DATASHEET - DILK12-11(24V60HZ)



Contactor for capacitors, with series resistors, 12.5 kVAr, 24 V 60 Hz

Powering Business Worldwide*

Part no. DILK12-11(24V60HZ)
Catalog No. 293981
Alternate Catalog XTCC012C11B6

Delivery program

zomor, program			
Product range			DILK Contactors for capacitors
Application			Contactors for power factor correction
Description			with series resistors
Rated power of AC-6b three-phase capacitors, 50 - 60 Hz			
Open			
230 V	O	kVAr	7.5
400 V	Q	kVAr	12.5
525 V	Q	kVAr	16.7
690 V	O	kVAr	20
Contact sequence			A1
Actuating voltage			24 V 60 Hz

Instructions In the case of group compensation multi-stage capacitor banks are connected to the mains, as required. Transient currents of up to 180 × le could 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 in a time-delayed manner and bring about the continuous current. Due to their special contacts, the contactors for the capacitors are weld-resistant for capacitors with inrush current peaks

Due to their special contacts, the contactors for capacitors are weld-resistant for capacitors with inrush current peaks up to 180 × I_e.

Technical data

Open

Ambient temperature Open C -25 - +60 Enclosed Mounting position Degree of Protection Protection against direct contact when actuated from front (EN 50274) Altitude Meight basic unit AC operated No - 25 - +0 PO - 25 - 40 I PO 0 Finger and back-of-hand proof Max. 2000 Max. 2000	General			
Open Enclosed Mounting position Degree of Protection Protection against direct contact when actuated from front (EN 50274) Altitude Meight basic unit AC operated AC operated Solid Flexible with ferrule Solid or stranded Flat conductor Altitude Solid or stranded Altitude Meight basic unit AC operated Solid or stranded AC operated AC operated AC operated AC operated Solid or stranded AC operated	Standards			IEC/EN 60947
Enclosed Mounting position Degree of Protection Protection against direct contact when actuated from front (EN 50274) Altitude Meight basic unit AC operated AC operated Solid Solid Solid Stranded Solid or stranded Flat conductor AWG Basic and Solid Solid or stranded Flat conductor Lamellenzahl x Braite x Dicke Brait and Solid AWG Basic and Solid AWG Basic and Solid Solid Solid Solid or stranded Flat conductor Lamellenzahl x Braite x Dicke Brait and Solid AWG Basic and Solid Brait and Solid AWG Basic and Solid Brait and Solid and S	Ambient temperature			
Mounting position Degree of Protection Degree of Protection Protection against direct contact when actuated from front (EN 50274) Altitude Weight basic unit AC operated AC operated Solid Solid Flexible with ferrule Flexible with ferrule Solid or stranded Flexible with ferrule Solid or stranded A Weight basic unit Lamellenzahl x Breite x Dick Base a Real Real Real Real Real Real Real R	Open		°C	-25 - +60
Degree of Protection Protection against direct contact when actuated from front (EN 50274) Altitude Weight basic unit AC operated Terminal capacity main cable Solid Flexible with ferrule Stranded Solid or stranded Flat conductor I amellenzahl x Breite x Dicke I p00 Finger and back-of-hand proof Max. 2000 Max. 2000 I v (0.75 - 16) mm² 1 x (0.75 - 16) mm² 1 x (0.75 - 16) mm² 1 x 16 AWG 18 - 6	Enclosed		°C	- 25 - 40
Protection against direct contact when actuated from front (EN 50274) Altitude Meight basic unit AC operated Solid Flexible with ferrule Stranded Stranded Solid or stranded Flat conductor Flat conductor Protection against direct contact when actuated from front (EN 50274) Max. 2000 Max. 2000 Max. 2000 Max. 2000 Max. 2000 It would back-of-hand proof Max. 2000 Max. 2000 It would back-of-hand proof Max. 2000 It would back of back o	Mounting position			30°
Altitude Weight basic unit AC operated AC operated Solid Flexible with ferrule Stranded Solid or stranded Flat conductor Flat conductor AC operated Max. 2000 Max	Degree of Protection			IP00
Weight basic unit AC operated kg 0.51 Terminal capacity main cable Solid mm² 1 x (0.75 - 16) Flexible with ferrule Stranded Solid or stranded Flat conductor Flat conductor Lamellenzahl x Breite x Dicke Dicke Rg 0.51 1 x (0.75 - 16) 1 x (0.75 - 16) 1 x (0.75 - 16) 8 He 6	Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof
AC operated Kg 0.51 Terminal capacity main cable Solid Flexible with ferrule Stranded Solid or stranded Flat conductor Kg 0.51 Terminal capacity main cable mm² 1 x (0.75 - 16) mm² 1 x (0.75 - 16) AWG 18 - 6 Lamellenzahl x Breite x Dicke Terminal capacity main cable Mg 1 x (0.75 - 16) The conductor 1 x 16 AWG 18 - 6	Altitude		m	Max. 2000
Terminal capacity main cable Solid mm² 1 x (0.75 - 16) mm² 1 x (0.75 - 16) Stranded Stranded Solid or stranded Flat conductor Lamellenzahl x Breite x Dicke Terminal capacity main cable mm² 1 x (0.75 - 16) AWG 18 - 6	Weight basic unit			
Solid Flexible with ferrule Stranded Solid or stranded Flat conductor Lamellenzahl x Breite x Dicke mm² 1 x (0.75 - 16)	AC operated		kg	0.51
Flexible with ferrule Stranded Stranded Solid or stranded Flat conductor Lamellenzahl x Breite x Dicke Toke Tokan bereite x Dicke	Terminal capacity main cable			
Stranded mm² 1 x 16 Solid or stranded AWG 18 - 6 Flat conductor Lamellenzahl x Breite x Dicke mm -	Solid		mm^2	1 x (0.75 - 16)
Solid or stranded AWG 18 - 6 Flat conductor Lamellenzahl mm x Breite x Dicke	Flexible with ferrule		mm ²	1 x (0.75 - 16)
Flat conductor Lamellenzahl mm - x Breite x Dicke	Stranded		mm ²	1 x 16
x Breite x Dicke	Solid or stranded		AWG	18 - 6
Rated nower of ΔC-6h three-phase canacitors 50 - 60 Hz	Flat conductor	x Breite x	mm	
	Rated power of AC-6h three phase canacitors 50 - 60 Hz			

909 V	0	13/4	15
230 V	0	kVAr	7.5
400 V	0	kVAr	12.5
525 V	0	kVAr	16.7
690 V	Q	kVAr	20
Rated operational current I_{θ} of three-phase capacitors			
Open			
230 V	I _e	Α	18
400 V	I _e	Α	18
525 V	I _e	Α	18
690 V	I _e	Α	18
of three-phase capacitors enclosed	I _e		
230 V	I _e	Α	16
400 V	I _e	A	16
525 V	I _e	A	16
690 V		A	16
	I _e		
Making capacity (i-peak value) without damping	_	x I _e	180
Component lifespan	Operations	x 10 ⁶	0.15
Maximum operating frequency		Ops./h	
Max. operating frequency		Ops/h	120
Magnet systems			
Voltage tolerance			
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
Power consumption of the coil in a cold state and 1.0 x $\ensuremath{\text{U}_{\text{S}}}$			
50 Hz	Pick-up	VA	58
50 Hz	Sealing	VA	7.6
50 Hz	Sealing	W	2.1
60 Hz	Pick-up	VA	71
60 Hz	Sealing	VA	9.3
60 Hz	Sealing	W	2.1
Duty factor		% DF	100
Changeover time at 100 $\%$ $\rm U_{S}$ (recommended value)			
Main contacts			
AC operated			
Closing delay		ms	16 - 22
Opening delay		ms	8 - 14
Arcing time		ms	10
Electromagnetic compatibility (EMC)			
Emitted interference			according to EN 60947-1
Interference immunity			according to EN 60947-1
Additional technical data			
like the contactar	DIL		M17
Rating data for approved types Special Purpose Ratings			
Capacitor Switching			
240V 60Hz 3phase		A	18
240V 60Hz 3phase		kVar	7.5
480V 60Hz 3phase		A	18
480V 60Hz 3phase		kVar	15
		A	14.4
600V 60Hz 3phase 600V 60Hz 3phase		kVar	15
ουσν συτιζ ομπαοσ		rvai	10

Design verification as per IEC/EN 61439

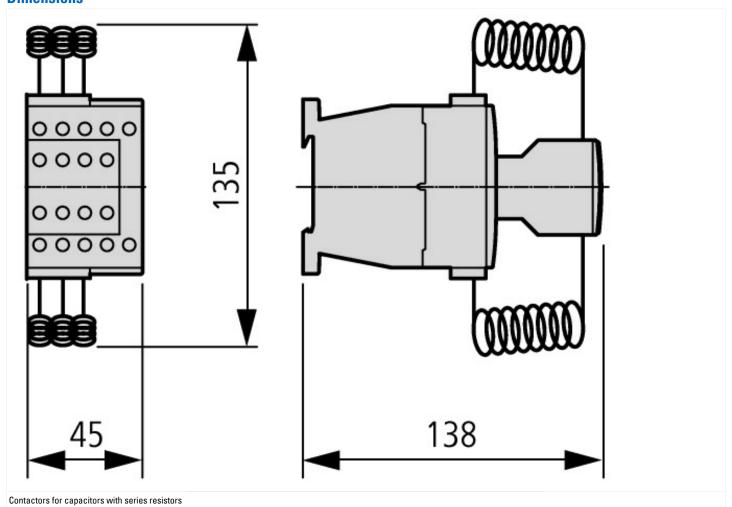
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	18

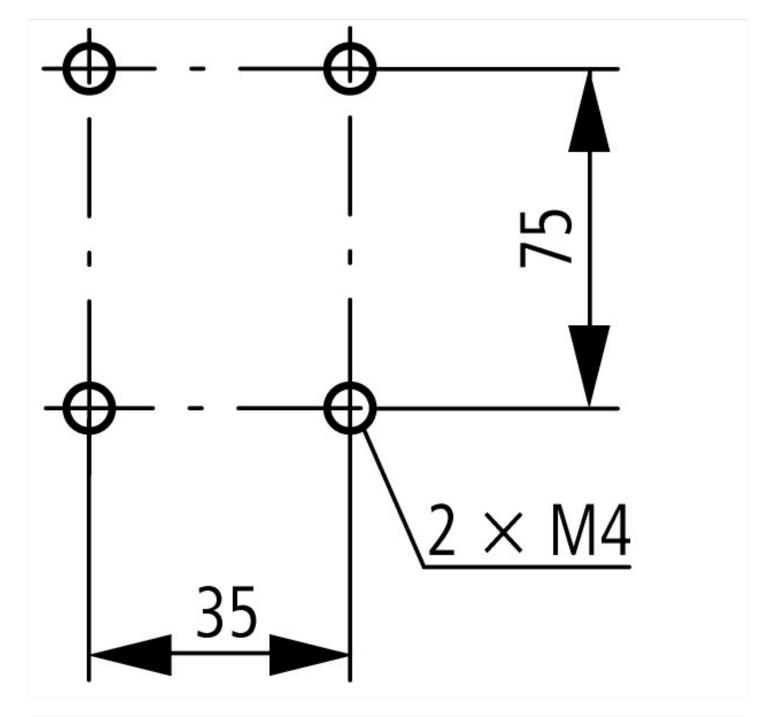
Heat dissipation per pole, current-dependent	P _{vid}	W	0.7
Equipment heat dissipation, current-dependent	P _{vid}	W	2.1
Static heat dissipation, non-current-dependent	P _{vs}	W	2.1
Heat dissipation capacity	P _{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	60
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			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 switch gear must be observed. $\label{eq:constraint}$
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switch gear must be observed. $\label{eq:constraint}$
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) / Capacitor contactor (EC001079)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Capacitor contactor (ecl@ss8.1-27-37-10-06 [AGZ569012])			
Rated control supply voltage Us at AC 50HZ		V	0 - 0
Rated control supply voltage Us at AC 60HZ		V	24 - 24
Rated control supply voltage Us at DC		V	0 - 0
Voltage type for actuating			AC
Number of auxiliary contacts as normally open contact			1
Number of auxiliary contacts as normally closed contact			1
Type of electrical connection of main circuit			Screw connection
Number of main contacts as normally open contact			3
Number of normally closed contacts as main contact			0
Rated blind power at 400 V, 50 Hz		kvar	12.5

Dimensions





Assets (links)

Declaration of CE Conformity

00002884

Instruction Leaflets

IL03407038Z2018_06

Additional product information (links)

IL03407038Z (AWA2100-2272) Contactors for capacitors

IL03407038Z (AWA2100-2272) Contactors for capacitors

 $ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407038Z2018_06.pdf$