



Contactor, 45kW/400V, DC operated

Part no.

DILM95(RDC24)

Article no.

239510



Delivery programme

Product range			Contactors
Application			Contactors for Motors
Subrange			Contactors up to 170 A, 3 pole
Connection technique			Screw terminals
Pole			3 pole
Rated operational current			
AC-3			
380 V 400 V	I_e	A	95
AC-1			
Conventional free air thermal current, 3 pole, 50 - 60 Hz			
Open			
at 60 °C	$I_{th} = I_e$	A	110
Max. rating for three-phase motors, 50 - 60 Hz			
AC-3			
220 V 230 V	P	kW	30
380 V 400 V	P	kW	45
660 V 690 V	P	kW	75
AC-4			
220 V 230 V	P	kW	16
380 V 400 V	P	kW	26
660 V 690 V	P	kW	35
Contact sequence			
Instructions			Contacts to EN 50012. integrated suppressor circuit in actuating electronics
Can be combined with auxiliary contact			DILM150-XHI(V).. DILM1000-XHI(V)..
Voltage AC/DC			DC operation

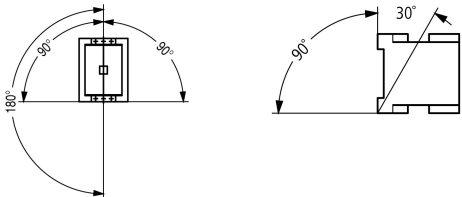
Approbationen

Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Specially designed for NA

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
No

General

Standards			IEC/EN 60947, VDE 0660, UL, CSA
Lifespan, mechanical			
AC operated	Operations	$\times 10^6$	10
DC operated	Operations	$\times 10^6$	10
Operating frequency, mechanical			
AC operated	Operations/h		3600
DC operated	Operations/h		3600
Climatic proofing			Damp heat, constant to IEC 60068-2-78 Damp heat, cyclic to IEC 60068-2-30

Ambient temperature		°C	
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 contact		g	10
Auxiliary contacts			
N/O contact		g	7
N/C contact		g	5
Mechanical shock resistance (IEC/EN 60068-2-27) when tabletop-mounted			
Half-sinusoidal shock, 10 ms			
Main contacts			
N/O contact		g	10
Auxiliary contacts			
N/O contact		g	7
N/C contact		g	5
Protection type			IP00
Protection against direct contact when actuated from front (EN 90274)			Finger- and back-of-hand proof
Weight			
AC operated		kg	2
DC operated		kg	2.1
Terminal capacity main cable			
Flexible with ferrule		mm ²	1 x (10 - 95) 2 x (10 - 70)
Stranded		mm ²	1 x (16 - 95) 2 x (16 - 70)
Solid or stranded		AWG	8...3/0
Flat conductor	Number of segments x width x thickness	mm	2 x (6 x 16 x 0.8)
Main cable connection screw/bolt			M10
Tightening torque		Nm	14
Terminal capacity control circuit cables			
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)
Solid or stranded		AWG	18 - 14
Control circuit cable connection screw/bolt			M3.5
Tightening torque		Nm	1.2
Tool			
Main cable			
Hexagon socket-head spanner	SW	mm	5
Control circuit cables			
Pozidriv screwdriver		Size	2
Standard screwdriver		mm	0.8 x 5.5 1 x 6
Terminal capacity control circuit cables			
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)
Solid or stranded	AWG	18 - 14
Tool		
Stripping length	mm	10
Screwdriver blade width	mm	3.5

Main conducting paths

Rated impulse withstand voltage	U _{imp}	V AC	8000
Overvoltage category/pollution degree			III/3
Rated insulation voltage	U _i	V AC	690
Rated operational voltage	U _e	V AC	690
Safe isolation to VDE 0106 Part 101 and Part 101/A1			
between coil and contacts		V AC	690
between the contacts		V AC	690
Making capacity (p.f. to IEC/EN 60947)			
	Up to 690 V	A	1330
Breaking capacity			
220/230 V		A	950
380/400 V		A	950
500 V		A	950
660/690 V		A	800
Short-circuit rating			
Short-circuit protection maximum fuse			
Type "2" coordination			
400 V	gG/gL 500 V	A	160
690 V	gG/gL 690 V	A	160
Type "1" coordination			
400 V	gG/gL 500 V	A	250
690 V	gG/gL 690 V	A	200

AC

AC-1 duty			
Conventional free air thermal current, 3 pole, 50 - 60 Hz			
Open			
at 40 °C	I _{th} = I _e	A	130
at 50 °C	I _{th} = I _e	A	125
at 55 °C	I _{th} = I _e	A	115
at 60 °C	I _{th} = I _e	A	110
enclosed	I _{th}	A	100
Conventional free air thermal current, 1 pole			
open	I _{th}	A	275
enclosed	I _{th}	A	250
AC-3 duty			
Rated operational current AC-3 open, 50 - 60 Hz, 3 pole	I _e		
220/230 V	I _e	A	95
240 V	I _e	A	95
380/400 V	I _e	A	95
415 V	I _e	A	95
440V	I _e	A	95
500 V	I _e	A	95
660/690 V	I _e	A	80
Motor rating	P	kWh	
220/230 V	P	kW	30
240V	P	kW	32
380/400 V	P	kW	45

415 V	P	kW	57
440 V	P	kW	60
500 V	P	kW	70
660/690 V	P	kW	75
AC-4 duty			
Rated operational current AC-4 open, 50 - 60 Hz, 3 pole	I _e		
220/230 V	I _e	A	50
240 V	I _e	A	50
380/400 V	I _e	A	50
415 V	I _e	A	50
440 V	I _e	A	50
500 V	I _e	A	50
660/690 V	I _e	A	37
Motor rating	P	kWh	
220/230 V	P	kW	16
240 V	P	kW	17
380/400 V	P	kW	26
415 V	P	kW	30
440 V	P	kW	32
500 V	P	kW	36
660/690 V	P	kW	35

DC

Rated operational current, open			
DC-1 operation			
60 V	I _e	A	110
110 V	I _e	A	110
220 V	I _e	A	70
440 V	I _e	A	4.5
DC-3 operation			
60 V	I _e	A	110
110 V	I _e	A	110
220 V	I _e	A	35
440 V	I _e	A	1
DC-5 operation			
60 V	I _e	A	110
110 V	I _e	A	110
220 V	I _e	A	35
440 V	I _e	A	1

Current heat loss (3 pole)

Current heat loss at I _{th}		W	18.2
Current heat loss at I _e to AC-3/400 V		W	13.5
Impedance per pole		mΩ	0.5

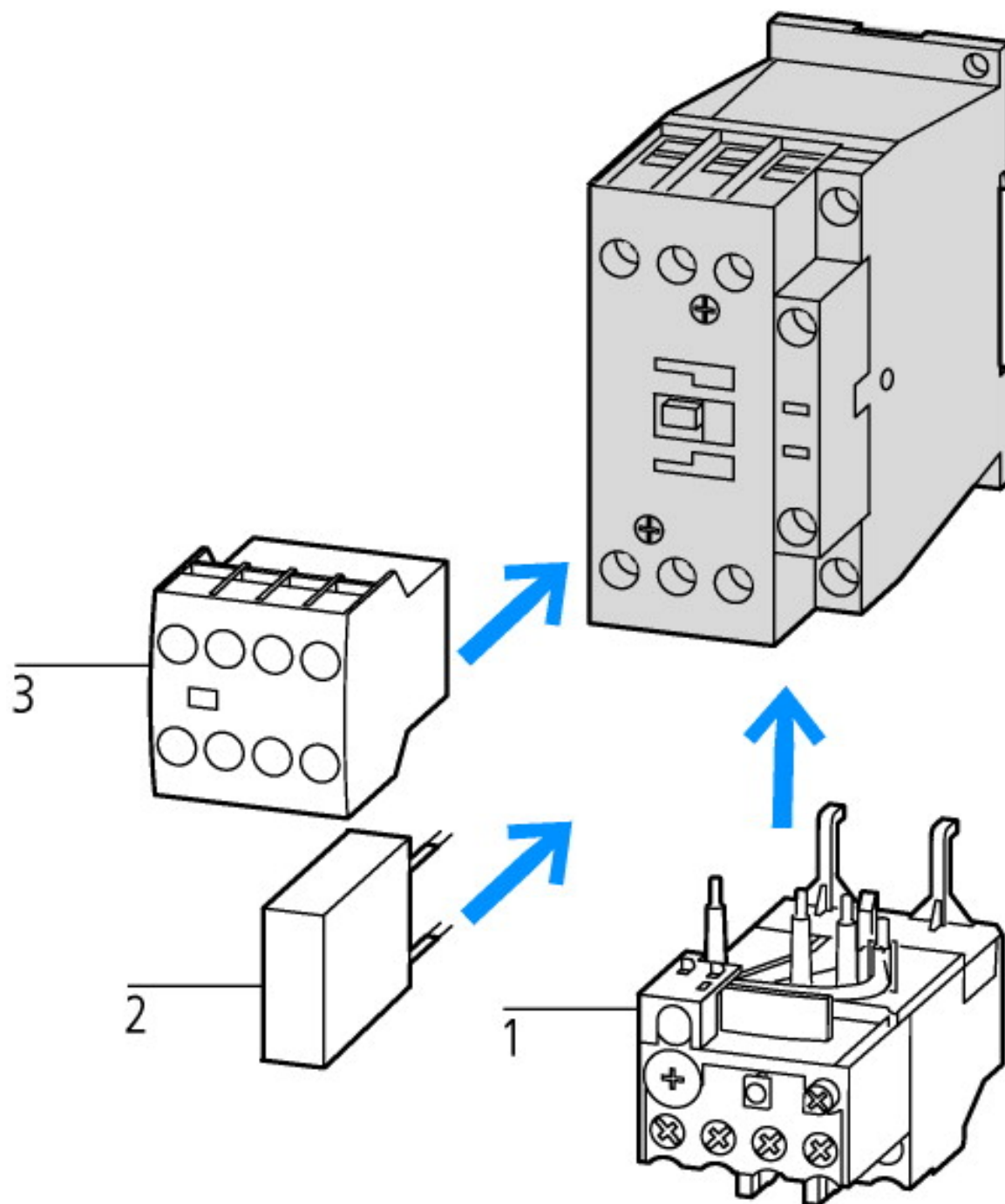
Magnet systems

Voltage tolerance		x U _c	
AC operated	Pick-up	x U _c	0.8 - 1.1
Drop-out voltage AC operated	Drop-out	x U _c	0.3 - 0.6
Notes			RDC 24 (U _{min} 24 V DC/U _{max} 27 V DC) Example: U _c = 0.7 x U _{min} - 1.2 x U _{max} / U _c = 0.7 x 24 V - 1.2 x 27 V DC
DC operated	Pick-up	x U _c	0.7 - 1.2
Notes			at least smoothed two-phase bridge rectifier or three-phase rectifier
DC operated	Drop-out	x U _c	0.15 - 0.6
Power consumption of the coil in a cold state and 1.0 x U _c			
50 Hz	Pick-up	VA	310
50 Hz	Sealing	VA	26

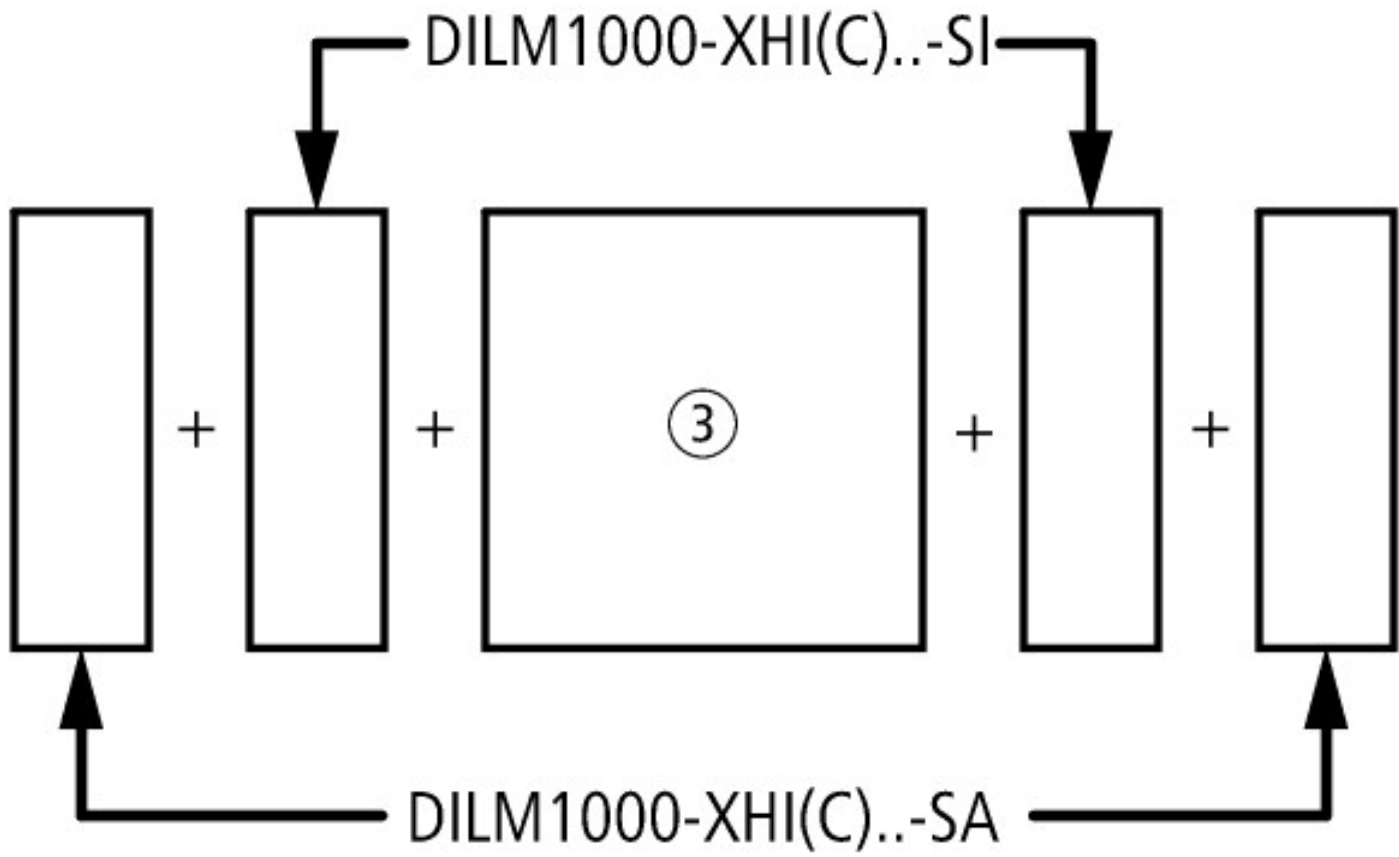
50 Hz	Sealing	W	5.8
60 Hz	Pick-up	VA	345
60 Hz	Sealing	VA	30
60 Hz	Sealing	W	7.1
50/60 Hz	Pick-up	VA	372 328
50/60 Hz	Sealing	VA	37.1 22.6
50/60 Hz	Sealing	W	7.5 6.1
DC operated	Pick-up	W	90
DC operated	Sealing	W	1.3
Duty factor		% DF	100
Switching times at 100 % U _c (approximate values)			
Main contacts			
AC operated			
Closing delay		ms	14 - 20
Opening delay		ms	9 - 14
DC operated			
Closing delay		ms	45
Opening delay		ms	34
Arcing time		ms	15
Permissible residual current with actuation of A1 - A2 by the electronics (with 0 signal).		mA	 1
Lifespan, mechanical; Coil 50/60 Hz	at 50 Hz		Mechanical lifespan at 50 Hz approx. 30% lower than under “General”
Electromagnetic compatibility (EMC)			
Emitted interference			to EN 60947-1
Interference immunity			to EN 60947-1

Technische Daten nach ETIM 4.0

Number of main contacts as N/Os			3
Rated operation current I _e at AC-1, 400 V			130
Connection type main circuit			Screw connection
Rated control voltage U _s at AC 60HZ		V	0
Number of auxiliary contacts as N/Os			0
Rated control voltage U _s at AC 50HZ		V	0
Number of auxiliary contacts as N/Cs			0
Suitable for rail-mounting			No
Rated control voltage U _s at DC		V	27
Voltage type for actuation			DC
Rated operation current I _e at AC-3, 400 V		A	95
Number of N/Cs as main contact			0
Motor rating at AC-3, 400 V		kWh	45

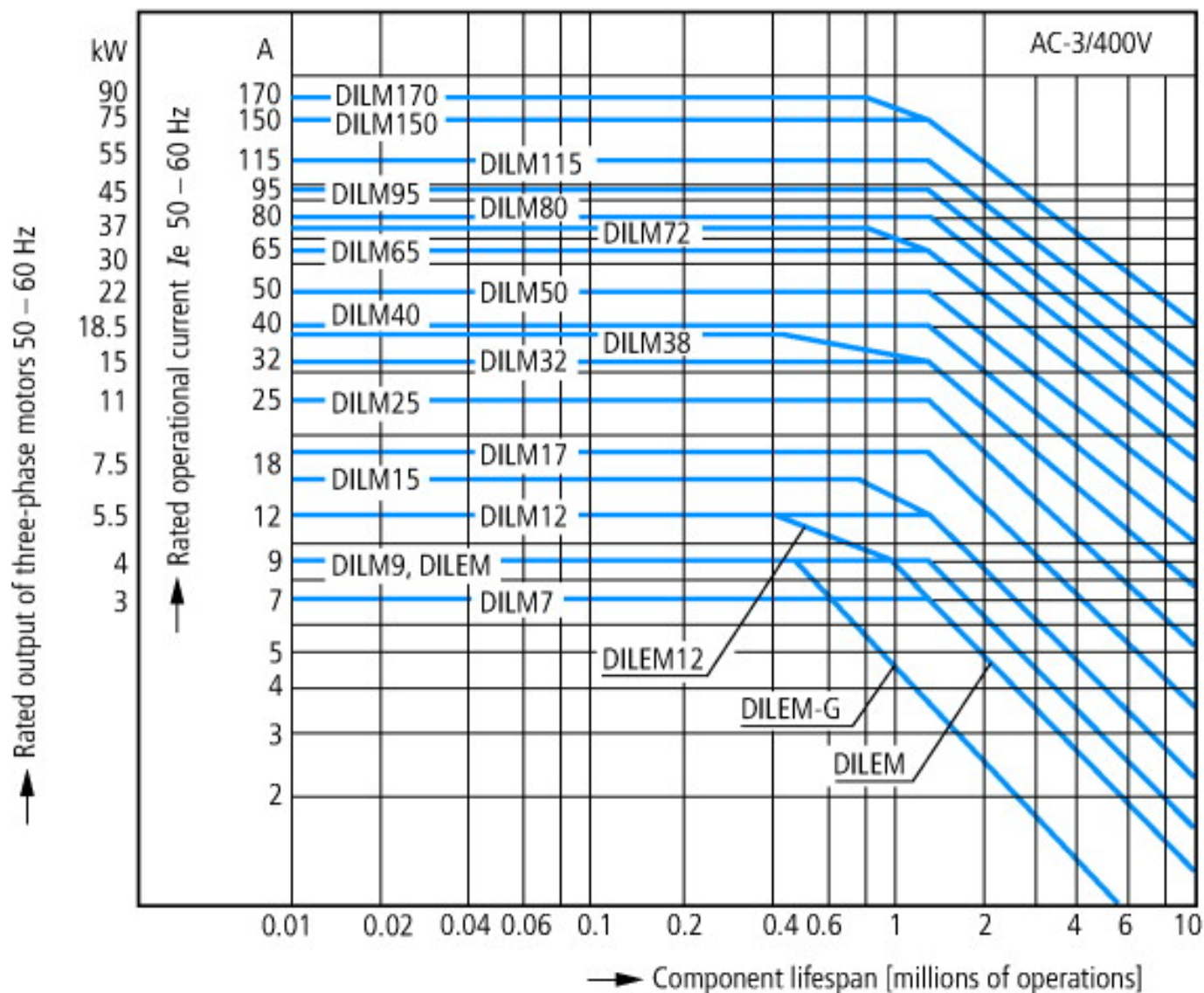


- 1: Overload relay
- 2: Suppressor
- 3: Auxiliary contact modules

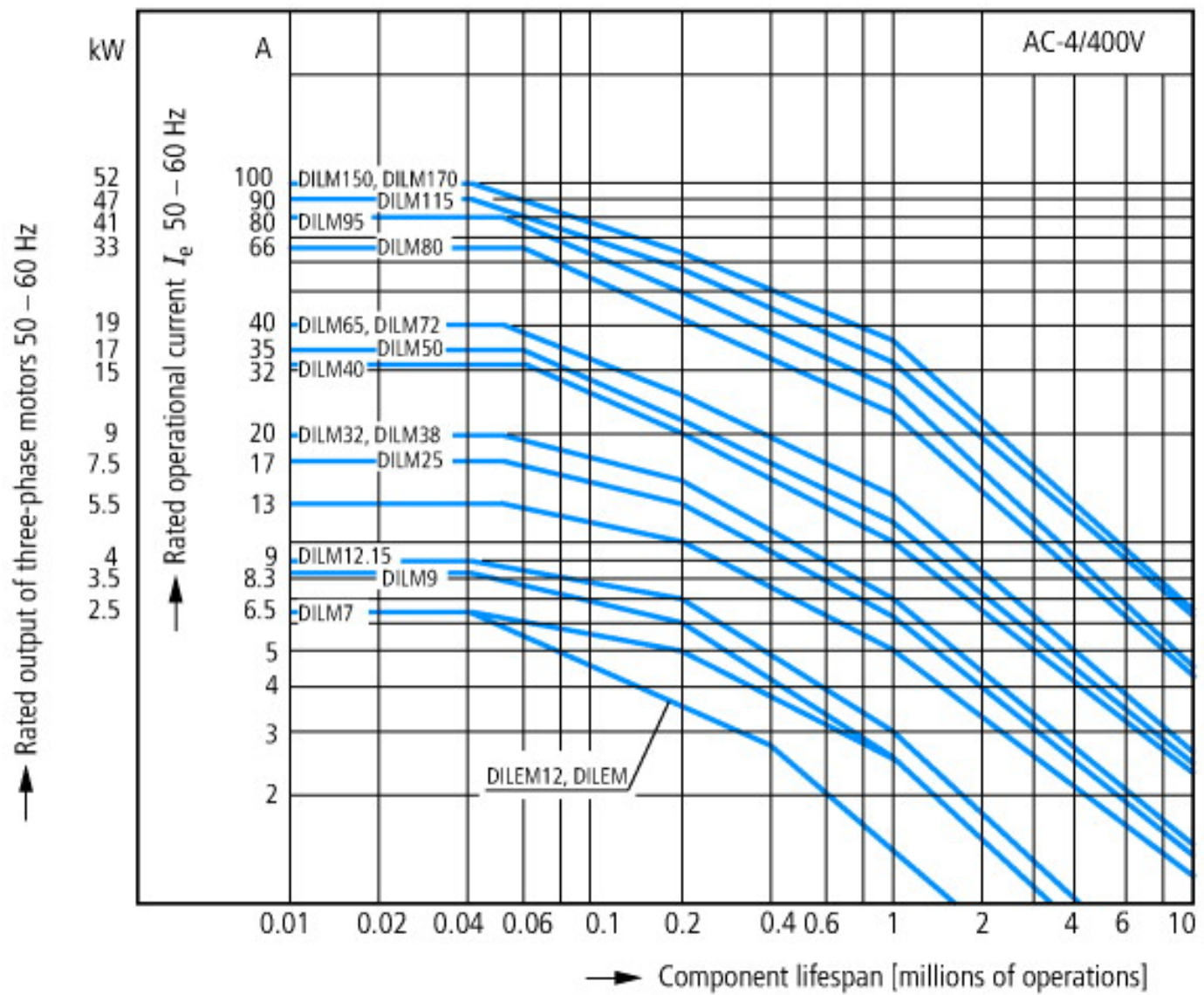


on the side: 2 x DILM820-XHI(V)11-SI; 2 x DILM820-XHI(V)11-SA
on the side: 2 x DILM1000-XHI(V)11-SI; surface mounting: 1 x DILM150-XHIA22
on the side: 2 x DILM1000-XHI(V)11-SI; surface mounting: 1 x DILM150-XHIA11
on the side: 2 x DILM1000-XHI(V)11-SA; surface mounting: 1 x DILM150-XHI (4 pole)
on the side: 2 x DILM1000-XHI(V)11-SA; surface mounting: 1 x DILM150-XHI (2 pole)

Projektieren



Squirrel-cage motor
 Operating characteristics
 Starting: from rest
 Stopping: after attaining full running speed
 Electrical characteristics
 Make: up to 6 x rated motor current
 Break: up to 1 x rated motor current
 Utilization category
 100 % AC-3
 Typical applications
 Compressors
 Lifts
 Mixers
 Pumps
 Escalators
 Agitators
 Fans
 Conveyor belts
 Centrifuges
 Hinged flaps
 Bucket-elevators
 Air conditioning system
 General drives in manufacturing and processing machines



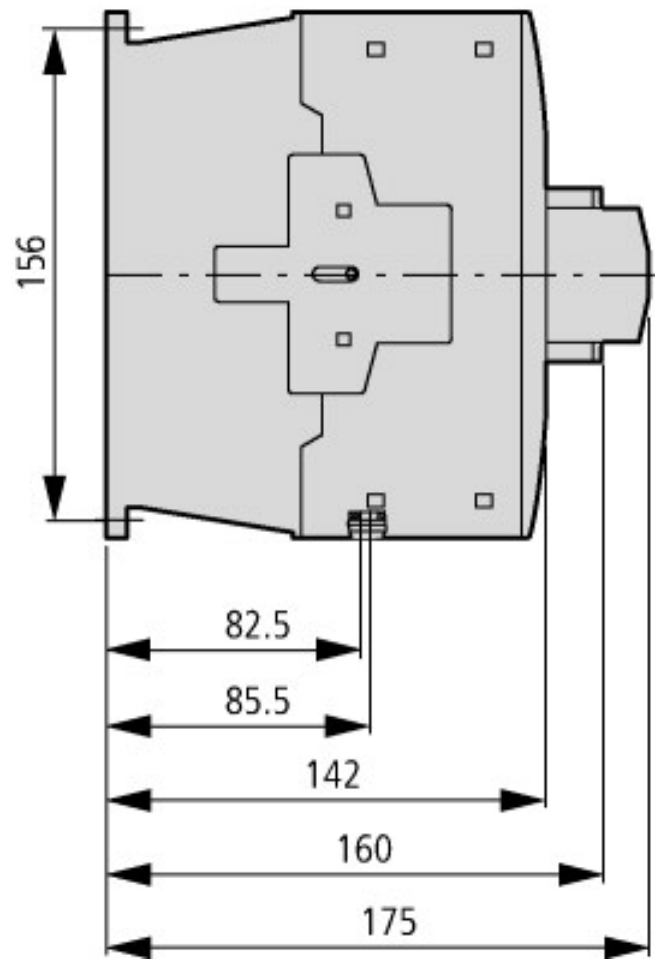
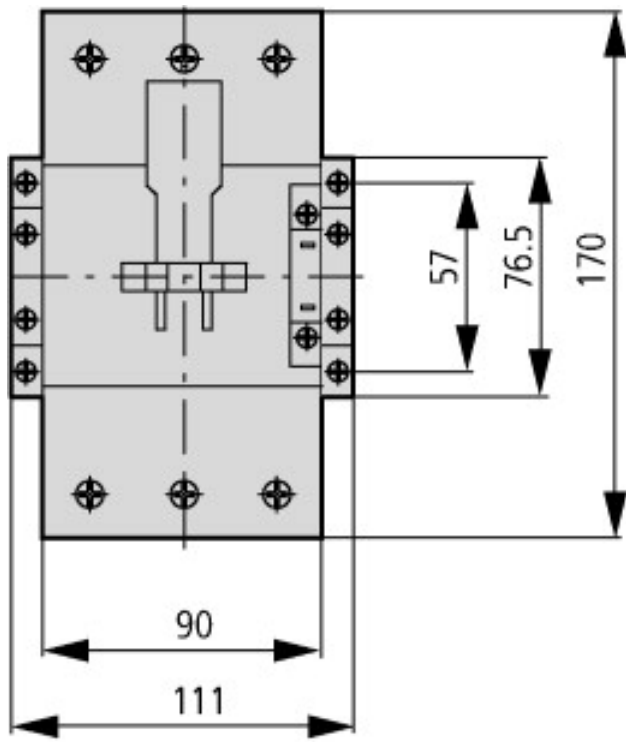
Extreme switching duty
Squirrel-cage motor
Operating characteristics
Inching, plugging, reversing
Electrical characteristics
Make: up to 6 x rated motor current
Break: up to 6 x rated motor current
Utilization category
100 % AC-4
Typical applications
Printing presses
Wire-drawing machines
Centrifuges
Special drives for manufacturing and processing machines

CAD-Daten

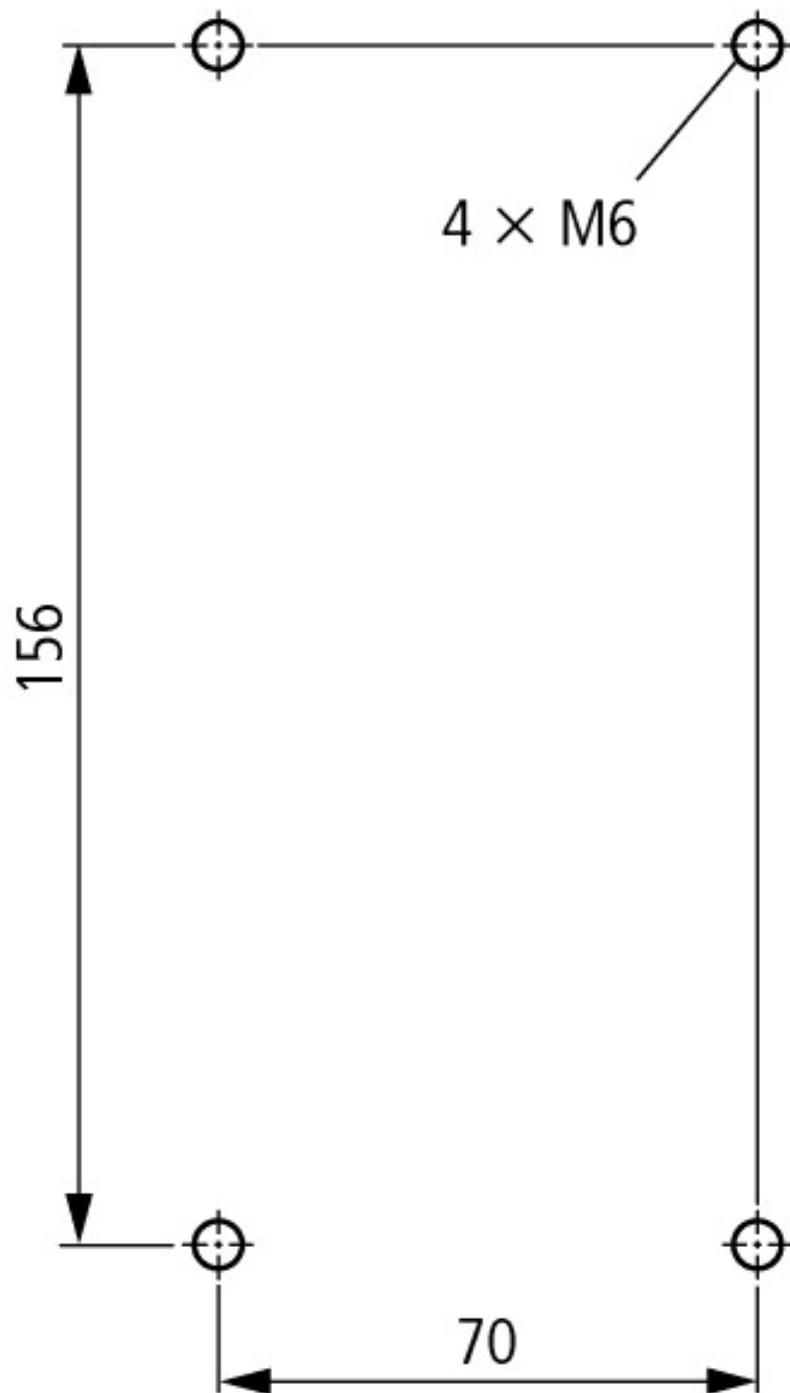
Product standards CAD data:

<http://eaton-moeller.partcommunity.com>

Dimensions



Contactor with auxiliary contact module



distance at side to earthed parts: 10 mm

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

Additional product information (links)

AWA2100-2286 (IL03407039Z) contactor DILM

ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/22860209.pdf