DATASHEET - DILER-31-G-C(220VDC)



Contactor relay, 220 V DC, N/O = Normally open: 3 N/O, N/C = Normally closed: 1 NC, Spring-loaded terminals, DC operation



Part no. DILER-31-G-C(220VDC)
Catalog No. 231832

Alternate Catalog XTRMC10A31BD

No

Delivery program

Delivery program			
Product range			DILER Mini-contactors
Application			Contactor relays
Description			with interlocked opposing contacts
Connection technique			Spring-loaded terminals
Rated operational current			
Conventional free air thermal current, 1 pole			
Open			
at 50 °C	$I_{th} = I_e$	Α	10
AC-15			
220 V 230 V 240 V	l _e	Α	6
380 V 400 V 415 V	I _e	Α	3
Contacts			
N/O = Normally open			3 N/O
N/C = Normally closed			1 NC
Contact sequence			A1 13 21 33 43 A2 14 22 34 44
Code number and version of combination			
Distinctive number			31E
For use with			DILE-C
Actuating voltage			220 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, EN 60947-5-1, VDE 0660, UL, CSA
Lifespan, mechanical			
DC operated	Operations	x 10 ⁶	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			
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
Altitude		m	Max. 2000
Weight			
DC operated		kg	0.211
Terminal capacities		mm ²	
Spring-loaded terminals			
Flexible with or without ferrule DIN 46228		mm ²	1 x (1 - 2.5) 2 x (1 - 2.5)
Solid or stranded		AWG	1 x (16 - 14) 2 x (16 - 14)
Stripping length		mm	10
Standard screwdriver		mm	0.6 x 3.5
Contacts			
Interlocked opposing contacts to ZH 1/457, including auxiliary contact module			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		Α	
Conventional free air thermal current, 1 pole			
Open			10
at 50 °C	$I_{th} = I_e$	Α	10
AC-15			
220 V 230 V 240 V	l _e	Α	6
380 V 400 V 415 V	I _e	Α	3
500 V	I _e	Α	1.5
DC current			
Notes DC L/R ≦ 15 ms			Switch-on and switch-off conditions based on DC-13, time constant as specified.
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 $_{e}=24$ V DC, $U_{min}=17$ V, $I_{min}=5.4$ mA)

Maximum overcurrent protective device PKZM0 4 220 V 230 V 240 V PKZM0 4 380 V 400 V 415 V PKZM0 4 Short-circuit protection maximum fuse A gG/gL 6	
380 V 400 V 415 V PKZM0 4 Short-circuit protection maximum fuse	
Short-circuit protection maximum fuse	
500 V A gG/gL 6	
500 V A fast 10	
Current heat loss at I _{th}	
DC operated W 1.1	
Magnet systems	
Voltage tolerance	
DC operated	
Notes Smoothed DC, three-phase bridge rectifiers	s or smoothed double-wave rectification
Pick-up voltage 0.85 1.3	
at 24 V: without auxiliary contact component (40 °C) Pick-up \times U $_{\rm C}$ 0.7 - 1.3	
Power consumption	
DC operation	
DC operated Pull-in = W 2.3 sealing	
duty factor % DF 100	
Changeover time at 100 % U _S (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	
Rating data for approved types	
Auxiliary contacts	
Pilot Duty	
AC operated A600	
DC operated P300	
General Use	
General Ose	
AC V 600	

Design verification as per IEC/EN 61439

DC

DC

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	6
Heat dissipation per pole, current-dependent	P _{vid}	W	0.4
Equipment heat dissipation, current-dependent	P _{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	2.3
Heat dissipation capacity	P _{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	50
EC/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.

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250

0.5

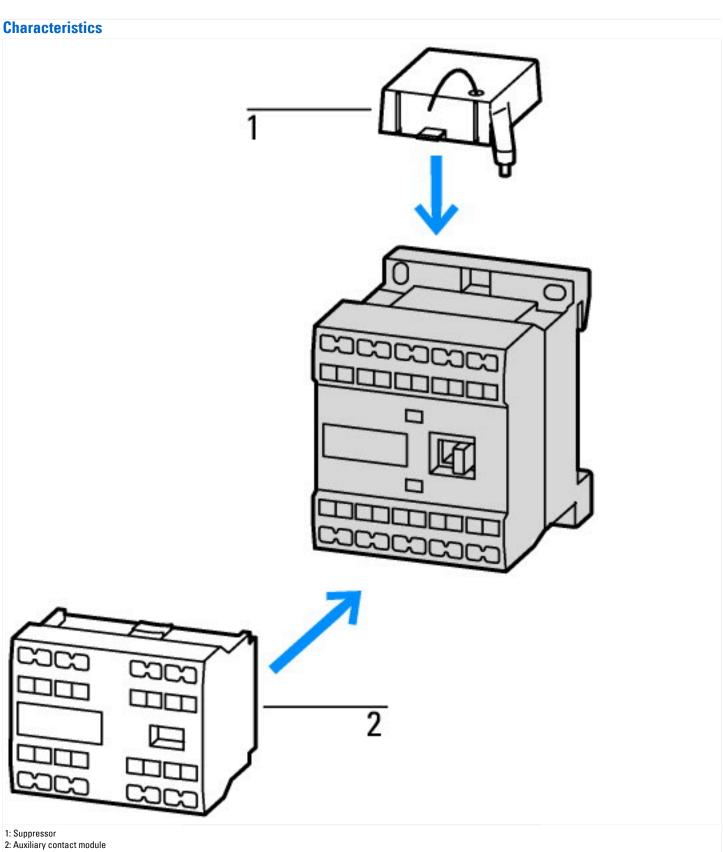
10.5 Protection against electric shock	Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components	Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections	Is the panel builder's 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.

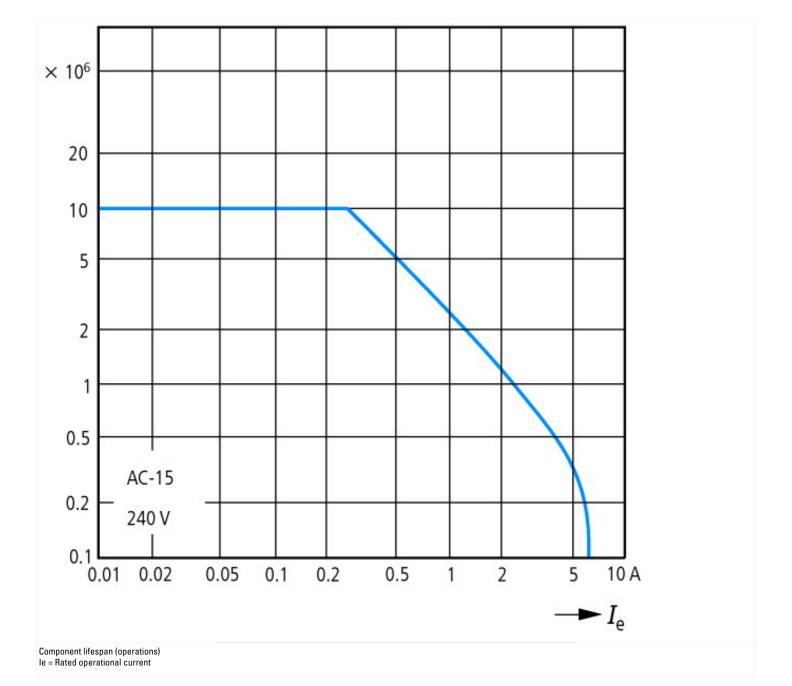
Technical data ETIM 7.0

Low-voltage industrial components (EG000017) / Contactor relay (EC000196)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Contactor relay (ecl@ss10.0.1-27-37-10-01 [AAB716014])			
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	/	220 - 220
Voltage type for actuating			DC
Rated operation current le, 400 V	А	4	3
Connection type auxiliary circuit			Spring clamp connection
Mounting method			DIN-rail/screw
Interface			No
Number of auxiliary contacts as normally closed contact			1
Number of auxiliary contacts as normally open contact			3
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

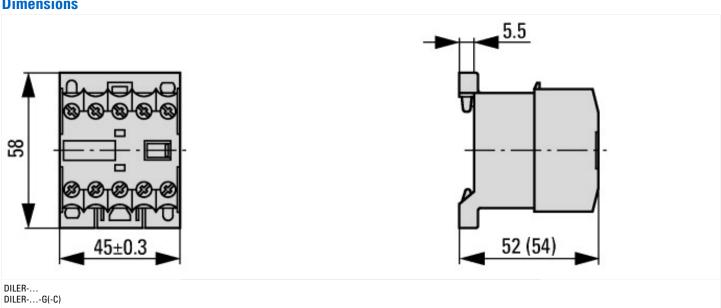
Approvals

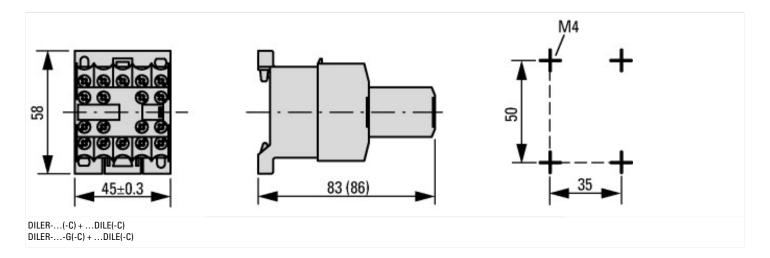
Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29184
UL Category Control No.	NKCR
CSA File No.	012528
CSA Class No.	3211-03
North America Certification	UL listed, CSA certified
Specially designed for North America	No





Dimensions





Assets (links)

Declaration of CE Conformity

00003110

Instruction Leaflets

IL03407009Z2018_04

Additional product information (links)

IL03407009Z (AWA2100-0882) Mini contactor relay

IL03407009Z (AWA2100-0882) Mini contactor relay

 $ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407009Z2018_04.pdf$