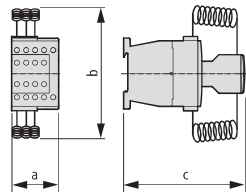


Contactors

Capacitor contactors, lamp contactors, contactor monitoring devices, SWD contactor modules
DILK..., DILL..., CMD, DIL-SWD

Contactor for capacitors

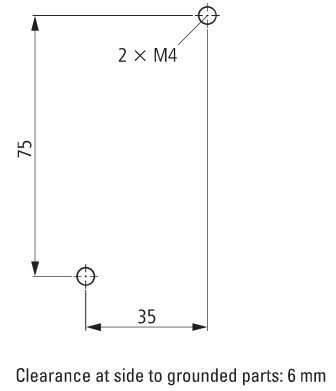
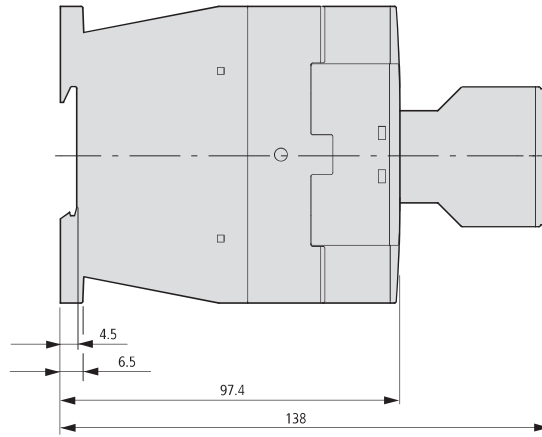
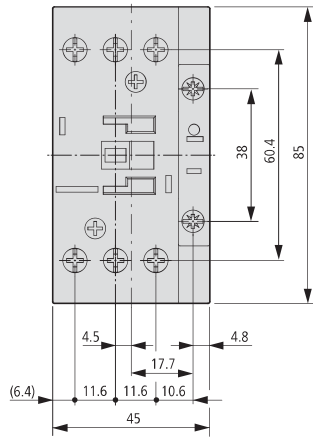
DILK...



Part no.	a	b	c	a1	b1	d
DILK12	45	135	138	35	75	2 x M4
DILK20	45	135	138	35	75	2 x M4
DILK25	45	135	138	35	75	2 x M4
DILK33	55	190	147	45	105	2 x M4
DILK50	55	190	147	45	105	2 x M4

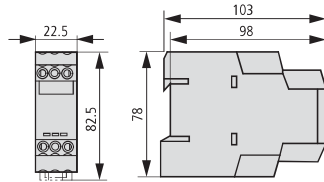
Illumination contactors

DILL...



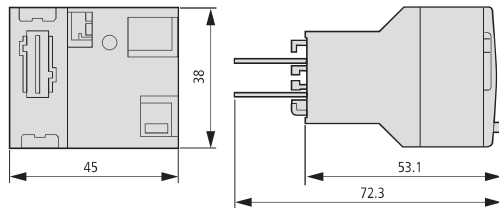
Contactor monitoring devices

CMD(...)



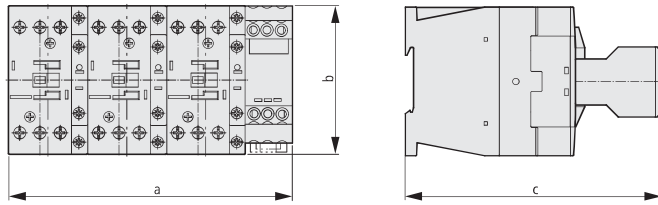
SWD contactor modules

DIL-SWD-32-...



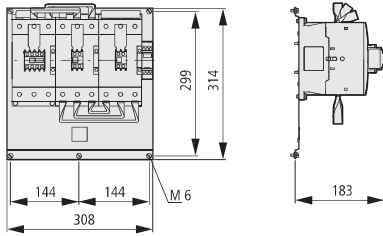
Star-delta contactors

SDAINLM12...SDAINLM115



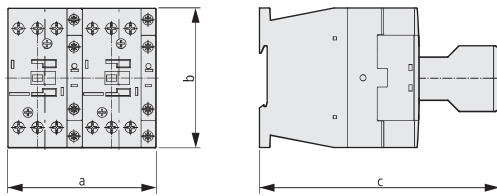
Part no.	a	b	c
SDAINLM12...22	158	68	117
SDAINLM30...55	158	85	138
SDAINLM70...115	188	115	147

SDAINLM140...SDAINLM260



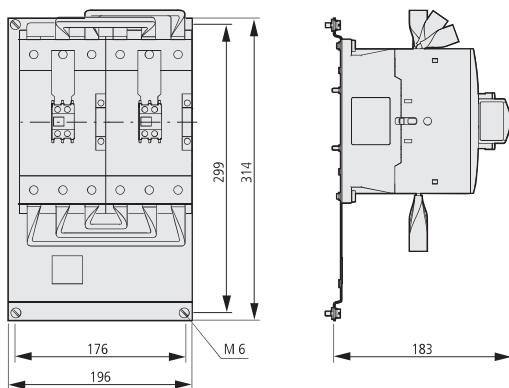
Reversing contactors

DIULM7...DIULM65



Part no.	a	b	c
DIULM7/21...12/21	90	68	117
DIULM17/21...32/21	90	85	138
DIULM40/11...65/11	110	115	147

DIULM80...DIULM150



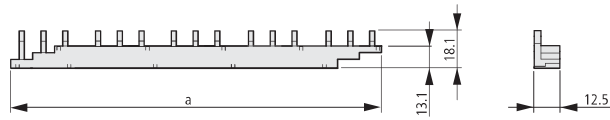
Contactors

Accessories

DILM...XDSB..., ETS4-VS3, DILM...XTE, DILM12-XMC...

Three-phase commoning links

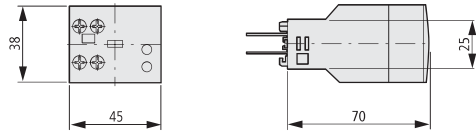
DILM12-XDSB...



Part no.	a
DILM12-XDSB0/3	112
DILM12-XDSB0/4	157
DILM12-XDSB0/5	202

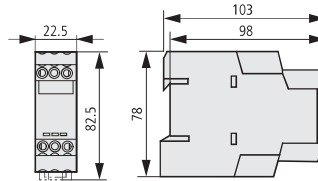
Electronic timer modules

DILM...XTE



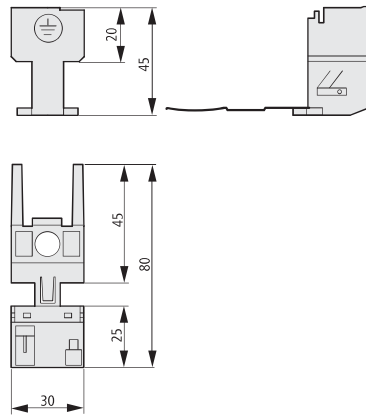
Amplifier module

ETS4-VS3

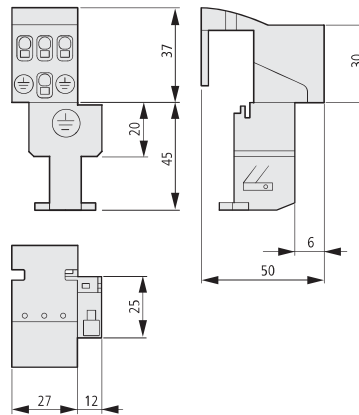


Wiring set for motor feeder plug

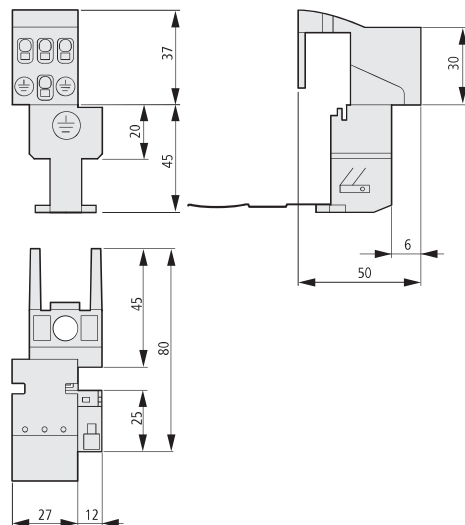
DILM12-XMCE



DILM12-XMCP/T

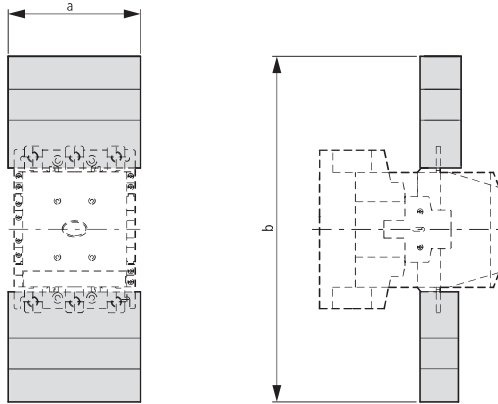


DILM12-XMCP/E



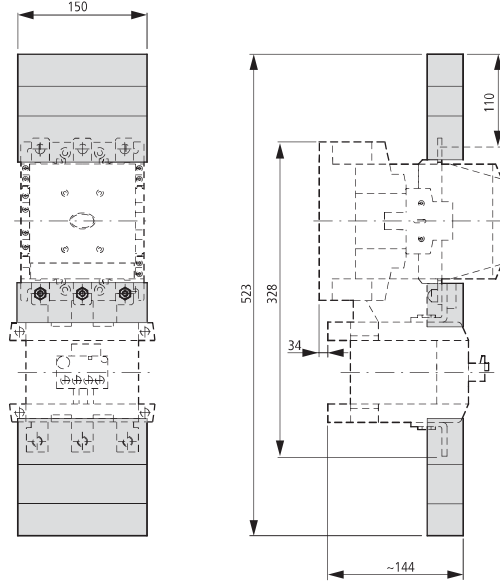
Contactors with terminal shrouds

DILM250...DILM1000 + DILM...-XHB

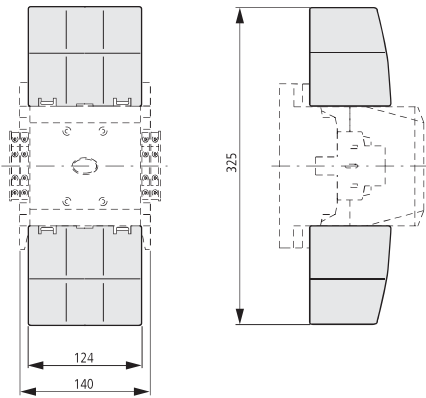


for part no.	a	b
DILM250, DILM300A	150	384
DILM400	150	404
DILM500	174	426
DILM580...1000	236	506

DILM250 + Z5-.../FF250

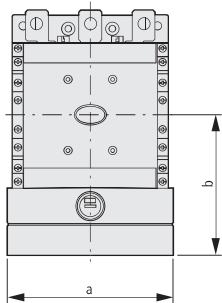


DILM185A...DILM225A + DILM225A-XHB



Contactor with star-point bridge and terminal shroud

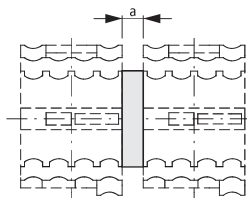
DILM...XS1



for part no.	a	b
DILM185...250	150	127
DILM300...400	150	137
DILM500	176	146

Mechanical interlock

DILM500-XMV



for part no.	a
DILM185...500	15

DILM820-XMV

