
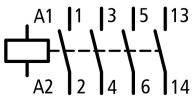




**Contactor, 3p+1N/O, 11kW/400V/AC3**

**Part no. DILM25-10(24V50/60HZ)**  
**Catalog No. 277136**  
**Eaton Catalog No. XTCE025C10T**

### 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				Also suitable for motors with efficiency class IE3. IE3-ready devices are identified by the logo on their packaging.
Connection technique				Screw terminals
Number of poles				3 pole
<b>Rated operational current</b>				
AC-3				
380 V 400 V	$I_e$	A	25	
AC-1				
Conventional free air thermal current, 3 pole, 50 - 60 Hz				
Open				
at 40 °C	$I_{th} = I_e$	A	45	
enclosed	$I_{th}$	A	36	
Conventional free air thermal current, 1 pole				
open	$I_{th}$	A	100	
enclosed	$I_{th}$	A	90	
<b>Max. rating for three-phase motors, 50 - 60 Hz</b>				
AC-3				
220 V 230 V	P	kW	7.5	
380 V 400 V	P	kW	11	
660 V 690 V	P	kW	14	
AC-4				
220 V 230 V	P	kW	3.5	
380 V 400 V	P	kW	6	
660 V 690 V	P	kW	8.5	
<b>Contacts</b>				
N/O = Normally open				1 N/O
Contact sequence				
Instructions				Contacts to EN 50 012.
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	x 10 <sup>6</sup>	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			
Ambient temperature			
Open	°C		-25 - +60
Enclosed	°C		- 25 - 40
Storage	°C		- 40 - 80
Mounting position			
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
Degree of Protection			
IP00			
Protection against direct contact when actuated from front (EN 50274)			
Finger and back-of-hand proof			
Weight			
AC operated	kg		0.428
Screw connector terminals			
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		single 18 - 6, double 18 - 8
Stripping length	mm		10
Terminal screw			M5
Tightening torque	Nm		3.2
Tool			
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 - 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
Tool			

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
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 EN 61140			
between coil and contacts		V AC	440
between the contacts		V AC	440
Making capacity (p.f. to IEC/EN 60947)			
	$U_p$ to 690 V	A	350
Breaking capacity			
220 V 230 V		A	250
380 V 400 V		A	250
500 V		A	250
660 V 690 V		A	150
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	100
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	45
at 50 °C	$I_{th} = I_e$	A	43
at 55 °C	$I_{th} = I_e$	A	42
at 60 °C	$I_{th} = I_e$	A	40
enclosed	$I_{th}$	A	36
Conventional free air thermal current, 1 pole			
open	$I_{th}$	A	100
enclosed	$I_{th}$	A	90
AC-3			
Rated operational current			
Open, 3-pole: 50 – 60 Hz			
220 V 230 V	$I_e$	A	25
240 V	$I_e$	A	25
380 V 400 V	$I_e$	A	25
415 V	$I_e$	A	25
440V	$I_e$	A	25
500 V	$I_e$	A	25
660 V 690 V	$I_e$	A	15
380 V 400 V	$I_e$	A	25
Motor rating	P	kWh	
220 V 230 V	P	kW	7.5
240V	P	kW	8.5
380 V 400 V	P	kW	11
415 V	P	kW	14.5

440 V	P	kW	15.5
500 V	P	kW	17.5
660 V 690 V	P	kW	14
<b>AC-4</b>			
Open, 3-pole: 50 – 60 Hz			
220 V 230 V	I <sub>e</sub>	A	13
240 V	I <sub>e</sub>	A	13
380 V 400 V	I <sub>e</sub>	A	13
415 V	I <sub>e</sub>	A	13
440 V	I <sub>e</sub>	A	13
500 V	I <sub>e</sub>	A	13
660 V 690 V	I <sub>e</sub>	A	10
Motor rating			
220 V 230 V	P	kW	3.5
240 V	P	kW	4
380 V 400 V	P	kW	6
415 V	P	kW	6.5
440 V	P	kW	7
500 V	P	kW	8
660 V 690 V	P	kW	8.5

## DC

Rated operational current, open			
DC-1			
60 V	I <sub>e</sub>	A	40
110 V	I <sub>e</sub>	A	40
220 V	I <sub>e</sub>	A	40

## Current heat loss

3 pole, at I <sub>th</sub> (60°)		W	10.8
Current heat loss at I <sub>e</sub> to AC-3/400 V		W	4.2
Impedance per pole		mΩ	2.7

## Magnet systems

Voltage tolerance			
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
Power consumption of the coil in a cold state and 1.0 x U <sub>S</sub>			
50/60 Hz	Pick-up	VA	62 58
50/60 Hz	Sealing	VA	9.1 6.5
50/60 Hz	Sealing	W	2.1
Duty factor		% DF	100
Changeover time at 100 % U <sub>S</sub> (recommended value)			
Main contacts			
AC operated			
Closing delay		ms	16 - 22
Opening delay		ms	8 - 14
Arcing time		ms	10
Lifespan, mechanical; Coil 50/60 Hz		x 10 <sup>6</sup>	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

## Rating data for approved types

Switching capacity			
Maximum motor rating			
Three-phase			
200 V		HP	7.5

208 V		
230 V 240 V	HP	10
460 V 480 V	HP	15
575 V 600 V	HP	20
Single-phase		
115 V 120 V	HP	2
230 V 240 V	HP	5
General use	A	40
<b>Auxiliary contacts</b>		
<b>Pilot Duty</b>		
AC operated		A600
DC operated		P300
<b>General Use</b>		
AC	V	600
AC	A	10
DC	V	250
DC	A	1
<b>Short Circuit Current Rating</b>		
<b>Basic Rating</b>		
SCCR	kA	5
max. Fuse	A	125
max. CB	A	125
<b>480 V High Fault</b>		
SCCR (fuse)	kA	10/100
max. Fuse	A	125/70 Class J
SCCR (CB)	kA	10/65
max. CB	A	50/32
<b>600 V High Fault</b>		
SCCR (fuse)	kA	10/100
max. Fuse	A	125/100 Class J
SCCR (CB)	kA	10/22
max. CB	A	50/32
<b>Special Purpose Ratings</b>		
<b>Electrical Discharge Lamps (Ballast)</b>		
480V 60Hz 3phase, 277V 60Hz 1phase	A	40
600V 60Hz 3phase, 347V 60Hz 1phase	A	40
<b>Incandescent Lamps (Tungsten)</b>		
480V 60Hz 3phase, 277V 60Hz 1phase	A	40
600V 60Hz 3phase, 347V 60Hz 1phase	A	40
<b>Resistance Air Heating</b>		
480V 60Hz 3phase, 277V 60Hz 1phase	A	40
600V 60Hz 3phase, 347V 60Hz 1phase	A	40
<b>Refrigeration Control (CSA only)</b>		
LRA 480V 60Hz 3phase	A	240
FLA 480V 60Hz 3phase	A	40
LRA 600V 60Hz 3phase	A	180
FLA 600V 60Hz 3phase	A	30
<b>Definite Purpose Ratings (100,000 cycles acc. to UL 1995)</b>		
LRA 480V 60Hz 3phase	A	150
FLA 480V 60Hz 3phase	A	25
<b>Elevator Control</b>		
200V 60Hz 3phase	HP	3

200V 60Hz 3phase	A	11
240V 60Hz 3phase	HP	5
240V 60Hz 3phase	A	15.2
480V 60Hz 3phase	HP	10
480V 60Hz 3phase	A	14
600V 60Hz 3phase	HP	15
600V 60Hz 3phase	A	17

## Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	$I_n$	A	25
Heat dissipation per pole, current-dependent	$P_{vid}$	W	1.4
Equipment heat dissipation, current-dependent	$P_{vid}$	W	4.2
Static heat dissipation, non-current-dependent	$P_{vs}$	W	2.1
Heat dissipation capacity	$P_{diss}$	W	0
Operating ambient temperature max.		°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			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			Meets the product standard's requirements.
10.2.5 Lifting			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances			Meets the product standard's requirements.
10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.8 Connections for external conductors			Is the panel builder's responsibility.
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage			Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material			Is the panel builder's responsibility.
10.10 Temperature rise			The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

## 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		24 - 24
Rated control supply voltage $U_s$ at AC 60HZ	V		24 - 24
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		45
Rated operation current $I_e$ at AC-3, 400 V	A		25
Rated operation power at AC-3, 400 V	kW		11

Rated operation current I <sub>e</sub> at AC-4, 400 V	A	13
Rated operation power I <sub>e</sub> at AC-4, 400 V	kW	6
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

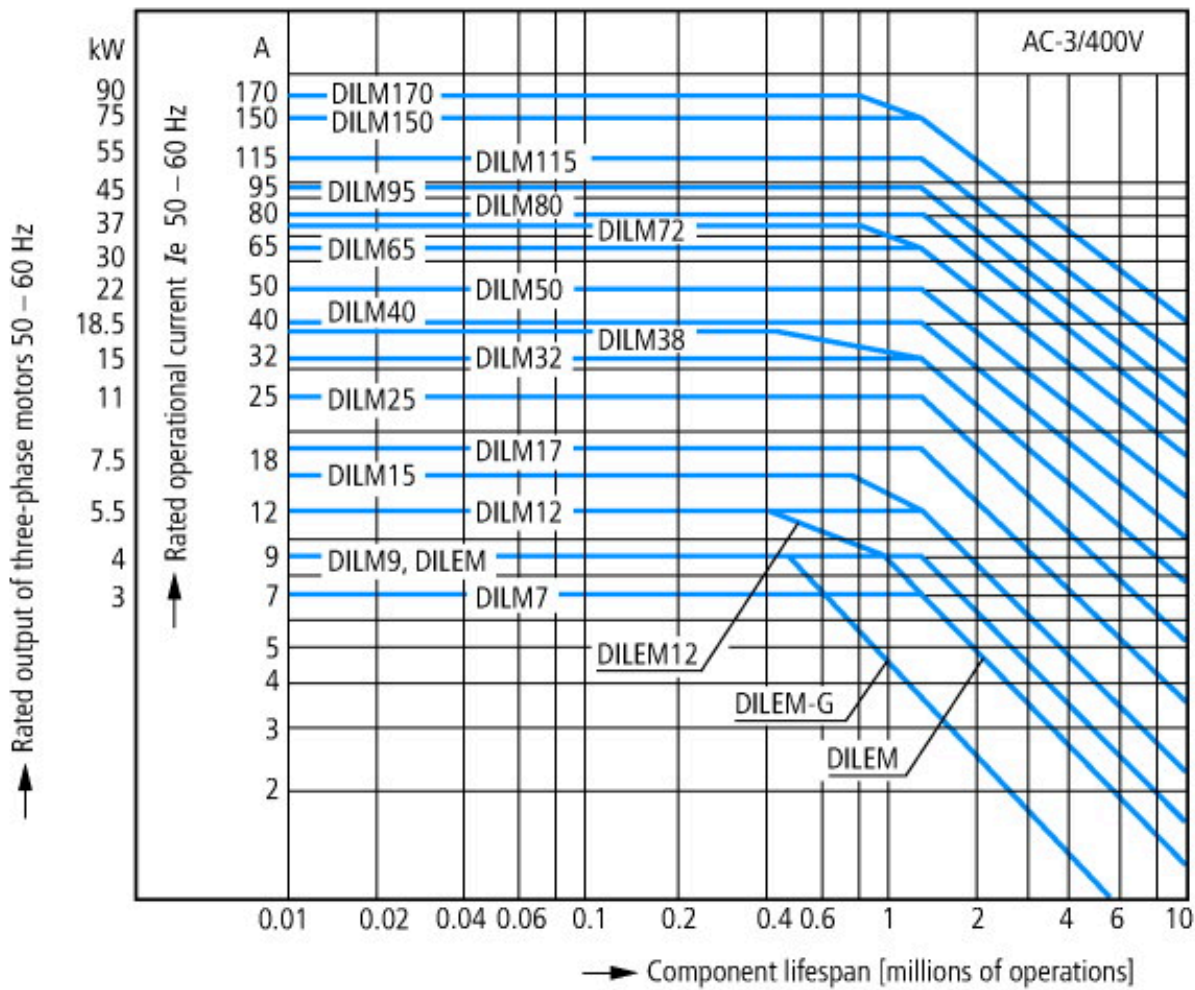
## Approvals

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

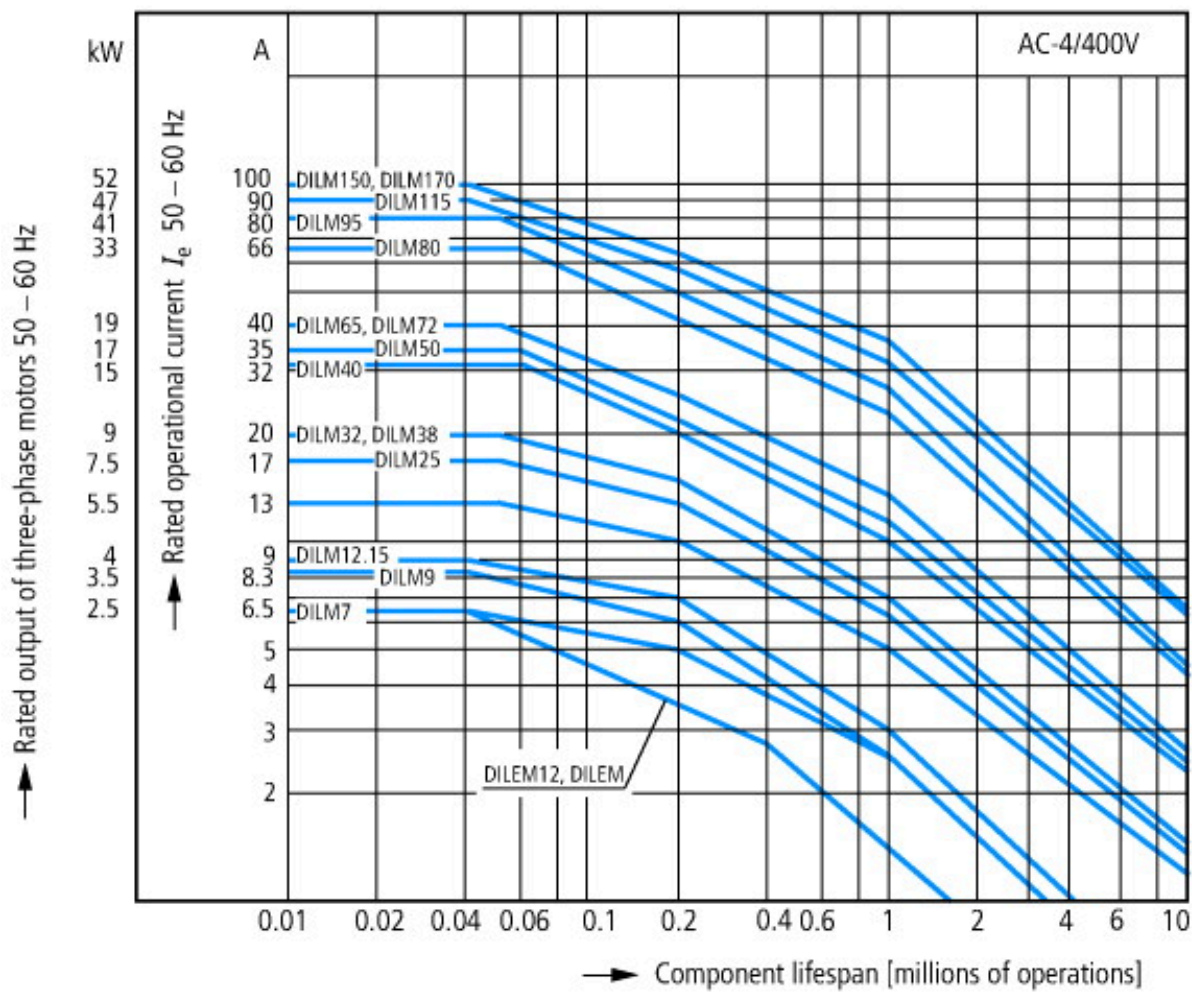


- 1: Overload relay
- 2: Suppressor
- 3: Auxiliary contact modules

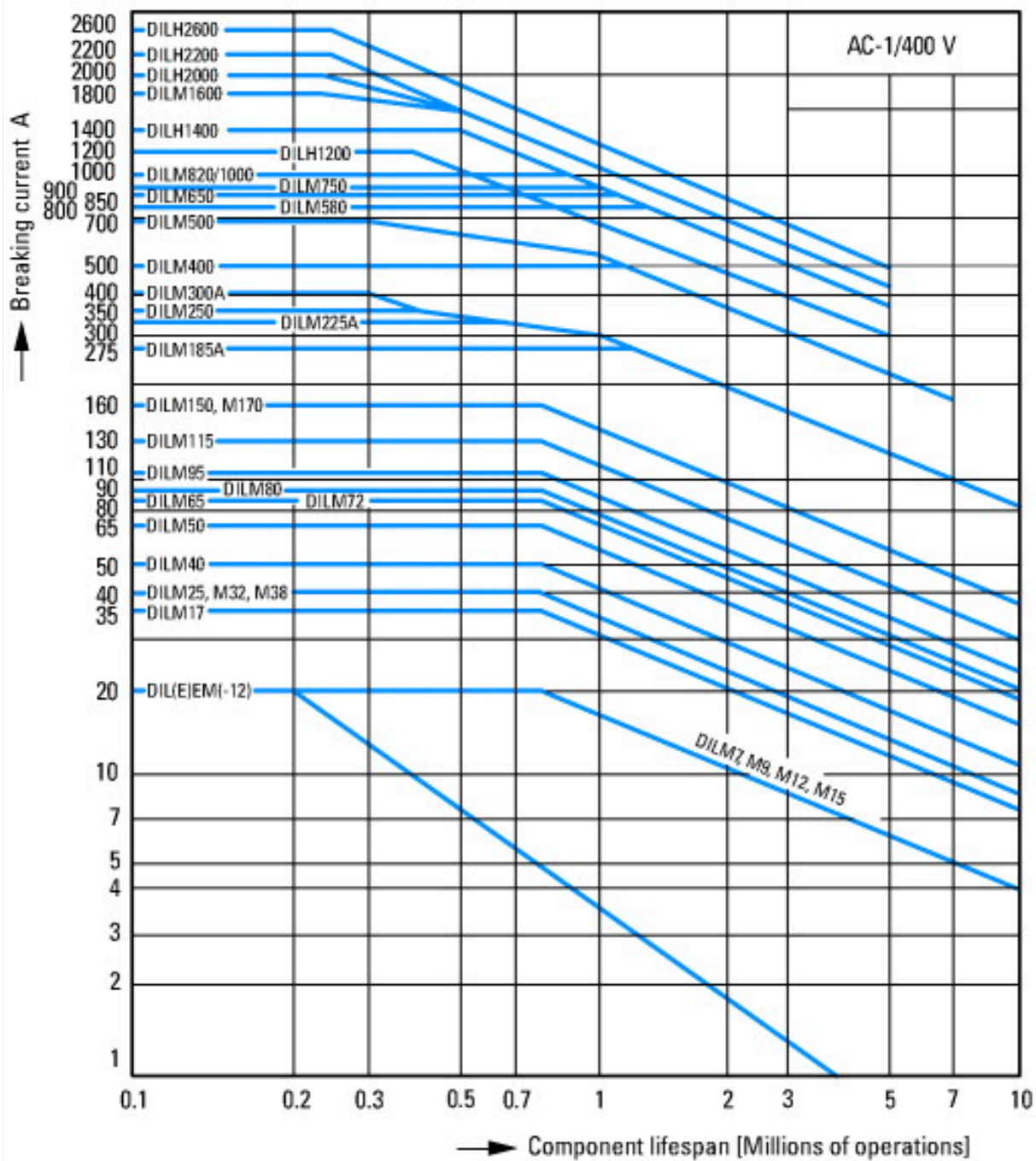




- Squirrel-cage motor
- Operating characteristics
- Starting: from rest
- Stopping: after attaining full running speed
- Electrical characteristics
- Make: up to 6 x rated motor current
- Break: up to 1 x rated motor current
- Utilization category
- 100 % AC-3
- Typical applications
- Compressors
- Lifts
- 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



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



Contacteur with auxiliary contact module



distance at side to earthed parts: 6 mm

### Additional product information (links)

#### IL03407014Z (AWA2100-2127) Contactor

IL03407014Z (AWA2100-2127) Contactor [ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL03407014Z2012\\_03.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407014Z2012_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 [http://www.moeller.net/binary/ver\\_techpapers/ver953en.pdf](http://www.moeller.net/binary/ver_techpapers/ver953en.pdf)

Switchgear for Luminaires [http://www.moeller.net/binary/ver\\_techpapers/ver955en.pdf](http://www.moeller.net/binary/ver_techpapers/ver955en.pdf)

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>