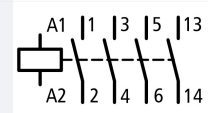




Contactor, 3p+1N/O, 7.5kW/400V/AC3

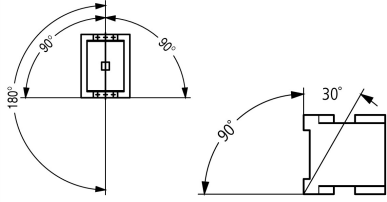
Part no. **DILM15-10(110V50HZ,120V60HZ)**  
 Catalog No. **290055**  
 Eaton Catalog No. **XTCE015B10A**  
 EL-Nummer **4110366**  
 (Norway)

### Delivery program

Product range			Contactors
Application			Contactors for Motors
Subrange			Contactors up to 170 A, 3 pole
Utilization category			AC-1: Non-inductive or slightly inductive loads, resistance furnaces NAC-3: Normal AC induction motors: starting, switch off during running AC-4: Normal AC induction motors: starting, plugging, reversing, inching
Notes			Not suitable for motors with efficiency class IE3.
Connection technique			Screw terminals
Number of poles			3 pole
<b>Rated operational current</b>			
AC-3			
380 V 400 V	$I_e$	A	15.5
AC-1			
Conventional free air thermal current, 3 pole, 50 - 60 Hz			
Open			
at 40 °C	$I_{th} = I_e$	A	22
enclosed	$I_{th}$	A	18
Conventional free air thermal current, 1 pole			
open	$I_{th}$	A	50
enclosed	$I_{th}$	A	45
<b>Max. rating for three-phase motors, 50 - 60 Hz</b>			
AC-3			
220 V 230 V	P	kW	4
380 V 400 V	P	kW	7.5
660 V 690 V	P	kW	7
AC-4			
220 V 230 V	P	kW	2
380 V 400 V	P	kW	3
660 V 690 V	P	kW	4.4
<b>Contacts</b>			
N/O = Normally open			1 N/O
Contact sequence			
<b>Instructions</b>			
Can be combined with auxiliary contact			DILM32-XHI.. DILA-XHI(V)..
Voltage AC/DC			AC operation

### Technical data

<b>General</b>			
Standards			IEC/EN 60947, VDE 0660, UL, CSA
Lifespan, mechanical			
AC operated	Operations	$\times 10^6$	10
Operating frequency, mechanical			
AC operated	Operations/h		5000
Climatic proofing			Damp heat, constant, to IEC 60068-2-78

			Damp heat, cyclic, to IEC 60068-2-30
<b>Ambient temperature</b>			
Open	°C		-25 - +60
Enclosed	°C		- 25 - 40
Storage	°C		- 40 - 80
<b>Mounting position</b>			
			
<b>Mechanical shock resistance (IEC/EN 60068-2-27)</b>			
Half-sinusoidal shock, 10 ms			
<b>Main contacts</b>			
N/O contact	g		10
<b>Auxiliary contacts</b>			
N/O contact	g		7
N/C contact	g		5
<b>Mechanical shock resistance (IEC/EN 60068-2-27) when tabletop-mounted</b>			
Half-sinusoidal shock, 10 ms			
<b>Main contacts</b>			
N/O contact	g		5.7
<b>Auxiliary contacts</b>			
N/O contact	g		3.4
N/C contact	g		3.4
<b>Degree of Protection</b>			
Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof
<b>Weight</b>			
AC operated	kg		0.24
<b>Screw connector terminals</b>			
Terminal capacity main cable			
Solid	mm <sup>2</sup>		1 x (0.75 - 4) 2 x (0.75 - 2.5)
Flexible with ferrule	mm <sup>2</sup>		1 x (0.75 - 2.5) 2 x (0.75 - 2,5)
			Also without ferrule.
Solid or stranded	AWG		single 18 - 10, double 18 - 14
Stripping length	mm		10
Terminal screw			M3.5
Tightening torque	Nm		1.2
<b>Tool</b>			
Pozidriv screwdriver	Size		2
Standard screwdriver	mm		0.8 x 5.5 1 x 6
<b>Terminal capacity control circuit cables</b>			
Solid	mm <sup>2</sup>		1 x (0.75 - 4) 2 x (0.75 - 2.5)
Flexible with ferrule	mm <sup>2</sup>		1 x (0.75 - 2.5) 2 x (0.75 - 2.5)
Solid or stranded	AWG		18 - 14
Stripping length	mm		10
Terminal screw			M3.5
Tightening torque	Nm		1.2
<b>Tool</b>			
Pozidriv screwdriver	Size		2
Standard screwdriver	mm		0.8 x 5.5 1 x 6

## Main conducting paths

Rated impulse withstand voltage	$U_{imp}$	V AC	8000
Overtoltage category/pollution degree			III/3
Rated insulation voltage	$U_i$	V AC	690
Rated operational voltage	$U_e$	V AC	690
Safe isolation to EN 61140			
between coil and contacts		V AC	400
between the contacts		V AC	400
Making capacity (p.f. to IEC/EN 60947)			
	$U_p$ to 690 V	A	155
Breaking capacity			
220 V 230 V		A	124
380 V 400 V		A	124
500 V		A	100
660 V 690 V		A	70
Short-circuit rating			
Short-circuit protection maximum fuse			
Type "2" coordination			
400 V	gG/gL 500 V	A	20
690 V	gG/gL 690 V	A	20
Type "1" coordination			
400 V	gG/gL 500 V	A	63
690 V	gG/gL 690 V	A	50

## AC

AC-1			
Rated operational current			
Conventional free air thermal current, 3 pole, 50 - 60 Hz			
Open			
at 40 °C	$I_{th} = I_e$	A	22
at 50 °C	$I_{th} = I_e$	A	21
at 55 °C	$I_{th} = I_e$	A	21
at 60 °C	$I_{th} = I_e$	A	20
enclosed	$I_{th}$	A	18
Conventional free air thermal current, 1 pole			
open	$I_{th}$	A	50
enclosed	$I_{th}$	A	45
AC-3			
Rated operational current			
Open, 3-pole: 50 – 60 Hz			
220 V 230 V	$I_e$	A	15.5
240 V	$I_e$	A	15.5
380 V 400 V	$I_e$	A	15.5
415 V	$I_e$	A	15.5
440V	$I_e$	A	15.5
500 V	$I_e$	A	12.5
660 V 690 V	$I_e$	A	9
380 V 400 V	$I_e$	A	15.5
Motor rating	P	kWh	
220 V 230 V	P	kW	4
240V	P	kW	4.6
380 V 400 V	P	kW	7.5
415 V	P	kW	8
440 V	P	kW	8.4
500 V	P	kW	7.5

660 V 690 V	P	kW	7
<b>AC-4</b>			
Open, 3-pole: 50 – 60 Hz			
220 V 230 V	I <sub>e</sub>	A	7
240 V	I <sub>e</sub>	A	7
380 V 400 V	I <sub>e</sub>	A	7
415 V	I <sub>e</sub>	A	7
440 V	I <sub>e</sub>	A	7
500 V	I <sub>e</sub>	A	6
660 V 690 V	I <sub>e</sub>	A	5
<b>Motor rating</b>			
220 V 230 V	P	kW	2
240 V	P	kW	2.2
380 V 400 V	P	kW	3
415 V	P	kW	3.4
440 V	P	kW	3.6
500 V	P	kW	3.5
660 V 690 V	P	kW	4.4

## DC

<b>Rated operational current, open</b>			
<b>DC-1</b>			
60 V	I <sub>e</sub>	A	20
110 V	I <sub>e</sub>	A	20
220 V	I <sub>e</sub>	A	15

## Current heat loss

3 pole, at I <sub>th</sub> (60°)		W	2.5
Current heat loss at I <sub>e</sub> to AC-3/400 V		W	1.5
Impedance per pole		mΩ	2.5

## Magnet systems

<b>Voltage tolerance</b>			
AC operated	Pick-up	x U <sub>c</sub>	0.8 - 1.1
Drop-out voltage AC operated	Drop-out	x U <sub>c</sub>	0.3 - 0.6
<b>Power consumption of the coil in a cold state and 1.0 x U<sub>S</sub></b>			
50 Hz	Pick-up	VA	24
50 Hz	Sealing	VA	3.4
50 Hz	Sealing	W	1.4
60 Hz	Pick-up	VA	30
60 Hz	Sealing	VA	4.4
60 Hz	Sealing	W	1.4
Duty factor		% DF	100
<b>Changeover time at 100 % U<sub>S</sub> (recommended value)</b>			
<b>Main contacts</b>			
AC operated			
	Closing delay	ms	15 - 21
	Opening delay	ms	9 - 18
	Arcing time	ms	10

## Electromagnetic compatibility (EMC)

Emitted interference			to EN 60947-1
Interference immunity			to EN 60947-1

## Rating data for approved types

<b>Switching capacity</b>			
Maximum motor rating			
Three-phase			
200 V 208 V		HP	5
230 V		HP	5

240 V		
460 V 480 V	HP	10
575 V 600 V	HP	10
Single-phase		
115 V 120 V	HP	1
230 V 240 V	HP	3
General use	A	20
Auxiliary contacts		
Pilot Duty		
AC operated		A600
DC operated		P300
General Use		
AC	V	600
AC	A	10
DC	V	250
DC	A	1
Short Circuit Current Rating	SCCR	
Basic Rating		
SCCR	kA	5
max. Fuse	A	45
max. CB	A	60
480 V High Fault		
SCCR (fuse)	kA	30/100
max. Fuse	A	25 Class RK5/60 Class J
600 V High Fault		
SCCR (fuse)	kA	30/100
max. Fuse	A	25 Class RK5/60 Class J
Special Purpose Ratings		
Electrical Discharge Lamps (Ballast)		
480V 60Hz 3phase, 277V 60Hz 1phase	A	20
600V 60Hz 3phase, 347V 60Hz 1phase	A	20
Incandescent Lamps (Tungsten)		
480V 60Hz 3phase, 277V 60Hz 1phase	A	14
600V 60Hz 3phase, 347V 60Hz 1phase	A	14
Resistance Air Heating		
480V 60Hz 3phase, 277V 60Hz 1phase	A	20
600V 60Hz 3phase, 347V 60Hz 1phase	A	20
Refrigeration Control (CSA only)		
LRA 480V 60Hz 3phase	A	60
FLA 480V 60Hz 3phase	A	10
LRA 600V 60Hz 3phase	A	60
FLA 600V 60Hz 3phase	A	10
Definite Purpose Ratings (100,000 cycles acc. to UL 1995)		
LRA 480V 60Hz 3phase	A	90
FLA 480V 60Hz 3phase	A	15
Elevator Control		
200V 60Hz 3phase	HP	2
200V 60Hz 3phase	A	7.8
240V 60Hz 3phase	HP	3
240V 60Hz 3phase	A	9.6
480V 60Hz 3phase	HP	7.5
480V 60Hz 3phase	A	11
600V 60Hz 3phase	HP	7.5

600V 60Hz 3phase	A	9
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## Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	$I_n$	A	15.5
Heat dissipation per pole, current-dependent	$P_{vid}$	W	0.5
Equipment heat dissipation, current-dependent	$P_{vid}$	W	0
Static heat dissipation, non-current-dependent	$P_{vs}$	W	1.4
Heat dissipation capacity	$P_{diss}$	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	60
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			
10.2.3.1 Verification of thermal stability of enclosures			
10.2.3.2 Verification of resistance of insulating materials to normal heat			
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			
10.2.4 Resistance to ultra-violet (UV) radiation			
10.2.5 Lifting			
10.2.6 Mechanical impact			
10.2.7 Inscriptions			
10.3 Degree of protection of ASSEMBLIES			
10.4 Clearances and creepage distances			
10.5 Protection against electric shock			
10.6 Incorporation of switching devices and components			
10.7 Internal electrical circuits and connections			
10.8 Connections for external conductors			
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			
10.9.3 Impulse withstand voltage			
10.9.4 Testing of enclosures made of insulating material			
10.10 Temperature rise			
10.11 Short-circuit rating			
10.12 Electromagnetic compatibility			
10.13 Mechanical function			

## Technical data ETIM 6.0

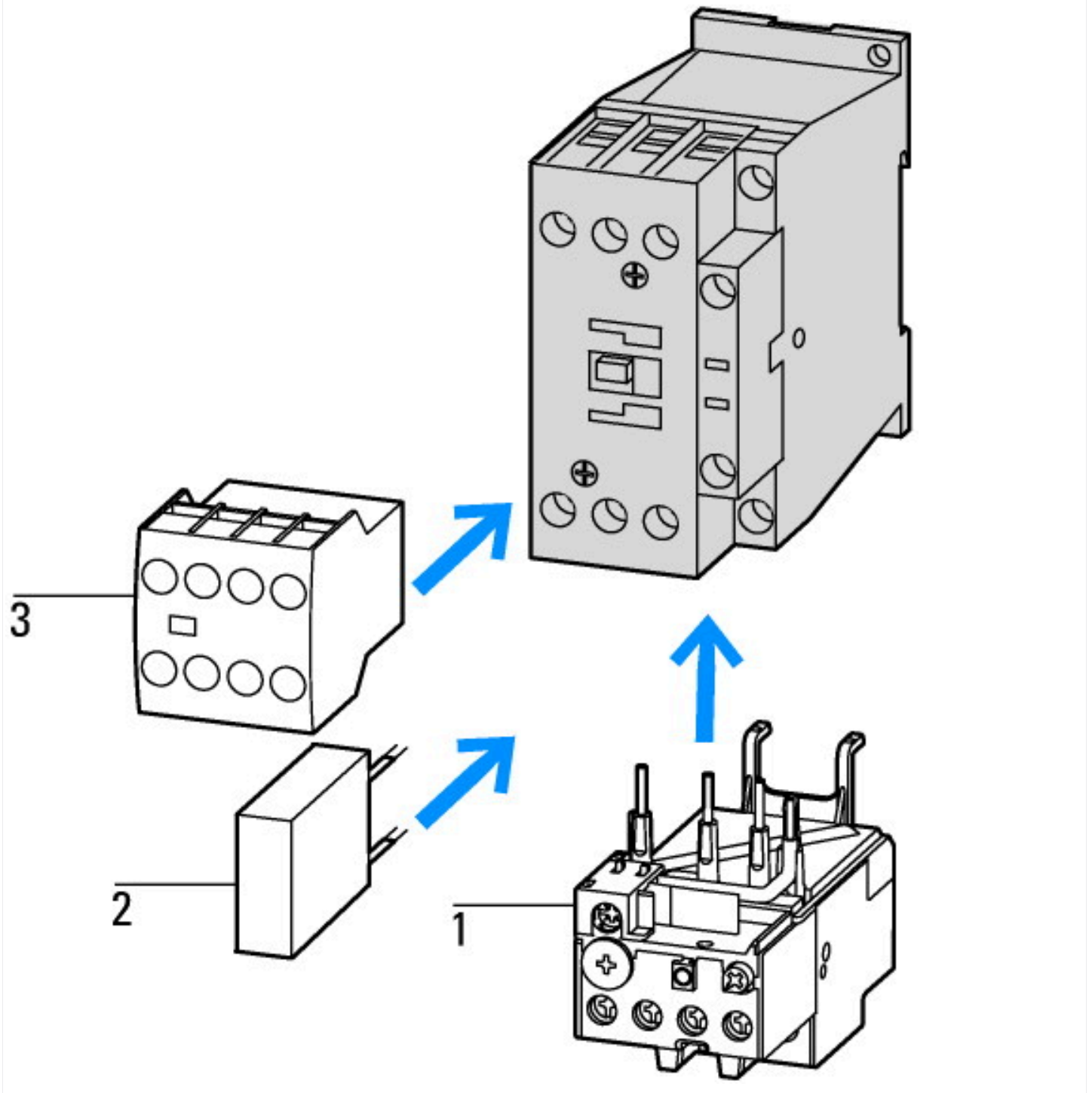
Low-voltage industrial components (EG000017) / Power contactor, AC switching (EC000066)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Power contactor, AC switching (ecl@ss8.1-27-37-10-03 [AAB718012])			
Rated control supply voltage $U_s$ at AC 50HZ		V	110 - 110
Rated control supply voltage $U_s$ at AC 60HZ		V	120 - 120
Rated control supply voltage $U_s$ at DC		V	0 - 0
Voltage type for actuating			AC
Rated operation current $I_e$ at AC-1, 400 V		A	22
Rated operation current $I_e$ at AC-3, 400 V		A	15.5
Rated operation power at AC-3, 400 V		kW	7.5
Rated operation current $I_e$ at AC-4, 400 V		A	7
Rated operation power $I_e$ at AC-4, 400 V		kW	3
Modular version			No
Number of auxiliary contacts as normally open contact			1
Number of auxiliary contacts as normally closed contact			0
Type of electrical connection of main circuit			Screw connection

Number of normally closed contacts as main contact	0
Number of main contacts as normally open contact	3

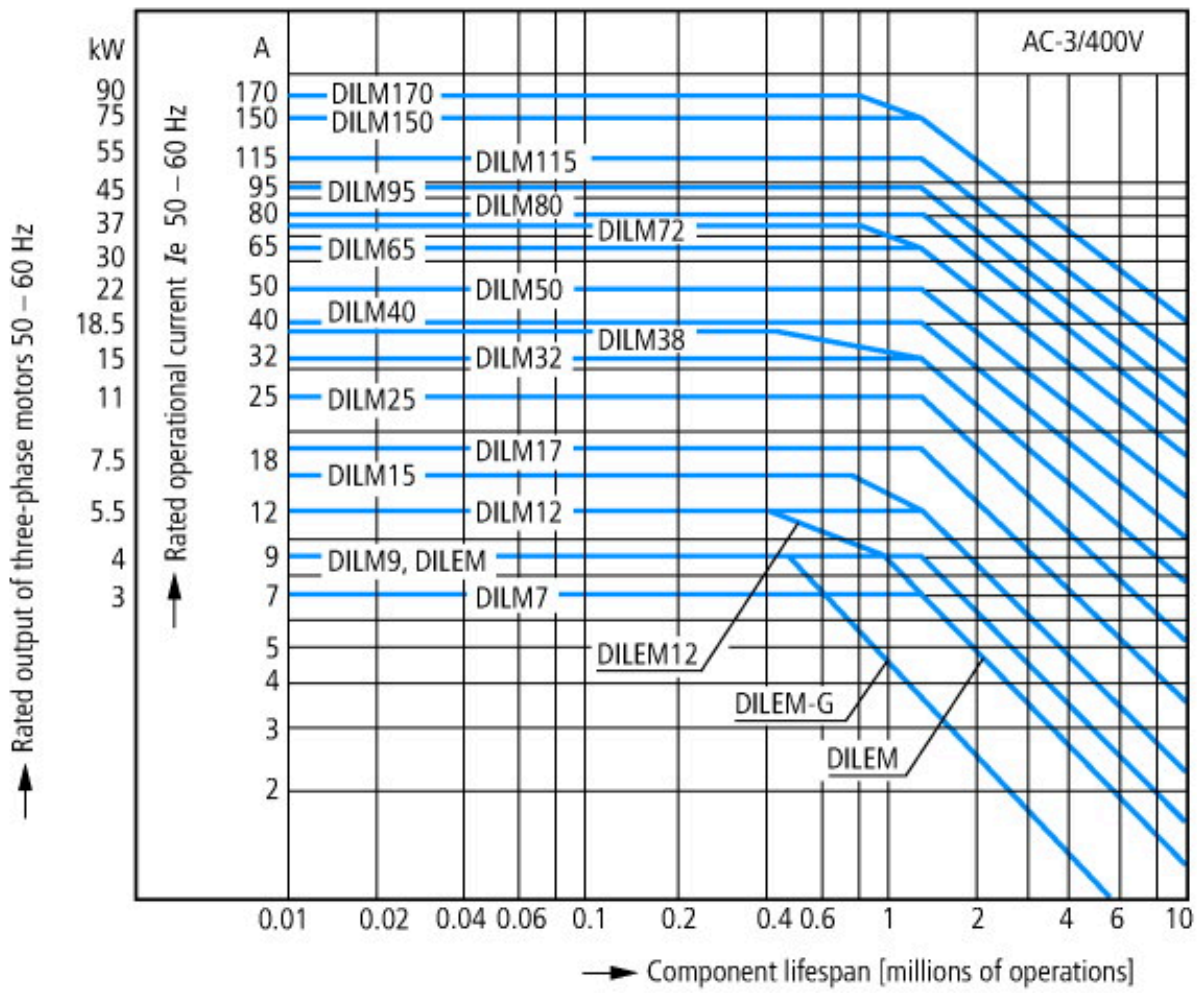
## Approvals

Product Standards	IEC/EN 60947-4-1; UL 60947-4-1; CSA - C22.2 No. 60947-4-1-14; CE marking
UL File No.	E29096
UL Category Control No.	NLDX
CSA File No.	012528
CSA Class No.	2411-03, 3211-04
North America Certification	UL listed, CSA certified
Specially designed for North America	No

## Characteristics

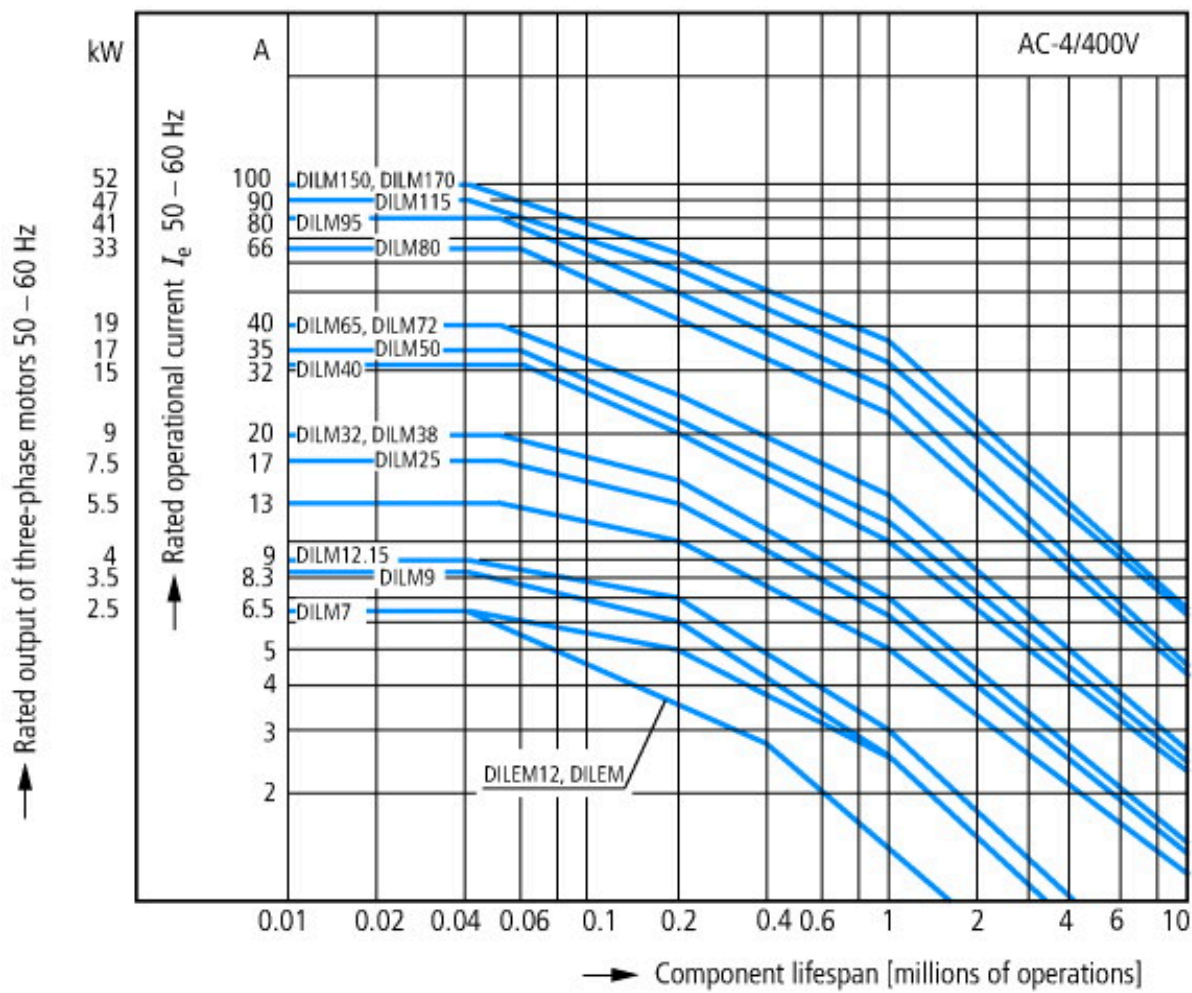


- 1: Overload relay
- 2: Suppressor
- 3: Auxiliary contact modules

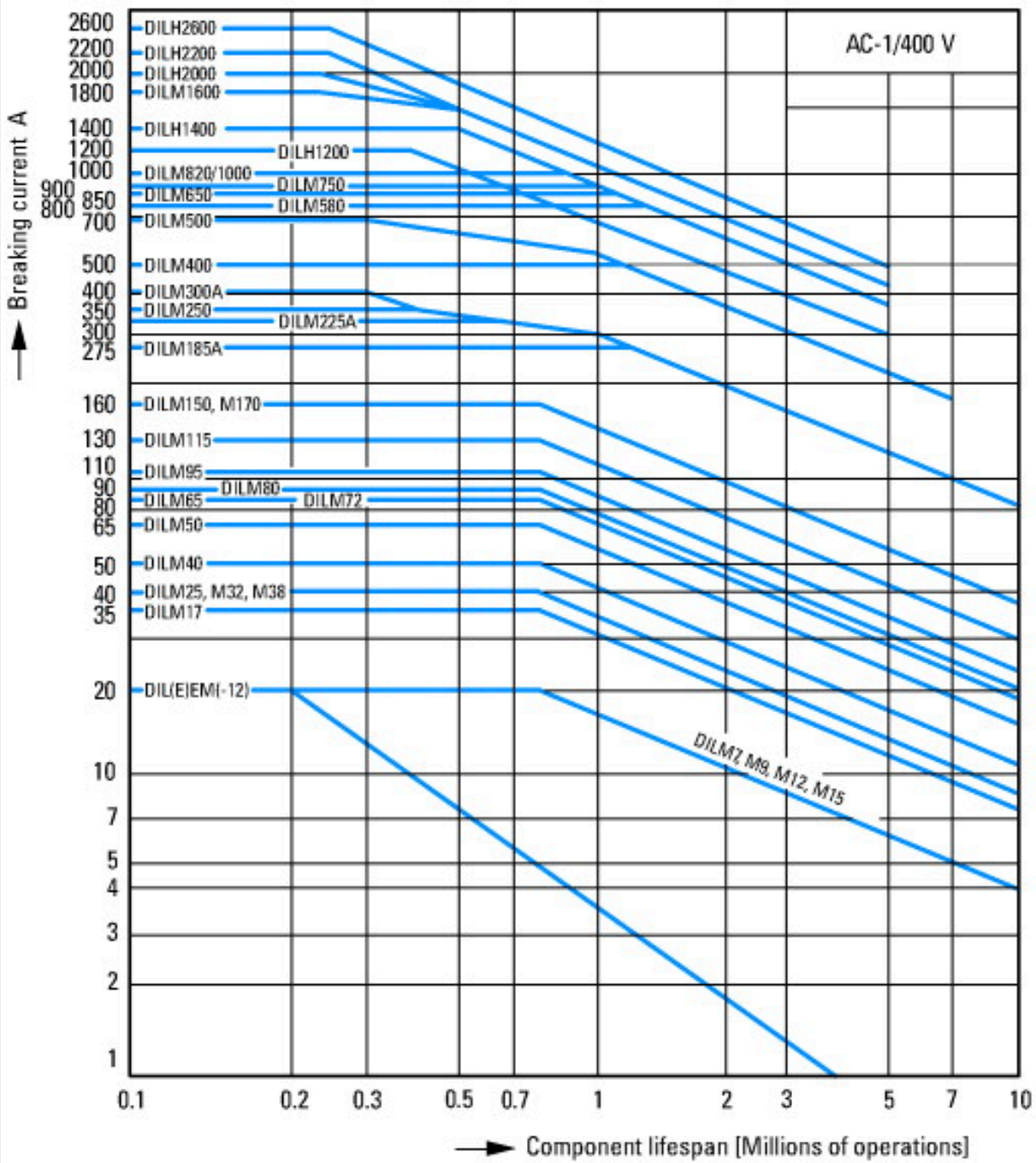


Normal AC induction motor  
 Operating characteristics  
 Switch on: from stop  
 Switch off: during run  
 Electrical characteristics:  
 Switch on: up to 6 x Rated motor current  
 Switch off: up to 1 x Rated motor current  
 Utility category



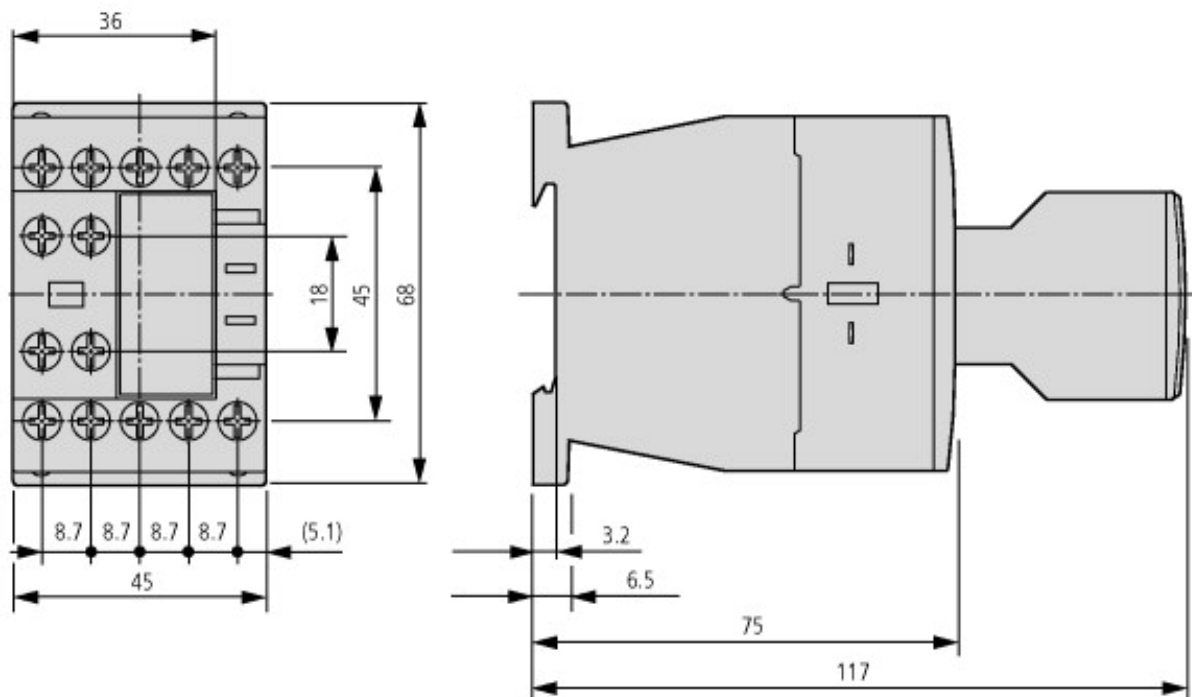


Extreme switching duty  
 Normal AC induction motor  
 Operating characteristics  
 Inching, plugging, reversing  
 Electrical characteristics:  
 Switch on: up to 6 x Rated motor current  
 Switch off: up to 6 x Rated motor current  
 Utilization

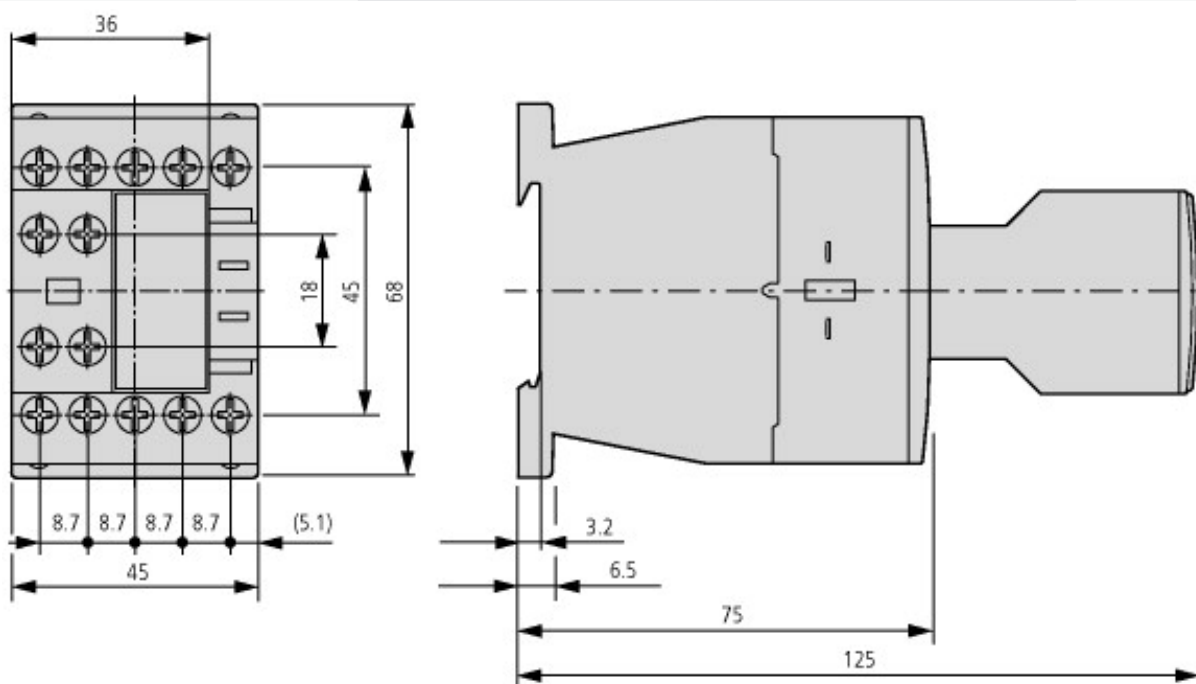


Switching conditions for non-motor consumers, 3 pole, 4 pole  
 Operating characteristics  
 Non inductive and slightly inductive loads  
 Electrical characteristics  
 Switch on: 1 x rated operational current  
 Switch off: 1 x rated operational current  
 Utilization category  
 100 % AC-1  
 Typical examples of application  
 Electric heat

## Dimensions



Contactor with auxiliary contact module DILM32-XHI.../DILA-XHI...



Contactor with auxiliary contact module DILA-XHIT...



## Assets (Links)

**Declaration of Conformity**  
00002560

## Additional product information (links)

### IL03407013Z (AWA2100-2126) Contactors

IL03407013Z (AWA2100-2126) Contactors [ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL03407013Z2012\\_03.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407013Z2012_03.pdf)

Switchgear of Power Factor Correction Systems [http://www.moeller.net/binary/ver\\_techpapers/ver934en.pdf](http://www.moeller.net/binary/ver_techpapers/ver934en.pdf)

X-Start - Modern Switching Installations Efficiently Fitted and Wired Securely [http://www.moeller.net/binary/ver\\_techpapers/ver938en.pdf](http://www.moeller.net/binary/ver_techpapers/ver938en.pdf)

Mirror Contacts for Highly-Reliable Information Relating to Safety-Related Control Functions [http://www.moeller.net/binary/ver\\_techpapers/ver944en.pdf](http://www.moeller.net/binary/ver_techpapers/ver944en.pdf)

Effect of the Cabel Capacitance of Long Control Cables on the Actuation of Contactors [http://www.moeller.net/binary/ver\\_techpapers/ver949en.pdf](http://www.moeller.net/binary/ver_techpapers/ver949en.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>
Switchgear for Luminaires	<a href="http://www.moeller.net/binary/ver_techpapers/ver955en.pdf">http://www.moeller.net/binary/ver_techpapers/ver955en.pdf</a>
Standard Compliant and Functionally Safe Engineering Design with Mechanical Auxiliary Contacts	<a href="http://www.moeller.net/binary/ver_techpapers/ver956en.pdf">http://www.moeller.net/binary/ver_techpapers/ver956en.pdf</a>
The Interaction of Contactors with PLCs	<a href="http://www.moeller.net/binary/ver_techpapers/ver957en.pdf">http://www.moeller.net/binary/ver_techpapers/ver957en.pdf</a>
Busbar Component Adapters for modern Industrial control panels	<a href="http://www.moeller.net/binary/ver_techpapers/ver960en.pdf">http://www.moeller.net/binary/ver_techpapers/ver960en.pdf</a>