



**Contactor,7,5kW/400V,AC-operated**



Powering Business Worldwide™

**Part no.** DILM17-10(110V50HZ,120V60H

**Article no.** 277001

**Program**

Product range			Contactors
Application			Contactors for Motors
Subrange			Contactors up to 170 A, 3 pole
Connection technique			Screw terminals
Rated operational current			
AC-3			
380 V 400 V	$I_e$	A	18
AC-1			
Conventional free air thermal current, 3 pole, 50 - 60 Hz			
Open			
at 40 °C	$I_{th}=I_e$	A	40
Max. rating for three-phase motors, 50 - 60 Hz			
AC-3			
220 V 230 V	P	kW	5
380 V 400 V	P	kW	7.5
660 V 690 V	P	kW	11
AC-4			
220 V 230 V	P	kW	2.5
380 V 400 V	P	kW	4.5
660 V 690 V	P	kW	6.5
Contacts			
N/O = Normally open			1 N/O
Contact sequence			
Can be combined with auxiliary contact			DILM32-XH1.. DILA-XH1(V)..
Voltage AC/DC			AC operation

**Approbatonen**

UL approval	Yes
CSA approval	Yes
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
Specially designed for NA	No

**General**

Standards			IEC/EN 60947, VDE 0660, UL, CSA
Lifespan, mechanical			
AC operated	Operations	$x 10^6$	10
DC operated	Operations	$x 10^6$	10
Operating frequency, mechanical			
AC operated	Operations/h		5000
DC operated	Operations/h		5000

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		6.9
Auxiliary contacts			
N/O contact	g		5.3
N/C contact	g		3.5
Protection type			IP00
Protection against direct contact when actuated from front (EN 90274)			Finger- and back-of-hand proof
Weight			
AC operated	kg		0.42
DC operated	kg		0.48
Terminal capacity main cable			
Solid	mm <sup>2</sup>		1 x (0.75 - 16) 2 x (0.75 - 10)
Flexible with ferrule	mm <sup>2</sup>		1 x (0.75 - 16) 2 x (0.75 - 10)
Stranded	mm <sup>2</sup>		1 x 16
Solid or stranded	AWG		18 - 6
Main cable connection screw/bolt			M5
Tightening torque	Nm		3.2
Terminal capacity control circuit cables			
Solid	mm <sup>2</sup>		1 x (0.75 - 4) 2 x (0.75 - 4)
Flexible with ferrule	mm <sup>2</sup>		1 x (0.75 - 1.5) 2 x (0.75 - 1.5)
Solid or stranded	AWG		18 - 14
Control circuit cable connection screw/bolt			M3.5
Tightening torque	Nm		1.2
Tool			
Main cable			
Pozidriv screwdriver	Size		2
Standard screwdriver	mm		0.8 x 5.5 1 x 6
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 <sup>2</sup>	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)
Flexible		mm <sup>2</sup>	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)
Flexible with ferrule		mm <sup>2</sup>	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	440
between the contacts		V AC	440
Making capacity (p.f. to IEC/EN 60947)			
	Up to 690 V	A	238
Breaking capacity			
220/230 V		A	170
380/400 V		A	170
500 V		A	170
660/690 V		A	120
Short-circuit rating			
Short-circuit protection maximum fuse			
Type "2" coordination			
400 V	gG/gL 500 V	A	35
690 V	gG/gL 690 V	A	35
Type "1" coordination			
400 V	gG/gL 500 V	A	63
690 V	gG/gL 690 V	A	50

### AC

AC-1 duty			
Conventional free air thermal current, 3 pole, 50 - 60 Hz			
Open			
at 40 °C	$I_{th} = I_e$	A	40
at 50 °C	$I_{th} = I_e$	A	38
at 55 °C	$I_{th} = I_e$	A	37
at 60 °C	$I_{th} = I_e$	A	35
enclosed	$I_{th}$	A	32
Conventional free air thermal current, 1 pole			
open	$I_{th}$	A	88
enclosed	$I_{th}$	A	80
AC-3 duty			
Rated operational current AC-3 open, 50 - 60 Hz, 3 pole	$I_e$		
220/230 V	$I_e$	A	18
240 V	$I_e$	A	18
380/400 V	$I_e$	A	18

415 V	$I_e$	A	18
440V	$I_e$	A	18
500 V	$I_e$	A	18
660/690 V	$I_e$	A	12
Motor rating	P	kWh	
220/230 V	P	kW	5
240V	P	kW	5.5
380/400 V	P	kW	7.5
415 V	P	kW	10
440 V	P	kW	10.5
500 V	P	kW	12
660/690 V	P	kW	11
AC-4 duty			
Rated operational current AC-4 open, 50 - 60 Hz, 3 pole	$I_e$		
220/230 V	$I_e$	A	10
240 V	$I_e$	A	10
380/400 V	$I_e$	A	10
415 V	$I_e$	A	10
440 V	$I_e$	A	10
500 V	$I_e$	A	10
660/690 V	$I_e$	A	8
Motor rating	P	kWh	
220/230 V	P	kW	2.5
240 V	P	kW	3
380/400 V	P	kW	4.5
415 V	P	kW	5
440 V	P	kW	5.5
500 V	P	kW	6
660/690 V	P	kW	6.5

## DC

Rated operational current, open			
DC-1 operation			
60 V	$I_e$	A	35
110 V	$I_e$	A	35
220 V	$I_e$	A	35
440 V	$I_e$	A	2.9
DC-3 operation			
60 V	$I_e$	A	35
110 V	$I_e$	A	35
220 V	$I_e$	A	10
440 V	$I_e$	A	0.6
DC-5 operation			
60 V	$I_e$	A	35
110 V	$I_e$	A	35
220 V	$I_e$	A	10
440 V	$I_e$	A	0.6

## Current heat loss (3 pole)

Current heat loss at $I_{th}$		W	7.3
Current heat loss at $I_e$ to AC-3/400 V		W	1.9
Impedance per pole		m $\Omega$	2

## Magnet systems

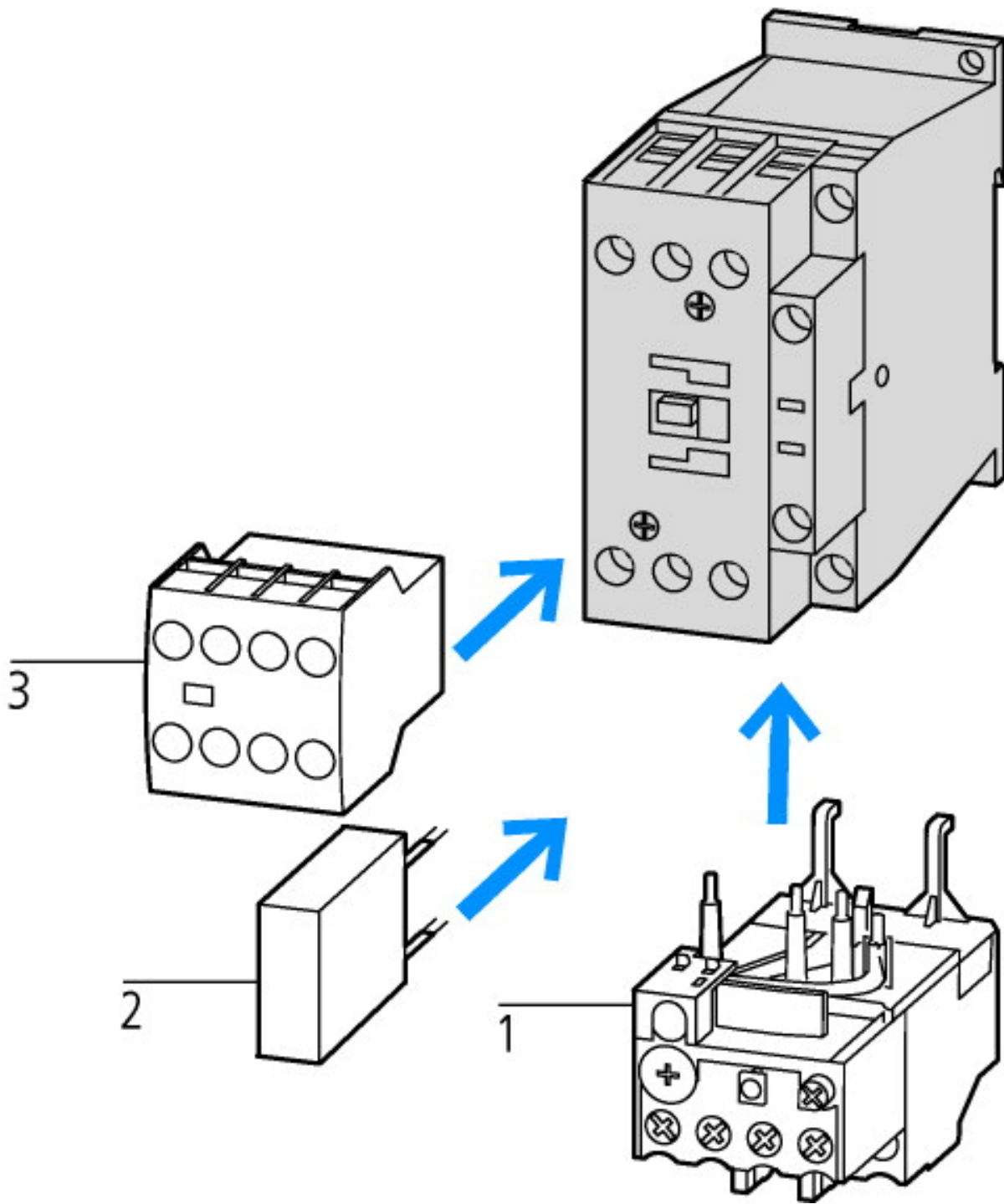
Voltage tolerance		$\times U_c$	
AC operated	Pick-up	$\times U_c$	0.8 - 1.1

Drop-out voltage AC operated	Drop-out	$x U_c$	0.3 - 0.6
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	52
50 Hz	Sealing	VA	7.1
50 Hz	Sealing	W	2.1
60 Hz	Pick-up	VA	67
60 Hz	Sealing	VA	8.7
60 Hz	Sealing	W	2.6
50/60 Hz	Pick-up	VA	62 58
50/60 Hz	Sealing	VA	9.1 6.5
50/60 Hz	Sealing	W	2.5 2
DC operated	Pick-up	W	12
DC operated	Sealing	W	0.5
Duty factor		% DF	100
Switching times at 100 % $U_c$ (approximate values)			
Main contacts			
AC operated			
	Closing delay	ms	16 - 22
	Opening delay	ms	8 - 14
DC operated			
	Closing delay	ms	47
	Opening delay	ms	30
	Arcing time	ms	10
Lifespan, mechanical; Coil 50/60 Hz	at 50 Hz		Mechanical lifespan at 50 Hz approx. 30% lower than under "Technical data, general"
<b>Electromagnetic compatibility (EMC)</b>			
Emitted interference			to EN 60947-1
Interference immunity			to EN 60947-1

### Technical data according to ETIM 4.0

Number of main contacts as N/Os			3
Rated operation current $I_e$ at AC-1, 400 V			40
Connection type main circuit			Screw connection
Rated control voltage $U_s$ at AC 60HZ		V	120
Number of auxiliary contacts as N/Os			1
Rated control voltage $U_s$ at AC 50HZ		V	110
Number of auxiliary contacts as N/Cs			0
Suitable for rail-mounting			No
Rated control voltage $U_s$ at DC		V	0
Voltage type for actuation			AC
Rated operation current $I_e$ at AC-3, 400 V		A	18
Number of N/Cs as main contact			0
Motor rating at AC-3, 400 V		kWh	7.5

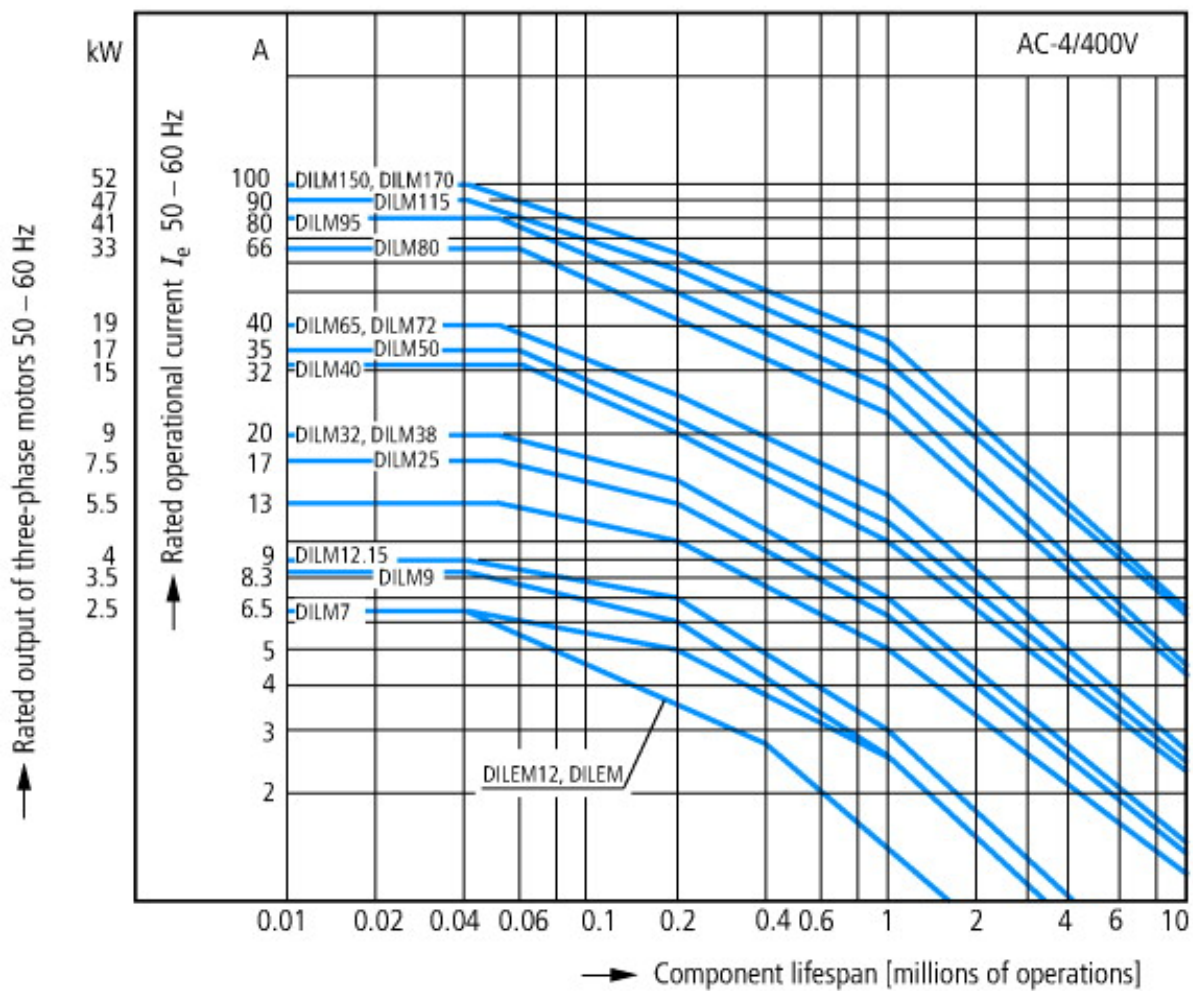
### Characteristics



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



- 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

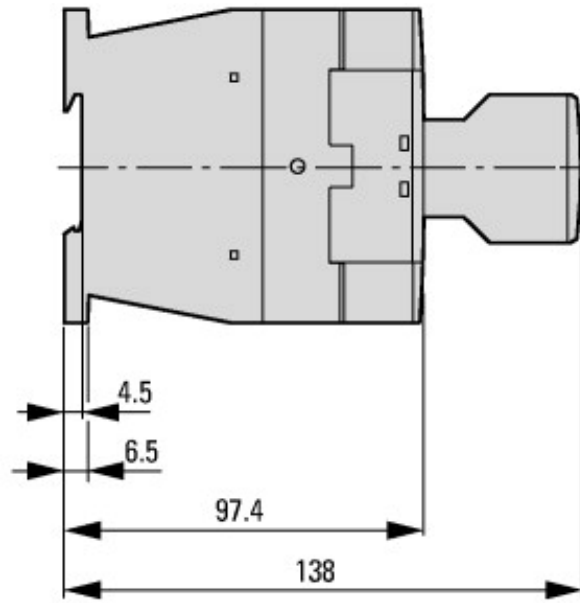
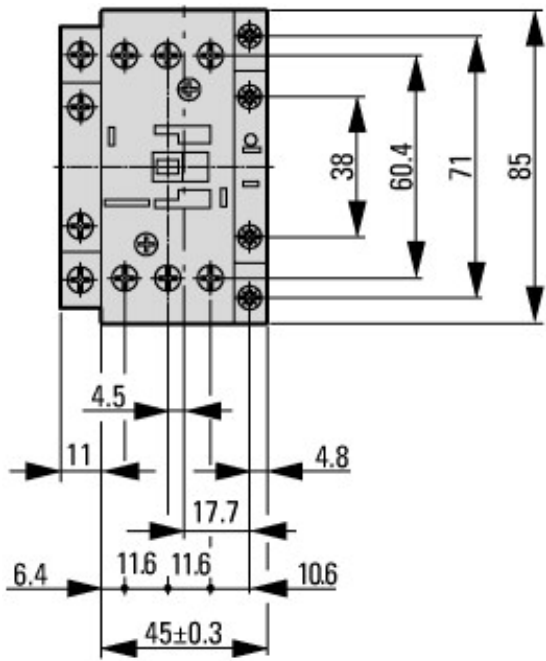
## CAD-Data

Product standards CAD data:

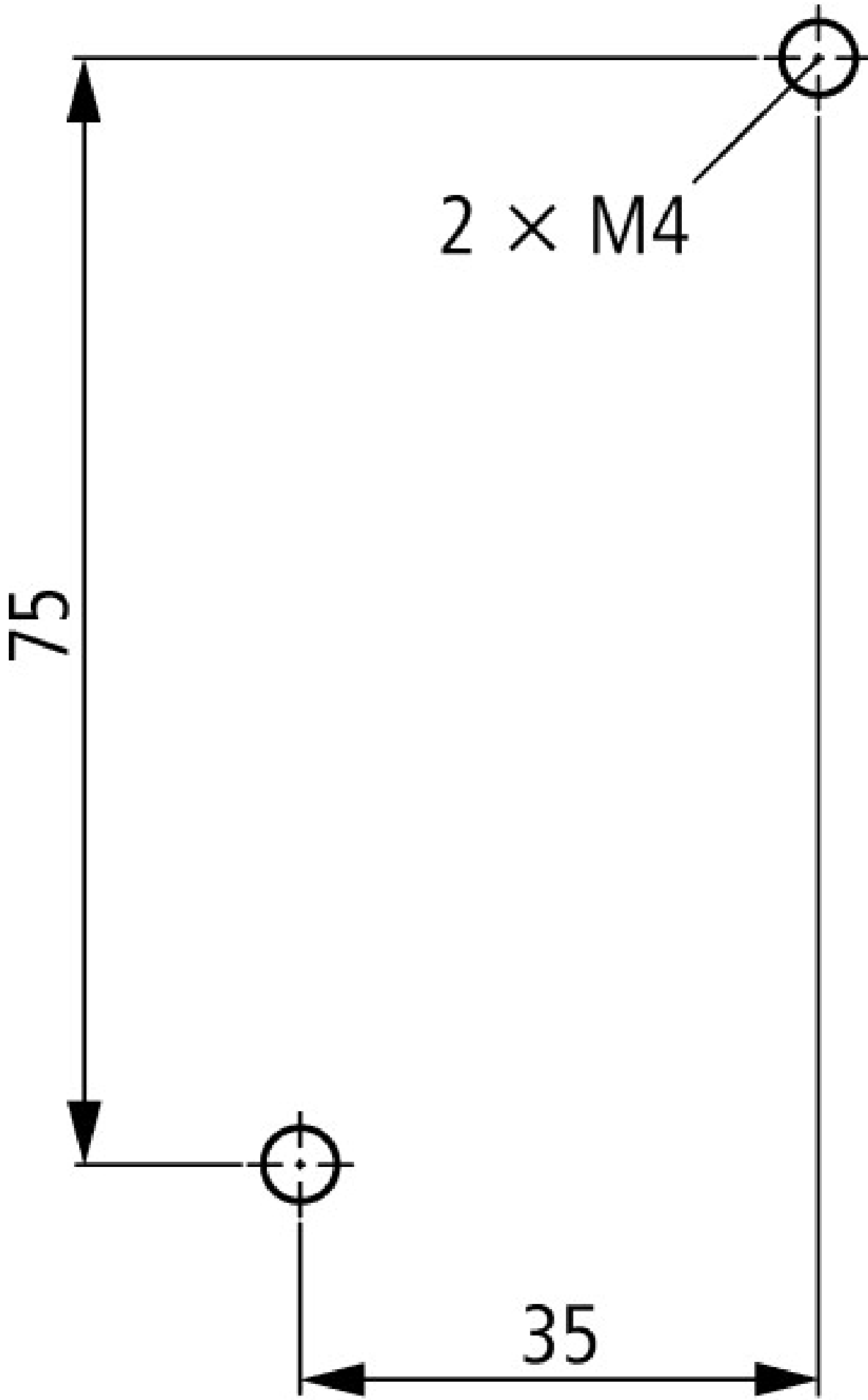
<http://eaton-moeller.partcommunity.com>

## Dimensions





Contacteur with auxiliary contact module



Lateral clearance to earthed parts: 6 mm

**Additional product information (links)**

IL03407014Z (IL03407014Z) Contactor

[ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL03407014Z2010\\_10.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407014Z2010_10.pdf)

Motor starters and "Special Purpose Ratings" for the North American market	<a href="http://www.moeller.net/binary/ver_techpapers/ver953en.pdf">http://www.moeller.net/binary/ver_techpapers/ver953en.pdf</a>
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