



**Contactor, 3p, 20A, for lamp load (HQL)**

**Part no.** DILL20(400V50HZ,440V60HZ)  
**Article no.** 104409  
**Catalog No.** XTCT020C00N

## Delivery program

Product range				DILL Lighting contactors
Application				Contactors for lighting systems
Utilization category				AC-1: Non-inductive or slightly inductive loads, resistance furnaces
<b>Rated operational current</b>				
AC-5a				
220 V 230 V	$I_e$	A		20
380 V 400 V	$I_e$	A		20
AC-5b				
220 V 230 V	$I_e$	A		27
380 V 400 V	$I_e$	A		27
AC-1				
Conventional free air thermal current, 3 pole, 50 - 60 Hz				
Open				
at 40 °C	$I_{th} = I_e$	A		45
Contact sequence				
Actuating voltage				400 V 50 Hz, 440 V 60 Hz

## Technical data

<b>General</b>				
Standards				IEC/EN 60947, VDE 0660, UL, CSA
Lifespan, mechanical				
AC operated	Operations	$\times 10^6$		1
Operating frequency, mechanical				
AC operated	Operations/h			60
Maximum operating frequency		Ops./h		
Electrical	Operations/h			60
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				
Mechanical shock resistance		g		6.9
Degree of Protection				IP00
Weight				

AC operated		kg	0.42
<b>Main conducting paths</b>			
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
Making capacity		A	550
Breaking capacity	380 ... 400 V	A	320
Lifespan, electrical	Operations		10000
Short-circuit protection maximum fuse			
400 V	gG/gL 500 V	A	125

## AC

<b>AC-1</b>			
Rated operational current			
Conventional free air thermal current, 3 pole, 50 - 60 Hz			
Open			
at 40 °C	$I_{th}=I_e$	A	45
at 60 °C	$I_{th}=I_e$	A	40
<b>AC-5a operation</b>			
220 V 230 V	$I_e$	A	20
380 V 400 V	$I_e$	A	20
<b>AC-5b operation</b>			
220 V 230 V	$I_e$	A	27
380 V 400 V	$I_e$	A	27
380 V 400 V	$I_e$	A	27
<b>Electric lamps</b>			
Filament bulbs		A	27
Mercury blended lamps		A	23
Fluorescent lamp load 10 x 58 W at 230/240 V AC			
Conventional reactor starter circuit		A	35
Duo circuit		A	35
Electronic upstream devices		A	20
High-pressure mercury vapour lamps		A	20
Metal-halide lamps		A	20
High-pressure sodium lamps		A	20
Low-pressure sodium lamps		A	12
Maximum permissible compensation capacitance		$\mu F$	470

## Additional technical data

like the contactor	DIL		M32
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## Design verification as per IEC/EN 61439

<b>Technical data for design verification</b>			
Rated operational current for specified heat dissipation	$I_n$	A	27
Heat dissipation per pole, current-dependent	$P_{vid}$	W	1.5
Equipment heat dissipation, current-dependent	$P_{vid}$	W	4.5
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
<b>IEC/EN 61439 design verification</b>			
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.

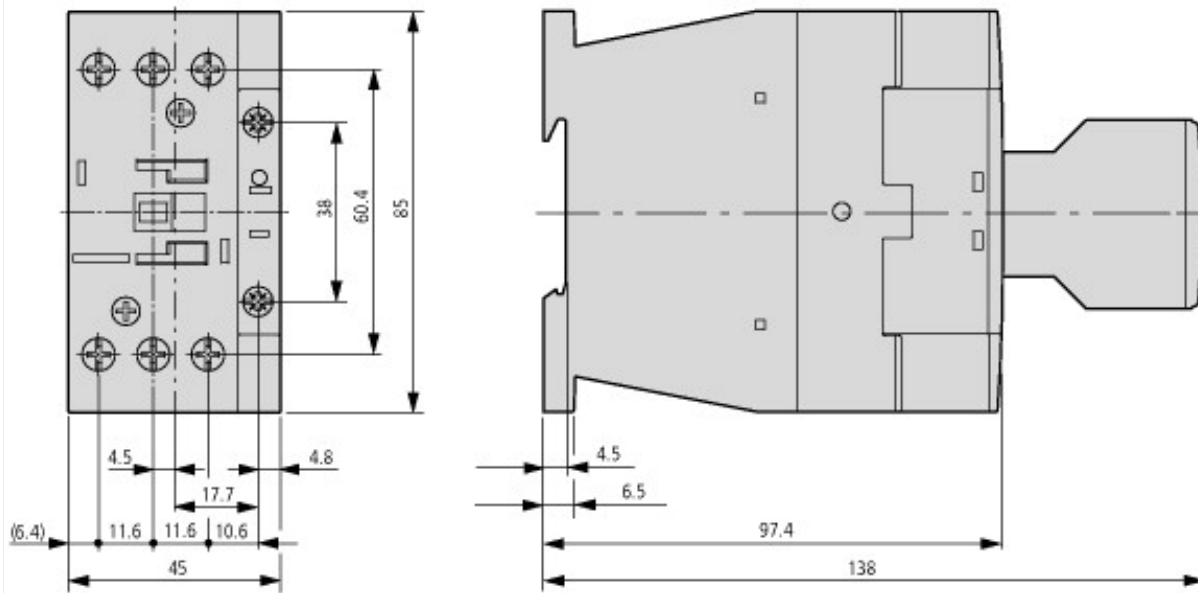
## Technical data ETIM 6.0

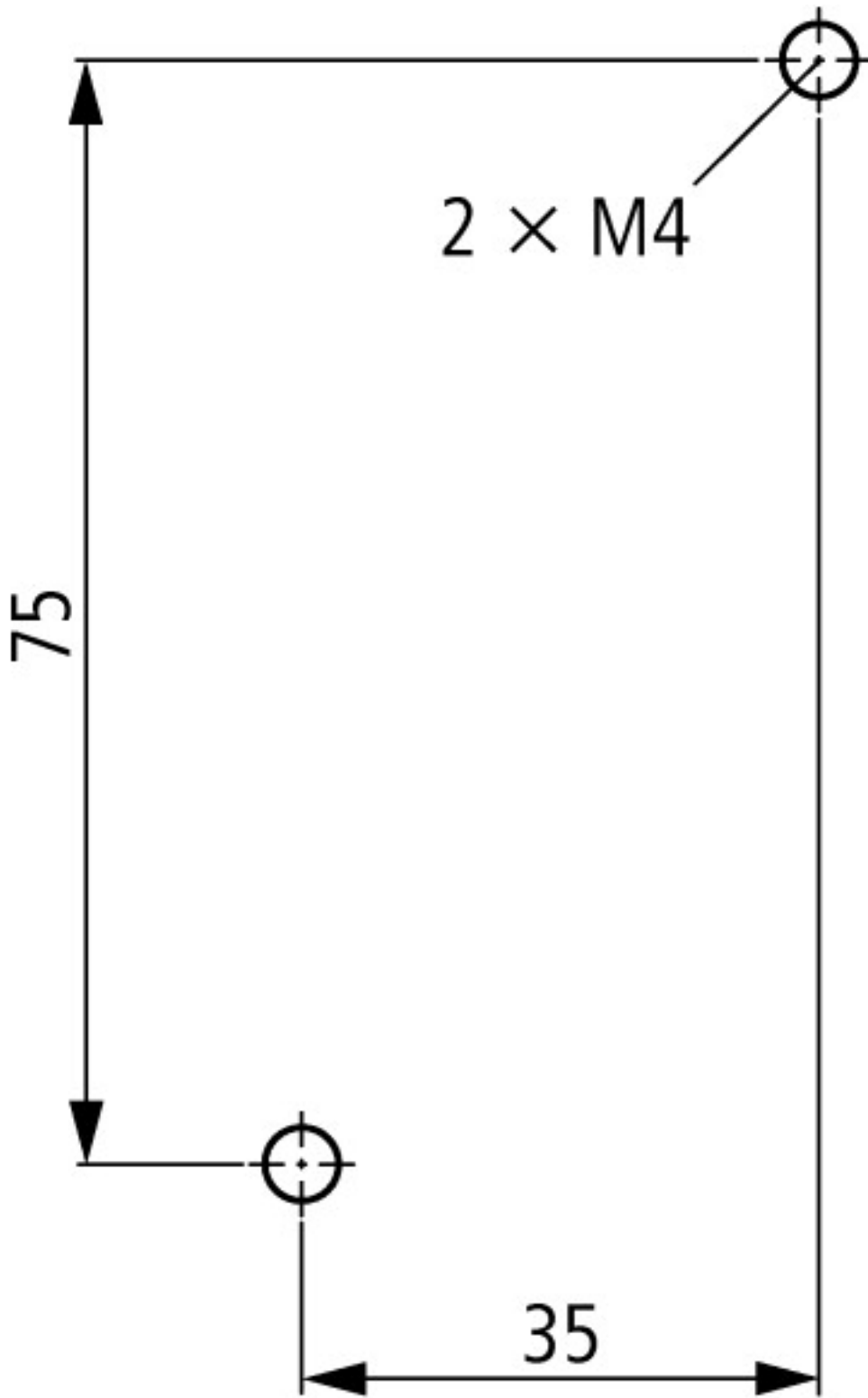
Low-voltage industrial components (EG000017) / Power contactor, AC switching (EC000066)		
Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Power contactor, AC switching (ecl@ss8.1-27-37-10-03 [AAB718012])		
Rated control supply voltage Us at AC 50HZ	V	400 - 400
Rated control supply voltage Us at AC 60HZ	V	440 - 440
Rated control supply voltage Us at DC	V	0 - 0
Voltage type for actuating		AC
Rated operation current Ie at AC-1, 400 V	A	20
Rated operation current Ie at AC-3, 400 V	A	0
Rated operation power at AC-3, 400 V	kW	0
Rated operation current Ie at AC-4, 400 V	A	0
Rated operation power Ie at AC-4, 400 V	kW	0
Modular version		No
Number of auxiliary contacts as normally open contact		0
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 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





distance at side to earthed parts: 6 mm

### Additional product information (links)

IL03407047Z (AWA2100-2322) Lighting contactors

IL03407047Z (AWA2100-2322) Lighting contactors

[ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL03407047Z2010\\_10.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407047Z2010_10.pdf)