

### Contactor relay, 4N/O, DC current

Part no. DILER-40-G(110VDC)
Article no. 010287
Catalog No. XTRM10A40E0



### **Delivery program**

zomor, program			
Product range			DILER Mini-contactors
Application			Contactor relays
Description			with interlocked opposing contacts
Connection technique			Screw terminals
Rated operational current			
Conventional free air thermal current, 3 pole, 50 - 60 Hz			
Open			
at 50 °C	$I_{th} = I_e$	Α	10
AC-15			
220 V 230 V 240 V	l <sub>e</sub>	Α	6
380 V 400 V 415 V	I <sub>e</sub>	Α	3
Contacts			
N/O = Normally open			4 N/O
Contact sequence			A1 13 23 33 43 A2 14 24 34 44
Code number and version of combination			
Distinctive number			40 E
For use with			DILE
Actuating voltage			110 V DC
Voltage AC/DC			DC operation
Instructions			Contact numbers to EN 50011 Coil terminal markings to EN 50005 Integrated diode-resistor combination Coil rating 2.6 W

### **Technical data**

#### General

General			
Standards			IEC/EN 60947, VDE 0660, UL, CSA
Lifespan, mechanical			
DC operated	Operations	x 10 <sup>6</sup>	20
Maximum operating frequency	Operations/h		9000
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
Open		°C	-25 - +50
Enclosed		°C	- 25 - 40
Mounting position			
Mounting position			As required, except vertical with terminals A1/A2 at the bottom
Mounting position			

Mark asias laborate assistanta (UEO/EN 00000 0 07)			
Mechanical shock resistance (IEC/EN 60068-2-27)			
Half-sinusoidal shock, 10 ms			
Basic unit with auxiliary contact module		g	
N/O contact		g	10
N/C contact		g	8
Degree of Protection			IP20
Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof
Weight			
DC operated		kg	0.2
Terminal capacities		mm <sup>2</sup>	
Screw terminals			
Solid		mm <sup>2</sup>	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)
Flexible with ferrule		mm <sup>2</sup>	1 x (0.75 - 1.5) 2 x (0.75 - 1.5)
Solid or stranded		AWG	18 - 14
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
Contacts			
Positive operating contacts to EN 60947-5-1 appendix L, including auxiliary commodule $$	ntact		Yes
Rated impulse withstand voltage	$U_{imp}$	V AC	6000
Overvoltage category/pollution degree			III/3
Rated insulation voltage	Ui	V AC	690
Rated operational voltage	U <sub>e</sub>	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		Α	
Conventional free air thermal current, 3 pole, 50 - 60 Hz			
Open			
at 50 °C	$I_{th} = I_e$	Α	10
AC-15			
220 V 230 V 240 V	I <sub>e</sub>	Α	6
380 V 400 V 415 V	I <sub>e</sub>	Α	3
500 V	I <sub>e</sub>	Α	1.5
DC current			
Notes			Switch-on and switch-off conditions based on DC-13, time constant as specified.
DC-13 L/R - 15 ms			
Contacts in series:		Α	
1	24 V	Α	2.5
2	60 V	Α	2.5
3	110 V	Α	1.5
3	220 V	Α	0.5
Control circuit reliability	Failure rate	λ	$<10^{-8}$ , $<$ one failure at 100 million operations (at U <sub>e</sub> = 24 V DC, U <sub>min</sub> = 17 V, I <sub>min</sub> = 5.4 mA)
Short-circuit rating without welding			Let up 200, Ollilli - 17 4, 1/Min - 0.7 ill/r)
Maximum overcurrent protective device			
220 V 230 V 240 V		PKZM0	4
380 V 400 V 415 V		PKZM0	4
Short-circuit protection maximum fuse			
500 V		A gG/gL	6
500 V		A fast	10

Current heat loss at I <sub>th</sub>			
DC operated		W	0.3
Magnet systems			
Voltage tolerance			
DC operated			
Notes			Smoothed DC, three-phase bridge rectifiers or smoothed double-wave rectification
Pick-up voltage			0.85 1.3
at 24 V: without auxiliary contact component (40 °C)	Pick-up	x U <sub>c</sub>	0.7 - 1.3
Power consumption			
DC operation			
Power consumption Pick-up = Sealing		VA/W	2.6
duty factor		% DF	100
Changeover time at 100 % $U_{\text{C}}$ (recommended value)			
DC operated closing delay		ms	26 - 35
DC operated N/O contact opening delay		ms	15 - 25
DC operated With auxiliary contact module Max. closing delay		ms	70

# Design verification as per IEC/EN 61439

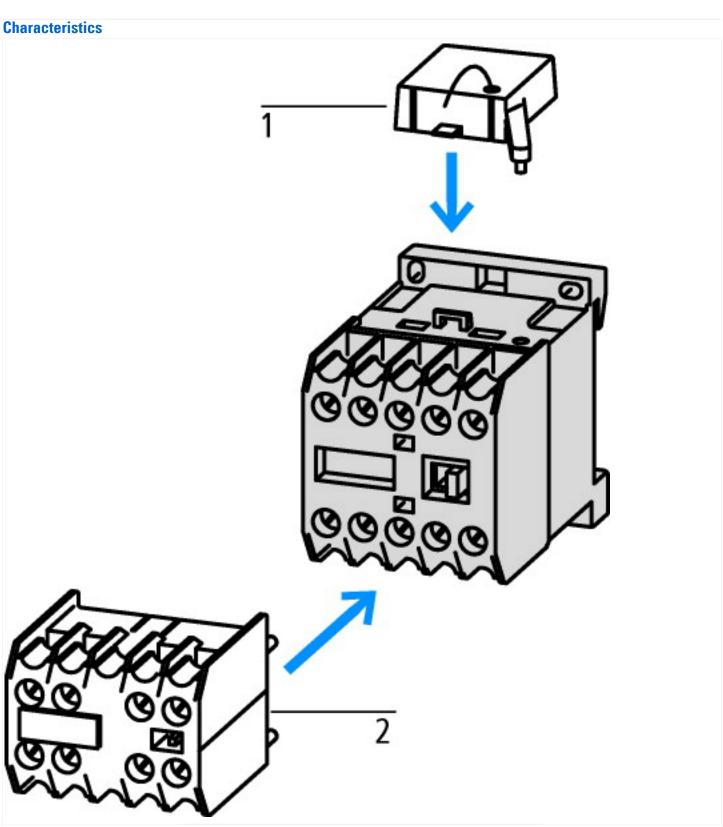
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10.4 Clearances and creepage distances  10.5 Protection against electric shock  10.6 Incorporation of switching devices and components  10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9 Insulation properties  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Is the panel builder's responsibility.  Is the panel builder is responsibility.  Is the panel builder is responsibility. The specifications for the switchgear must be observed.  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  The device meets the requirements, provided the information in the instruction	10.2.7 Inscriptions			Meets the product standard's requirements.
10.5 Protection against electric shock  10.6 Incorporation of switching devices and components  10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9 Insulation properties  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Is the panel builder's responsibility.  Is the panel builder's responsibility.  Is the panel builder's responsibility.  Is the panel builder is responsibility. The specifications for the switchgear must be observed.  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  The 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.
10.6 Incorporation of switching devices and components  10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9 Insulation properties  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  Does not apply, since the entire switchgear needs to be evaluated.  Is the panel builder's responsibility.  Is the panel builder's responsibility.  Is the panel builder's responsibility.  The panel builder's responsibility.  Is the panel builder is responsibility.  Is the panel builder is responsibility.  Is the panel builder's responsibility.  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  In the device meets the requirements, provided the information in the instruction.	10.4 Clearances and creepage distances			Meets the product standard's requirements.
10.7 Internal electrical circuits and connections  1s the panel builder's responsibility.  10.8 Connections for external conductors  1s the panel builder's responsibility.  10.9 Insulation properties  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  1s the panel builder's responsibility.  1nulation properties  The panel builder's responsibility.  1nulation properties  Is the panel builder's responsibility.  1s the panel builder's responsibility.  1s the panel builder's responsibility.  1s the panel builder's responsibility. The specifications for the switchgear must be observed.  1s the panel builder's responsibility. The specifications for the switchgear must be observed.  1s the panel builder's responsibility. The specifications for the switchgear must be observed.  1s the panel builder's responsibility. The specifications for the switchgear must be observed.  1s the panel builder's responsibility. The specifications for the switchgear must be observed.  1s the panel builder's responsibility. The specifications for the switchgear must be observed.  1s the panel builder's responsibility. The specifications for the switchgear must be observed.	10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.8 Connections for external conductors  10.9 Insulation properties  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  Is the panel builder's responsibility.  Is the panel builder's responsibility.  The panel builder is responsibility.  The panel builder is responsibility.  Is the panel builder is responsibility.  Is the panel builder is responsibility. The specifications for the switchgear must be observed.  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  The device meets the requirements, provided the information in the instruction	10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.9 Insulation properties  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  10.13 Mechanical function  Is the panel builder's responsibility.  The panel builder is responsibility. The specifications for the switchgear must be observed.  The panel builder's responsibility. The specifications for the switchgear must be observed.  The device meets the requirements, provided the information in the instruction	10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  Is the panel builder's responsibility.  Is the panel builder's responsibility.  The panel builder is responsibility. The specifications for the switchgear must be observed.  10.13 Mechanical function  The device meets the requirements, provided the information in the instruction	10.8 Connections for external conductors			Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  15 the panel builder's responsibility.  The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.  15 the panel builder's responsibility. The specifications for the switchgear must be observed.  16 the panel builder's responsibility. The specifications for the switchgear must be observed.  17 The device meets the requirements, provided the information in the instruction	10.9 Insulation properties			
10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  The panel builder is responsibility.  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	10.9.2 Power-frequency electric strength			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	10.9.3 Impulse withstand voltage			Is the panel builder's responsibility.
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	10.9.4 Testing of enclosures made of insulating material			Is the panel builder's responsibility.
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	10.10 Temperature rise			
observed.  10.13 Mechanical function  The device meets the requirements, provided the information in the instruction	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			

### **Technical data ETIM 6.0**

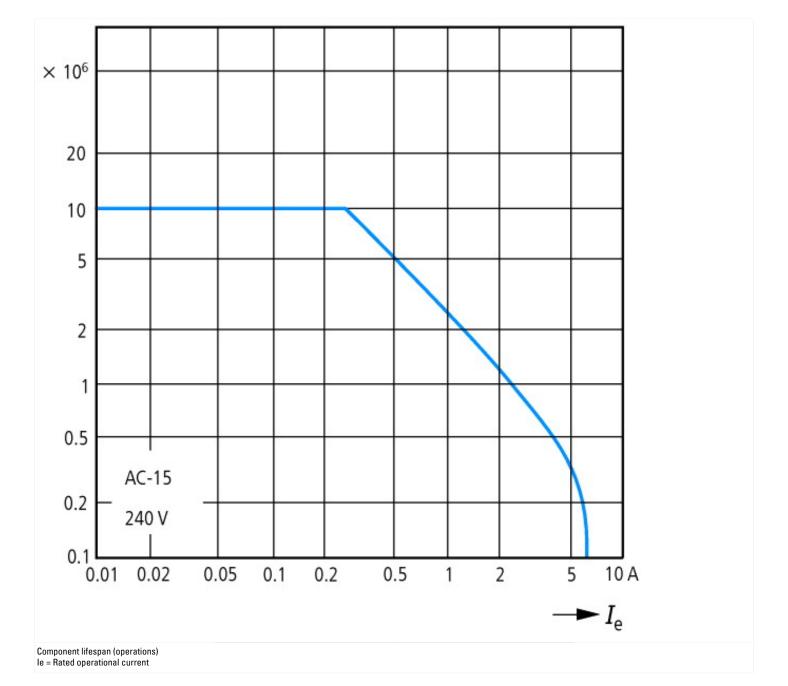
Low-voltage industrial components (EG000017) / Contactor relay (EC000196)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Contactor relay (ecl@ss8.1-27-37-10-01 [AAB716011])			
Rated control supply voltage Us at AC 50HZ	V	0 - 0	
Rated control supply voltage Us at AC 60HZ	V	0 - 0	
Rated control supply voltage Us at DC	V	110 - 110	
Voltage type for actuating		DC	
Rated operation current le , 400 V	А	3	
Connection type auxiliary circuit		Screw connection	
Mounting method		DIN-rail/screw	
Interface		No	
Number of auxiliary contacts as normally closed contact		0	
Number of auxiliary contacts as normally open contact		4	
Number of auxiliary contacts as normally closed contact, delayed switching		0	
Number of auxiliary contacts as normally open contact, leading		0	
With LED indication		No	
Number of auxiliary contacts as change-over contact		0	
Manual operation possible		No	

# **Approvals**

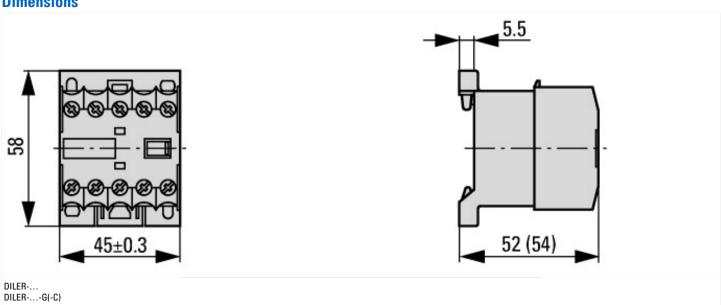
Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29184
UL Category Control No.	NKCR
CSA File No.	012528
CSA Class No.	3211-03
North America Certification	UL listed, CSA certified
Specially designed for North America	No

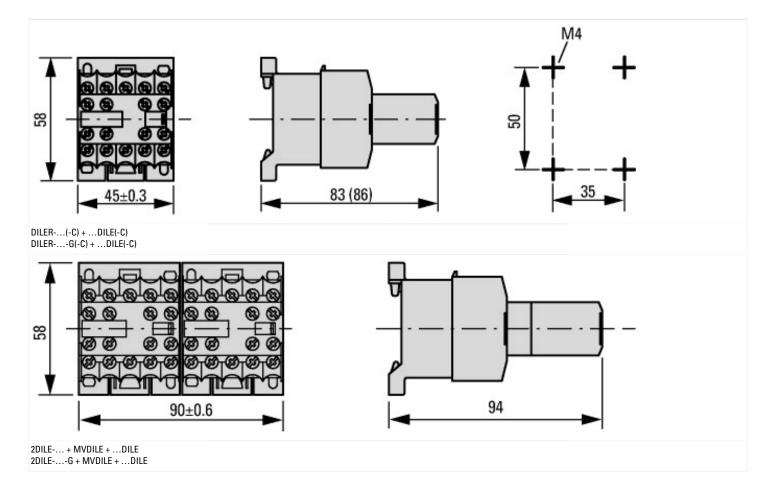


1: Suppressor 2: Auxiliary contact module



### **Dimensions**





### Additional product information (links)

Additional product information (miks)		
IL03407009Z (AWA2100-0882) Mini contactor relay		
IL03407009Z (AWA2100-0882) Mini contactor relay	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407009Z2016_03.pdf	
UL/CSA: Approved rating data	http://de.ecat.moeller.net/flip-cat/?edition=HPLTE&startpage=5.84	