

Contactor for 3ph three-phase capacitors, 20kVAR

Part no. **DILK20-11(400V50HZ,440V60HZ)**
 Article no. **294012**
 Catalog No. **XTCC020C11N**

Delivery program

Product range			DILK Contactors for capacitors
Application			Contactors for power factor correction
Three-phase capacitors 50 - 60 Hz			
Open			
230 V		kVAr	11
400 V		kVAr	20
525 V		kVAr	25
690 V		kVAr	33.3
Contact sequence			
Actuating voltage			400 V 50 Hz, 440 V 60 Hz

Technical data

General			
Standards			IEC/EN 60947
Ambient temperature			
Open		°C	-25 - +60
Enclosed		°C	- 25 - 40
Mounting position			
Degree of Protection			IP00
Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof
Weight basic unit			
AC operated		kg	0.55
Terminal capacity main cable			
Solid		mm ²	1 x (0.75 - 16)
Flexible with ferrule		mm ²	1 x (0.75 - 16)
Stranded		mm ²	1 x 16
Solid or stranded		AWG	18 - 6
Flat conductor	Lamellenzahl x Breite x Dicke	mm	-

Rated power of three-phase capacitors			
230 V		kVAr	11
400 V		kVAr	20
525 V		kVAr	25
690 V		kVAr	33.3
Rated operational current I_g of three-phase capacitors			
Open			

230 V	I_e	A	29
400 V	I_e	A	29
525 V	I_e	A	29
690 V	I_e	A	29
of three-phase capacitors enclosed	I_e		
230 V	I_e	A	26
400 V	I_e	A	26
525 V	I_e	A	26
690 V	I_e	A	26
Making capacity (i-peak value) without damping		$\times I_e$	180
Component lifespan	Operations	$\times 10^6$	0.15
Maximum operating frequency		Ops./h	
Max. operating frequency		Ops/h	120

Magnet systems

Voltage tolerance			
AC operated	Pick-up	$\times U_c$	0.8 - 1.1
Drop-out voltage AC operated	Drop-out	$\times U_c$	0.3 - 0.6
Power consumption of the coil in a cold state and $1.0 \times U_c$			
50 Hz	Pick-up	VA	58
50 Hz	Sealing	VA	7.6
50 Hz	Sealing	W	2.3
60 Hz	Pick-up	VA	71
60 Hz	Sealing	VA	9.3
60 Hz	Sealing	W	2.8
50/60 Hz	Pick-up	VA	65 59
50/60 Hz	Sealing	VA	9.6 7
50/60 Hz	Sealing	W	2.7 2.2
Duty factor		% DF	100
Changeover time at 100 % U_c (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 contactor	DIL		M25
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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	29
Heat dissipation per pole, current-dependent	P_{vid}	W	1.8
Equipment heat dissipation, current-dependent	P_{vid}	W	5.4
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 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.

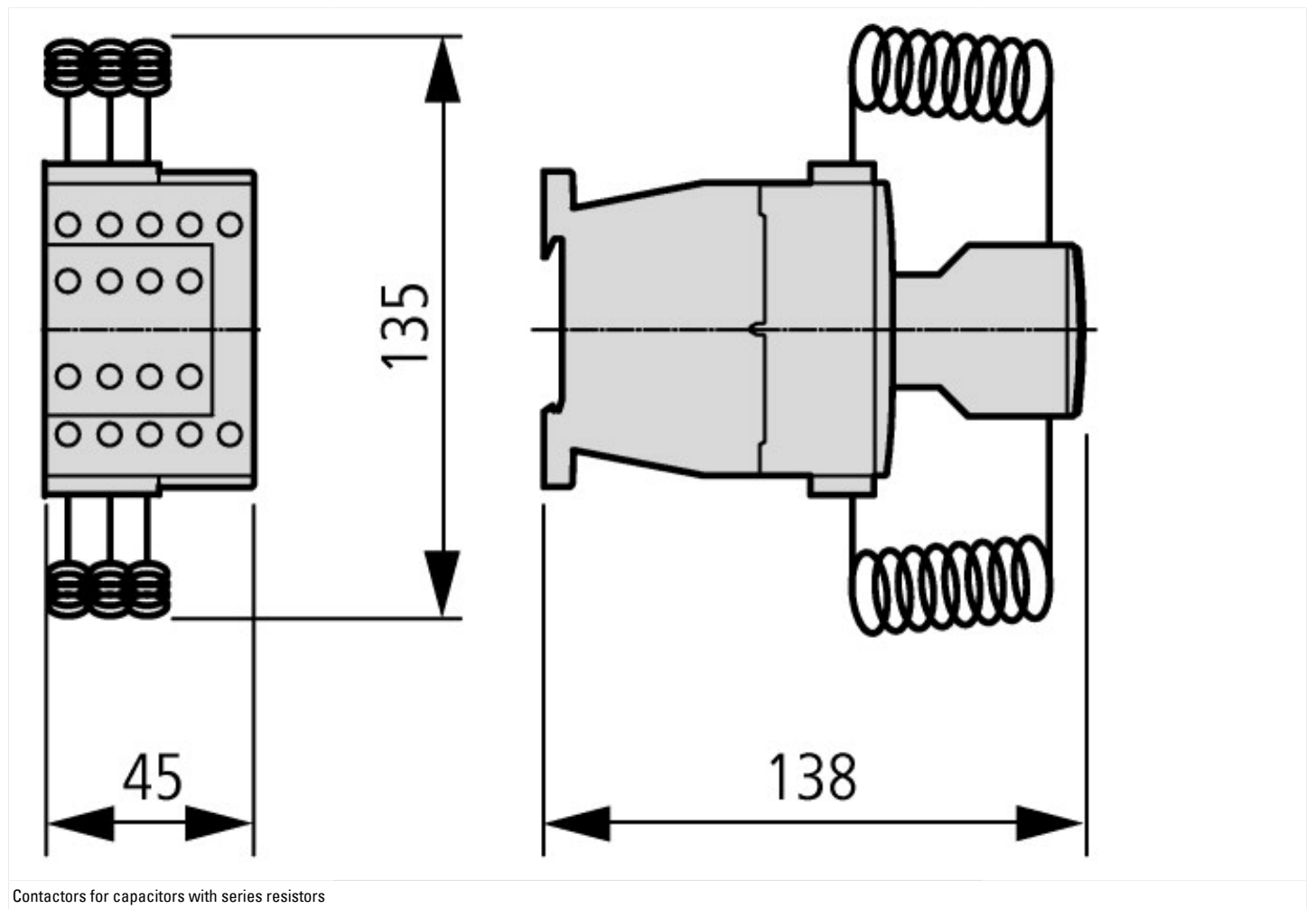
Technical data ETIM 6.0

Low-voltage industrial components (EG000017) / 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 U_s at AC 50HZ	V	400 - 400
Rated control supply voltage U_s at AC 60HZ	V	440 - 440
Rated control supply voltage U_s 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	20

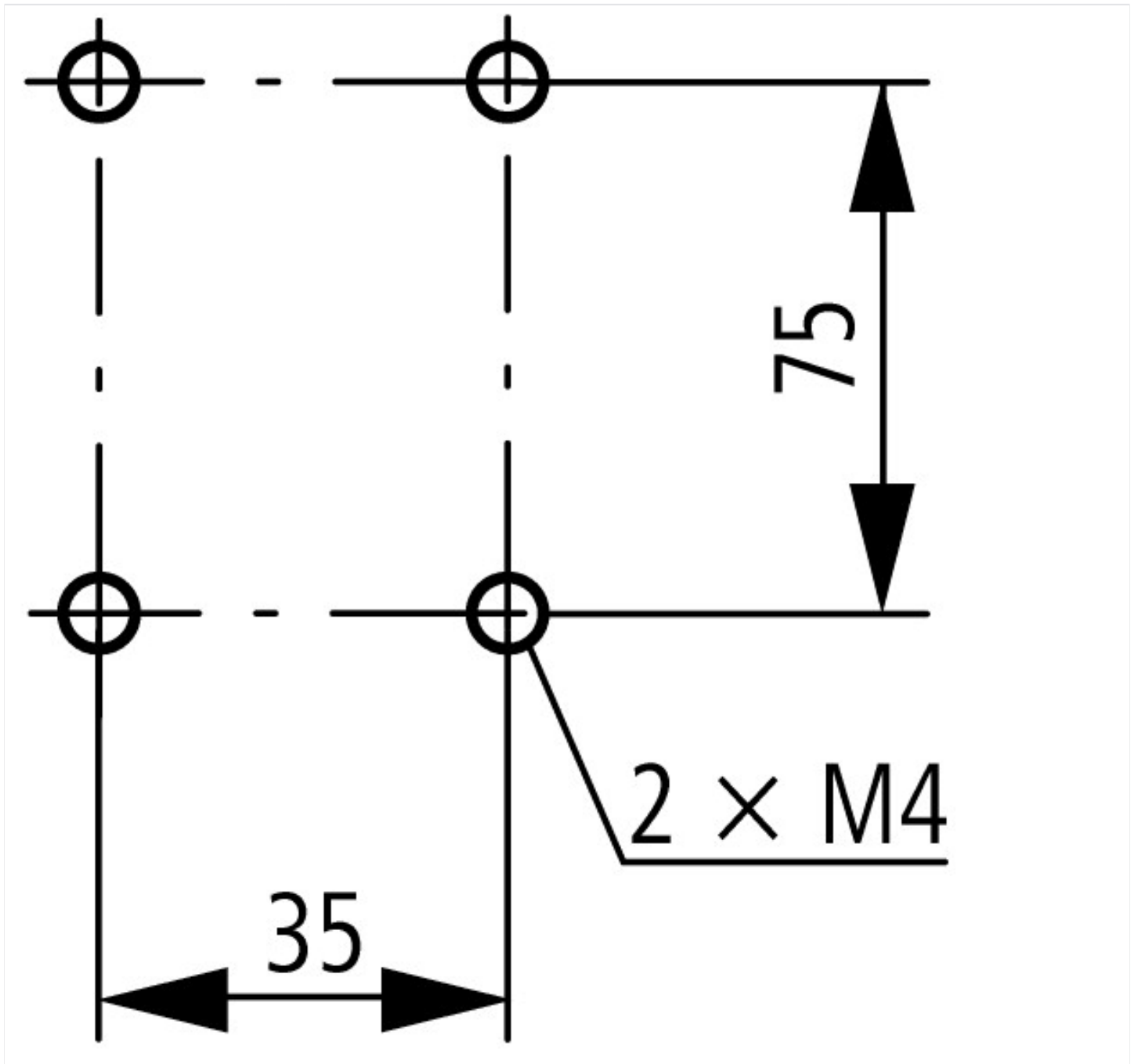
Approvals

Product Standards		IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.		E29096
UL Category Control No.		NLDX
CSA File No.		012528
CSA Class No.		3211-04
North America Certification		UL listed, CSA certified
Specially designed for North America		No

Dimensions



Contactors for capacitors with series resistors



Additional product information (links)

IL03407038Z (AWA2100-2272) Contactor for capacitors

IL03407038Z (AWA2100-2272) Contactor for capacitors

ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407038Z2010_10.pdf

UL/CSA: UL/CSA: Special Purpose Rating

<http://de.ecat.moeller.net/flip-cat/?edition=HPLTE&startpage=5.85>