DATASHEET - DILEM-01-G(24VDC)



Application

Subrange

Notes

Description

AC-3

AC-1

AC-3

AC-4

Contacts

Instructions

For use with

Contactor, 24 V DC, 3 pole, 380 V 400 V, 4 kW, Contacts N/C = Normally closed= 1 NC, Screw terminals, DC operation



Part no. Catalog No. **Alternate Catalog** No. 4130389 **EL-Nummer**

DILEM-01-G(24VDC) 010343 XTMC9A01TD

(Norway)

Delivery program Product range Contactors Mini Contactors for Motors and Resistive Loads **DILEM** contactors 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 Also suitable for motors with efficiency class IE3. IE3-ready devices are identified by the logo on their packaging. Connection technique Screw terminals With auxiliary contact Number of poles 3 pole **Rated operational current** 380 V 400 V le А 9 Conventional free air thermal current, 3 pole, 50 - 60 Hz Open at 40 °C I_{th} =I_e А 22 Max. rating for three-phase motors, 50 - 60 Hz 220 V 230 V Ρ kW 2.2 380 V 400 V Ρ kW 4 Ρ 660 V 690 V kW 4 220 V 230 V Р kW 1.5 380 V 400 V Ρ kW 3 660 V 690 V Р kW 3 N/C = Normally closed 1 NC Contact sequence Integrated diode-resistor combinationDILE 24 V DC Actuating voltage Voltage AC/DC DC operation

Technical data General

General			
Standards			IEC/EN 60947, VDE 0660, CSA, UL
Lifespan, mechanical	Operations	x 10 ⁶	20
Maximum operating frequency			

Mashanias		One /	0000
Mechanical electrical (Contactors without overload relay)	Operations/h	Ops./h	9000 Page 05/070
	Operations/II		Damp heat, constant, to IEC 60068-2-78
Climatic proofing			Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
Open		°C	-25 - +50
Enclosed		°C	- 25 - 40
Storage		°C	
Min. ambient temperature, storage		°C	- 40
Ambient temperature, storage max.		°C	+ 80
Mounting position			As required, except vertical with terminals A1/A2 at the bottom
Mounting position			
Mechanical shock resistance (IEC/EN 60068-2-27)			
Half-sinusoidal shock, 10 ms			
Basic unit without auxiliary contact module			
Main contacts, make contacts		g	10
Main contacts Make/break contacts		g	
Break contact		g	10
Basic unit with auxiliary contact module			
Main contacts make contact		g	
Make		g	10
Auxiliary contacts Make/break contacts		g	20 / 20
Degree of Protection			IP20
Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof
Altitude		m	Max. 2000
Weight		kg	0.206
Terminal capacity of auxiliary and main contacts Screw terminals			
Solid		2	1 x (0.75 - 2.5)
Sulu		mm ²	2 x (0.75 - 2.5)
Flexible with ferrule		mm ²	1 × (0.75 - 1.5) 2 × (0.75 - 1.5)
Solid or stranded		AWG	18 - 14
Stripping length		mm	8
Terminal screw			M3.5
Pozidriv screwdriver		Size	2
Standard screwdriver		mm	0.8 x 5.5 1 x 6
Max. tightening torque		Nm	1.2
Main conducting paths	11.	VAC	2000
Rated impulse withstand voltage	U _{imp}	V AC	6000
			111/3
		V A C	000
Rated insulation voltage	Ui	V AC	690
Overvoltage category/pollution degree Rated insulation voltage Rated operational voltage	U _i U _e	V AC V AC	690 690
Rated insulation voltage Rated operational voltage Safe isolation to EN 61140		V AC	690
Rated insulation voltage Rated operational voltage			

Breaking capacity A and 220 V 230 V A 9 380 V 400 V A 64 500 V A 42 660 V 880 V A 42 Short-circuit protection maximum fuse V 42 Type '2', 500 V 0L/G A 10 Act 2	
380 400 VImage: solution of the solut	
500 V600 Keek V60	
660 V 680 VA A A2Short-circuit protection maximum fusegL/gGA0Type "1", 500 VgL/gGA0Type "1", 500 VgL/gGA0AC	
Short-circuit protection maximum fuse GL/GG A Type "2", 500 V GL/GG A Type "1", 500 V GL/GG A AC	
Type*2'.500 V gL/gG A 1 Type*1'.500 V gL/gG A 20 AC	
Type "1, 500 VBu/geABu/geAAC1AAARated operational currentAAAOpenAACa 440 °CBaleACa 440 °CBaleACa 450 °CBaleADa 650 °CBaleADa fabr °CBaleAAa fabr °CBaleAAa fabr °CBaleAAa fabr °CBaleAAa fabr °CBaleAAa fabr °CBaleA<	
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240 V I _e A 9	
415 V I _e A 9	
440V I _e A 9	
240V P kW 2.5 380 V 400 V P kW 4	
415 V P kW 4.3 440 V P kW 4.6	
500 V P kW 4	
660 V 690 V P kW 4	
AC-4	
Rated operational current	
Open, 3-pole: 50 – 60 Hz	
Notes At maximum permissible ambient air temperature.	
220 V 230 V I _e A 6.6	
240 V I _e A 6.6	
380 V 400 V I _e A 6.6	
440 V I _e A 6.6	
500 V I _e A 5	
660 V 690 V Ie A 3.4	
Motor rating P kWh	
220 V 230 V P kW 1.5	

240 V	Р	kW	1.8
380 V 400 V	Р	kW	3
415 V	Р	kW	3.1
440 V	Ρ	kW	3.3
500 V	Р	kW	3
660 V 690 V	Р	kW	3
DC			
Rated operational current open			
DC-1			
12 V	l _e	A	20
24 V	le	А	20
60 V	l _e	А	20
110 V	l _e	А	20
220 V	l _e	A	20
Current heat losses (3- or 4-pole)			
at I _{th} , 50 °C		W	4.4
at I _e to AC-3/400 V		W	0.9
Magnet systems			
Voltage tolerance			
DC operated			
Pick-up voltage			0.8 - 1.1
Power consumption			
DC operation			
Power consumption Pick-up = Sealing		VA/W	2.3
Notes			Smoothed DC voltage or three-phase bridge rectifier
Duty factor		% DF	100
Switching times at 100 % U _c			
Make contact		ms	
Closing delay		ms	
Closing delay min.		ms	26
Closing delay max.		ms	35
Opening delay		ms	
Opening delay min.		ms	15
Opening delay max.		ms	25
Closing delay with top mounting auxiliary contact		ms	70
Reversing contactors			
Changeover time at 110 % U _c			
Changeover time min.		ms	40
Changeover time max.		ms	50
Arcing time at 690 V AC		ms	12
Auxiliary contacts			
Positive operating contacts to EN 60947-5-1 appendix L, including auxiliary contact module	ct		Yes
Rated impulse withstand voltage	U _{imp}	V AC	6000
Overvoltage category/pollution degree			111/3
Rated insulation voltage	Ui	V AC	690
Rated operational voltage	U _e	V AC	600
Safe isolation to EN 61140			
between coil and auxiliary contacts		V AC	300
between the auxiliary contacts		V AC	300
Rated operational current			
AC-15			
220 V 240 V	l _e	A	6
380 V 415 V	l _e	A	3
500 V	l _e	A	1.5
000 ¥	'e	~	

DC L/R ≦ 15 ms			
Contacts in series:		A	
1	24 V	A	2.5
2	60 V	A	2.5
3	100 V	A	1.5
3	220 V	A	0.5
Conv. thermal current	I _{th}	A	10
Control circuit reliability	Failure rate	λ	<10 ⁻⁸ , < one failure at 100 million operations (at U _e = 24 V DC, U _{min} = 17 V, I _{min} = 5.4 mA)
Component lifespan at U _e = 240 V			
AC-15	Operations	x 10 ⁶	0.2
DC current			
$L/R = 50$ ms: 2 contacts in series at $I_e = 0.5$ A	Operations	x 10 ⁶	0.15
Notes		X IU	Switch-on and switch-off conditions based on DC-13, time constant as specified
Short-circuit rating without welding			
Maximum overcurrent protective device			
Short-circuit protection only			PKZM0-4
			F K21910*4
Short-circuit protection maximum fuse		A #C/#L	6
500 V		A gG/gL	
500 V		A fast	10
Current heat loss at a load of I _{th} per contact		W	1.1
Rating data for approved types Switching capacity			
Maximum motor rating			
Three-phase			
200 V		НР	2
200 V 208 V 230 V		HP	
230 V 240 V		пг	3
460 V 480 V		HP	5
575 V 600 V		HP	5
Single-phase			
115 V 120 V		HP	0.5
230 V 240 V		HP	1.5
General use		А	15
Auxiliary contacts			
Pilot Duty			
AC operated			A600
DC operated			P300
General Use			
AC		V	600
AC		А	10
DC		V	250
DC		А	0.5
Short Circuit Current Rating		SCCR	
Basic Rating			
SCCR		kA	5
max. Fuse		А	45

Design verification as per IEC/EN 61439

٦	echnical data for design verification			
	Rated operational current for specified heat dissipation	In	А	9
	Heat dissipation per pole, current-dependent	P _{vid}	W	0.3

Static heat dissipation, non-current-dopendentPusW23Heat dissipation capacityPdissW0Operating ambient temporature min.550ECENK 133 design verificationMeets the product standard's requirements.Meets the product standard's requirements.102.2 Corosion resistanceMeets the product standard's requirements.Meets the product standard's requirements.102.23 Verification of testistance of insulating materials to normal heatMeets the product standard's requirements.102.23 Verification of resistance of insulating materials to abnormal heatMeets the product standard's requirements.102.23 Verification of resistance of insulating materials to abnormal heatMeets the product standard's requirements.102.23 Verification of resistance of insulating materials to abnormal heatMeets the product standard's requirements.102.23 Verification of resistance of insulating materials to abnormal heatMeets the product standard's requirements.102.24 Meetsmate to ultraviolet (UV) radiationMeets the product standard's requirements.102.25 LittingDoes not apply, since the entire switchgear needs to be evaluated.102.31 Verification of ASSEMBLIESDoes not apply, since the entire switchgear needs to be evaluated.103 Degree of protection of ASSEMBLIESDoes not apply, since the entire switchgear needs to be evaluated.104 Chearnees and creepse distancesMeets the product standard's requirements.103 Degree of evaluation of switching dwices and componentsStep panel builder's responsibility.104 Chearnees ind recepse distancesFee product standard's req	Equipment heat dissipation, current-dependent	P _{vid}	W	0.9
Operating ambient temperature min.	Static heat dissipation, non-current-dependent	P _{vs}	W	2.3
Operating ambient temperature max. Image: Constraint of the second s	Heat dissipation capacity	P _{diss}	W	0
ECEN 81439 design verification Image: Comparison of the status and parts 102.2 Corrosion resistance Meets the product standard's requirements. 102.3.1 Verification of thermal stability of enclosures Meets the product standard's requirements. 102.3.2 Verification of resistance of insulating materials to abnormal heat Meets the product standard's requirements. 102.3.2 Verification of resistance of insulating materials to abnormal heat Meets the product standard's requirements. 102.4 Resistance to ultra-violet (UV) rediation Meets the product standard's requirements. 102.5 Lifting Dees not apply, since the entire switchgear needs to be evaluated. 102.5 Lifting Dees not apply, since the entire switchgear needs to be evaluated. 102.5 Lifting Dees not apply, since the entire switchgear needs to be evaluated. 102.5 Inscriptions Meets the product standard's requirements. 103.5 Degree of protection of ASSEMBLIES Dees not apply, since the entire switchgear needs to be evaluated. 104.7 Inscriptions Interple service s	Operating ambient temperature min.		°C	-25
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10.3 Degree of protection of ASSEMBLIESDoes not apply, since the entire switchgear needs to be evaluated.10.4 Clearances and creepage distancesMeets the product standard's requirements.10.5 Protection against electric shockDoes not apply, since the entire switchgear needs to be evaluated.10.6 Incorporation of switching devices and componentsDoes not apply, since the entire switchgear needs to be evaluated.10.7 Internal electrical circuits and connectionsIs the panel builder's responsibility.10.8 Connections for external conductorsIs the panel builder's responsibility.10.9 Insulation propertiesIs the panel builder's responsibility.10.9.1 Supulse withstand voltageIs the panel builder's responsibility.10.9.2 Power-frequency electric strengthIs the panel builder's responsibility.10.9.3 Impulse withstand voltageIs the panel builder's responsibility.10.10 Temperature riseThe panel builder's responsibility.10.11 Short-circuit ratingIs the panel builder's responsibility.10.12 Electromagnetic compatibilityIs the panel builder's responsibility. The specifications for the switchgear must be observed.10.13 Mechanical functionThe device meets the requirements, provided the information in the instruction	10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.
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10.5 Protection against electric shockDoes not apply, since the entire switchgear needs to be evaluated.10.6 Incorporation of switching devices and componentsDoes not apply, since the entire switchgear needs to be evaluated.10.7 Internal electrical circuits and connectionsIs the panel builder's responsibility.10.8 Connections for external conductorsIs the panel builder's responsibility.10.9.1 Insulation propertiesIs the panel builder's responsibility.10.9.2 Power-frequency electric strengthIs the panel builder's responsibility.10.9.3 Impulse withstand voltageIs the panel builder's responsibility.10.10 Temperature riseIs the panel builder's responsibility.10.11 Short-circuit ratingIs the panel builder's responsibility. The specifications for the switchgear must be observed.10.12 Electromagnetic compatibilityIs the panel builder's responsibility. The specifications for the switchgear must be observed.10.13 Mechanical functionThe device meets the requirements, provided the information in the instruction	10.3 Degree of protection of ASSEMBLIES			Does not apply, since the entire switchgear needs to be evaluated.
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10.9 Insulation propertiesImage: Control of the second	10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
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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 responsibile 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, provide the information in the instruction	10.9 Insulation properties			
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10.12 Electromagnetic compatibility observed. 10.13 Mechanical function Is the panel builder's responsibility. The specifications for the switchgear must be observed.	10.10 Temperature rise			
10.13 Mechanical function observed. The device meets the requirements, provided the information in the instruction	10.11 Short-circuit rating			
	10.12 Electromagnetic compatibility			
	10.13 Mechanical function			

Technical data ETIM 7.0

Low-voltage industrial components (EG000017) / Power contactor, AC switching	(EC000066)		
Electric engineering, automation, process control engineering / Low-voltage sv	vitch technology /	Contactor	(LV) / Power contactor, AC switching (ecl@ss10.0.1-27-37-10-03 [AAB718015])
Rated control supply voltage Us at AC 50HZ		V	0 - 0
Rated control supply voltage Us at AC 60HZ		V	0 - 0
Rated control supply voltage Us at DC		V	24 - 24
Voltage type for actuating			DC
Rated operation current le at AC-1, 400 V		А	22
Rated operation current le at AC-3, 400 V		А	9
Rated operation power at AC-3, 400 V		kW	4
Rated operation current le at AC-4, 400 V		Α	6.6
Rated operation power at AC-4, 400 V		kW	3
Rated operation power NEMA		kW	3.7
Modular version			No
Number of auxiliary contacts as normally open contact			0
Number of auxiliary contacts as normally closed contact			1
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

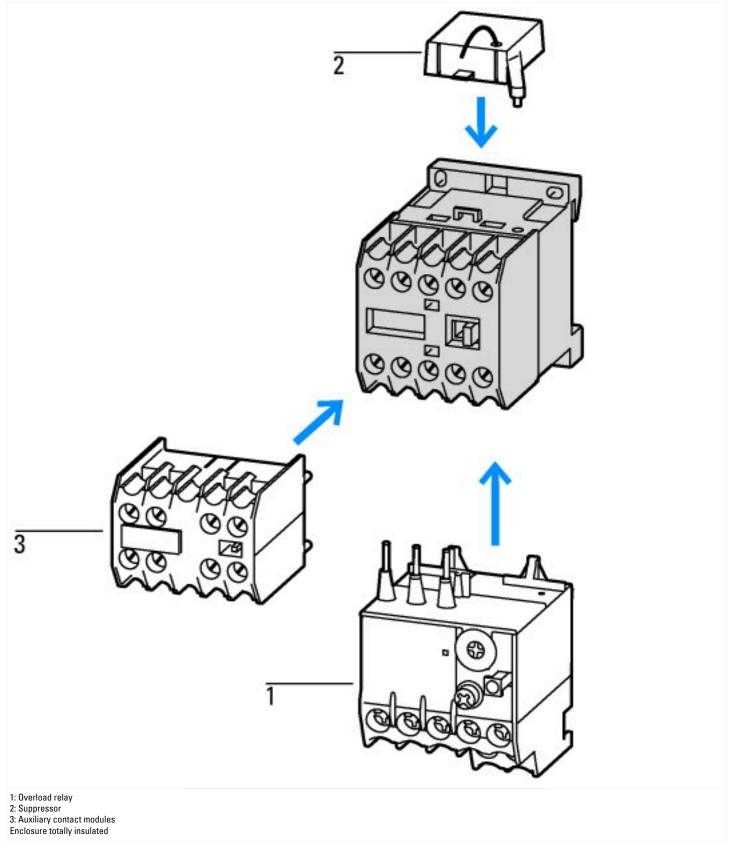
Approvals

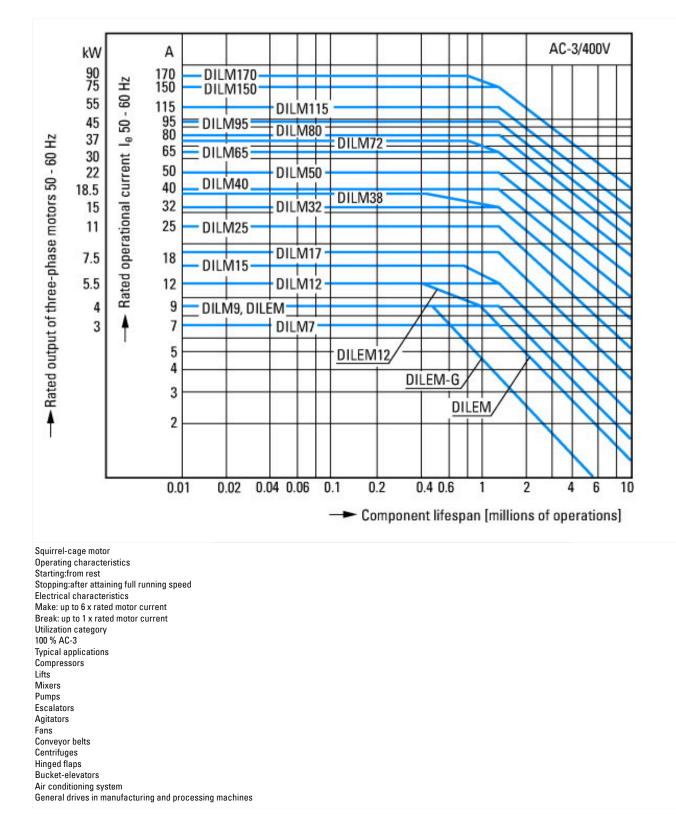
Product Standards

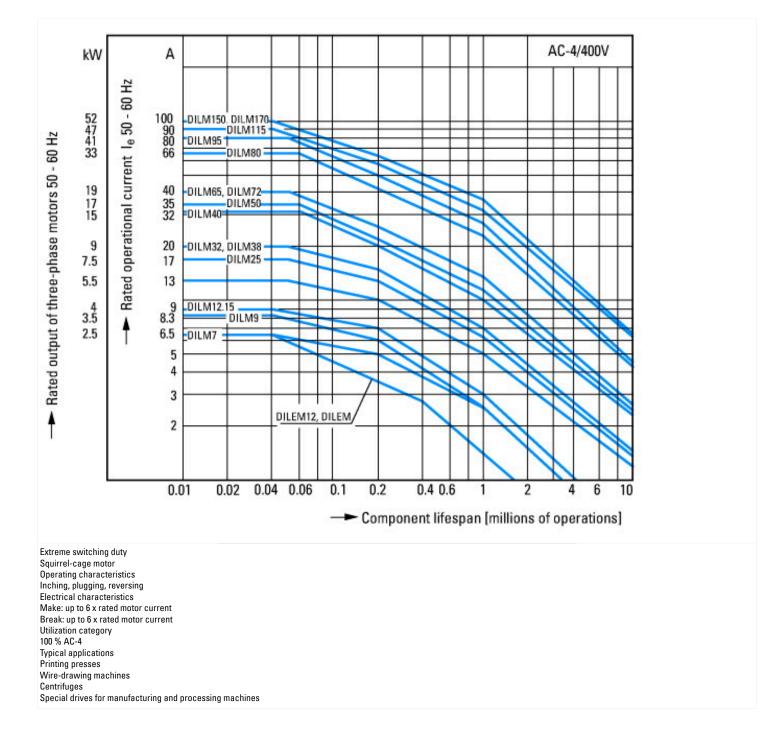
IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking

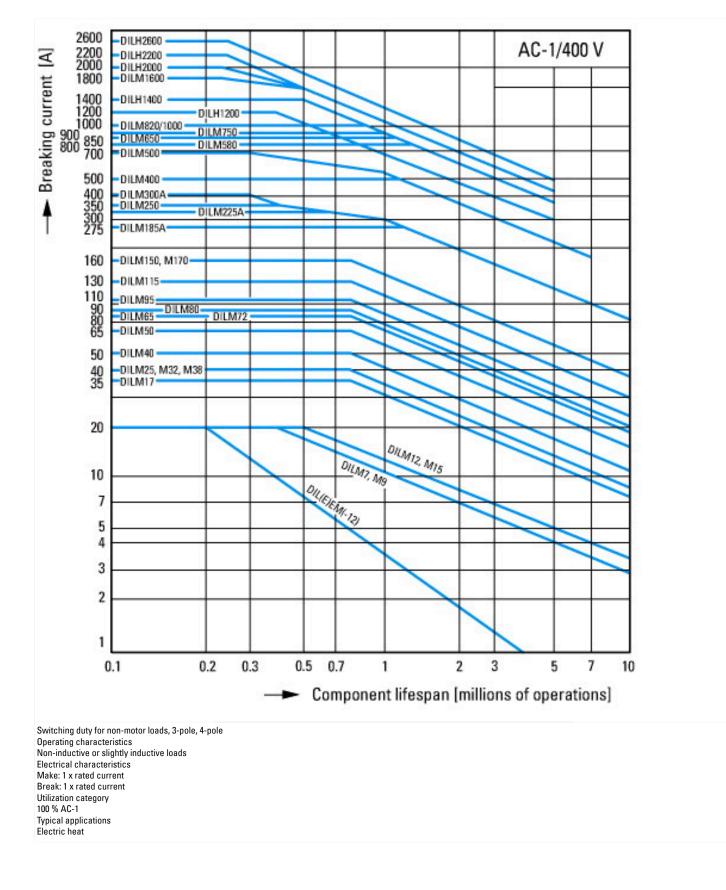
UL File No.	E29096
UL Category Control No.	NLDX
CSA File No.	012528
CSA Class No.	3211-04
North America Certification	UL listed, CSA certified
Specially designed for North America	No

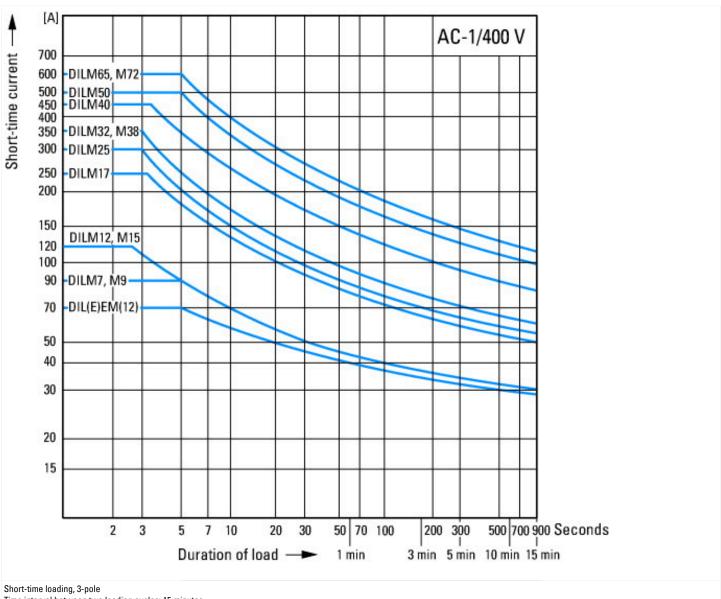
Characteristics





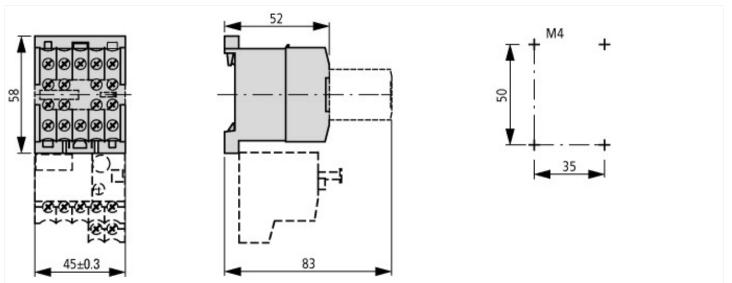


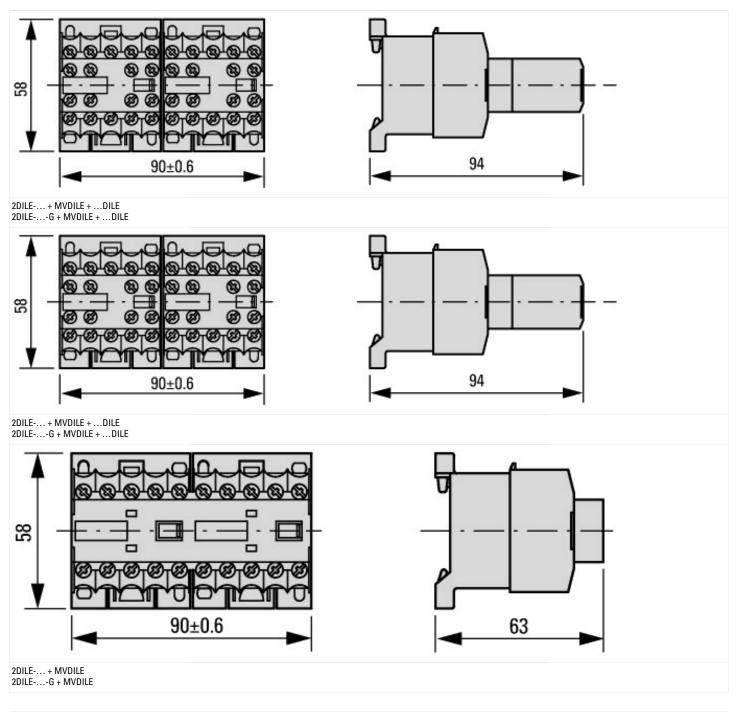




Time interval between two loading cycles: 15 minutes

Dimensions





Additional product information (links)

IL03407009Z (AWA2100-0882) Mini contactor relay

IL03407009Z (AWA2100-0882) Mini contactor relay https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407009Z2020_05.pdf