DATASHEET - DILA-40(220VDC)



Contactor relay, 220 V DC, N/O = Normally open: 4 N/O, Screw terminals, DC operation



Part no. DILA-40(220VDC)
Catalog No. 276348
Alternate Catalog XTRE10B40BD

No.

Similar to illustration

Delivery program			
Product range			DILA relays
Application			Contactor relays
Description			Basic devices with positive operation contacts
Connection technique			Screw terminals
Rated operational current			
AC-15			
220 V 230 V 240 V	I _e	Α	4
380 V 400 V 415 V	I _e	Α	4
Contacts			
N/O = Normally open			4 N/O
Contact sequence			A2 14 24 34 44
Code number and version of combination			
Distinctive number			40D
Can be combined with auxiliary contact module			DILA-XHI(V)
Actuating voltage			220 V DC
Voltage AC/DC			DC operation
Suppressor circuit			built-in
Connection to SmartWire-DT			no
Instructions			Contact numbers to EN 50011 Coil terminal markings to EN 50005 built-in suppressor circuit'

Technical data

General

Conordi			
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 - +60
Enclosed		°C	- 25 - 40
Ambient temperature, storage		°C	- 40 - 80
Mounting position			
Mounting position			30°
Mechanical shock resistance (IEC/EN 60068-2-27)			
Half-sinusoidal shock, 10 ms			

Basic unit with auxiliary contact module 9 7 7 7 7 7 7 7 7 7	
NC contact Degree of Protection Protection against direct contact when actuated from front (EN 50274) Weight DC operated DC o	
Degree of Protoction P20 P20 Protection against direct contact when actuated from front (EN 50274) Finger and back-of-hand proof Weight Region R	
Protection against direct contact when actuated from from (EN 50274) Woight Compared Compa	
Weight BC operated kg 0.294 Terminal capacities mm² 1x (0.75 - 41) Screw terminals mm² 1x (0.75 - 41) Solid mm² 1x (0.75 - 25) Floxible with forrule mm² 1x (0.75 - 25) Solid or stranded AWO 18 - 14 Stripping length 10 14 Terminal screw M3.5 2 Pozidriv screwdriver Sizo 2 Standard screwdriver mm 0.8 x 5.5 Max tightening torque 0.0 mm 1.2 Contact vac wmm 0.8 x 5.5 Max tightening torque vac wmm 0.8 x 5.5 Max tightening torque vac wmm 0.8 x 5.5 Rated imputes withstand voltage vac wmm 0.8 x 5.5 Rated imputes withstand voltage up v.A.C 600 Rated imputes withstand voltage up v.A.C 600 Rated imputes withstand voltage up v.A.C 400 <	
DC operated	
Terminal capacities	
Scriew terminals Solid mm² 1 x (0,75 - 4) 2 x (0,75 - 2.5)	
Solid mm² 1 x (0.75 - 4) 2 x (0.75 - 2.5)	
Flexible with ferrule	
Solid or stranded Solid or stranded Stripping length Imm 10	
Stripping length	
Terminal screw Pozidriv screwdriver Standard screwdriver Standard screwdriver Max. tightening torque Max. tightening torque Nax. tightening tor	
Pozidriv screwdriver Size 2 Standard screwdriver Standard	
Standard screwdriver mm 0.8 x 5.5 1 x 6 Max. tightening torque Nm 1.2 Contacts Ves Rated impulse withstand voltage U _{imp} V AC 6000 Overvoltage category/pollution degree III/3 690 Rated perational voltage U _i V AC 690 Rated operational voltage U _e V AC 690 Safe isolation to EN 61140 V AC 400 690 between coil and auxiliary contacts V AC 400 400 Rated operational current A I I Conventional free air thermal current, 1 pole A I I Open I A I	
Nax tightening torque	
Positive operating contacts to ZH 1/457, including auxiliary contact module Rated impulse withstand voltage Overvoltage category/pollution degree Rated insulation voltage Rated operational voltage Rated operational voltage Ou V AC 690 Rated operational voltage Safe isolation to EN 61140 between coil and auxiliary contacts between the auxiliary contacts V AC Conventional free air thermal current, 1 pole Open at 60 °C AC-15 220 V 230 V 240 V 380 V 400 V 415 V Ie A 16 A 15 DC current Notes DC LURS \$15 ms Yes Yes 400 6000 11/3 12/3 400 400 400 400 400 400 400 4	
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AC-15 220 V 230 V 240 V 1e A 4 380 V 400 V 415 V 1e A 4 500 V 1e A 1.5 DC current Notes DC L/R ≤ 15 ms NO A NO B	
220 V 230 V 240 V I _e A 4 380 V 400 V 415 V I _e A 4 500 V I _e A 1.5 DC current Notes Switch-on and switch-off conditions based on DC-13, time conditions	
380 V 400 V 415 V	
500 V I _e A 1.5 DC current Notes DC L/R ≦ 15 ms Notes Notes DC L/R ≤ 15 ms	
DC current Notes Switch-on and switch-off conditions based on DC-13, time conditions based	
Notes Switch-on and switch-off conditions based on DC-13, time conditions based on DC-13, tim	
DC L/R ≦ 15 ms	
	nstant as specified.
Contacts in series:	
1 24 V A 10	
1 60 V A 6	
2 60 V A 10	
1 110 V A 3	
3 110 V A 6	
1 220 V A 1	
3 220 V A 5	
DC L/R ≦ 50 ms	
Contacts in series:	
3 24 V A 4	
3 60 V A 4	
3 110 V A 2	
3 220 V A 1	
Control circuit reliability Failure rate λ <10 ⁻⁸ , < one failure at 100 million operations (at $U_e = 24 \text{ V DC}$, $U_{min} = 17 \text{ V}$, $I_{min} = 5.4 \text{ mA}$)	

Short-circuit rating without welding			
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	10
Current heat loss at I _{th}			
DC operated		W	1.07
Magnet systems			
Voltage tolerance			
DC operated			
Notes			Smoothed DC, three-phase bridge rectifiers or smoothed double-wave rectification
Pick-up voltage			0.8 1.1
at 24 V: without auxiliary contact component (40 °C)	Pick-up	xU_c	0.7 - 1.3
Power consumption			
DC operation			
DC operated	Pull-in = sealing	W	3
duty factor		% DF	100
Changeover time at 100 $\%$ Us (recommended value)			
DC operated closing delay		ms	
Switching times, DC operated, max. closing delay		ms	31
DC operated N/O contact opening delay		ms	
Switching times, DC actuated make contact Opening delay, max.		ms	12
Rating data for approved types			
Auxiliary contacts			

	A600
	P300
V	600
Α	15
V	250
Α	1
	V A V

Design verification as per IEC/EN 61439

besign vermoution as per 120/214 01403			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	15.5
Heat dissipation per pole, current-dependent	P _{vid}	W	1
Equipment heat dissipation, current-dependent	P_{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	3
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.

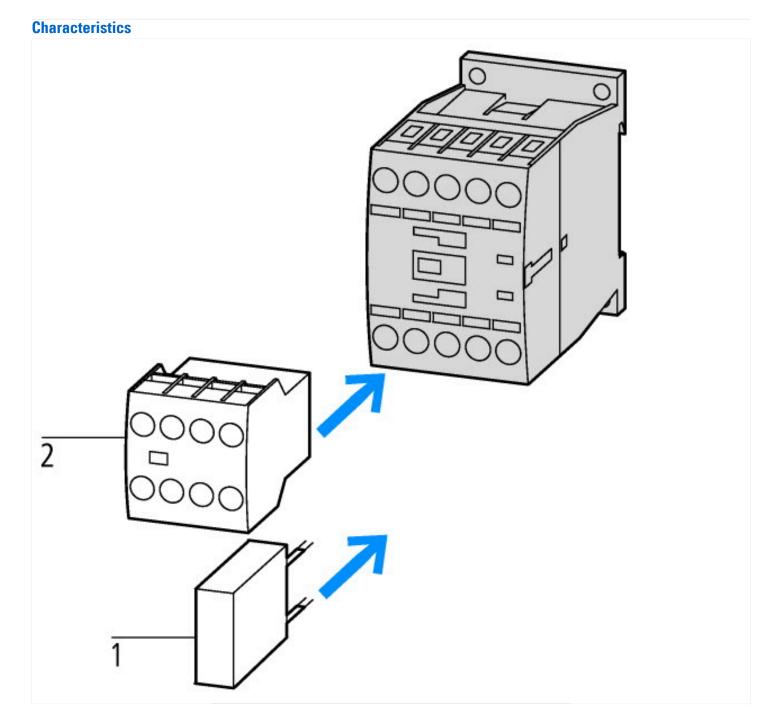
10.4 Clearances and creepage distances	Meets the product standard's requirements.
10.5 Protection against electric shock	Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components	Does not apply, since the entire switchgear needs to be evaluated.
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 7.0

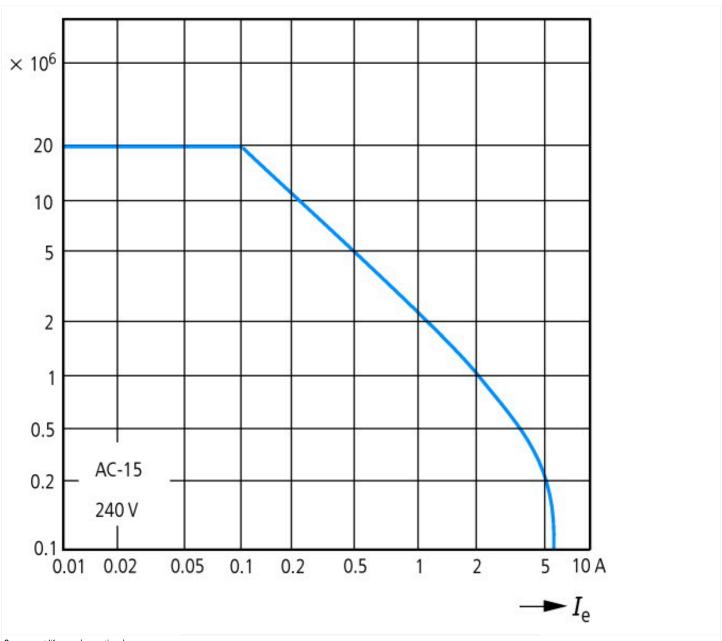
Low-voltage industrial components (EG000017) / Contactor relay (EC000196)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Contactor relay (ecl@ss10.0.1-27-37-10-01 [AAB716014])			
Rated control supply voltage Us at AC 50HZ		V	0 - 0
Rated control supply voltage Us at AC 60HZ		٧	0 - 0
Rated control supply voltage Us at DC		٧	220 - 220
Voltage type for actuating			DC
Rated operation current le, 400 V		Α	4
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

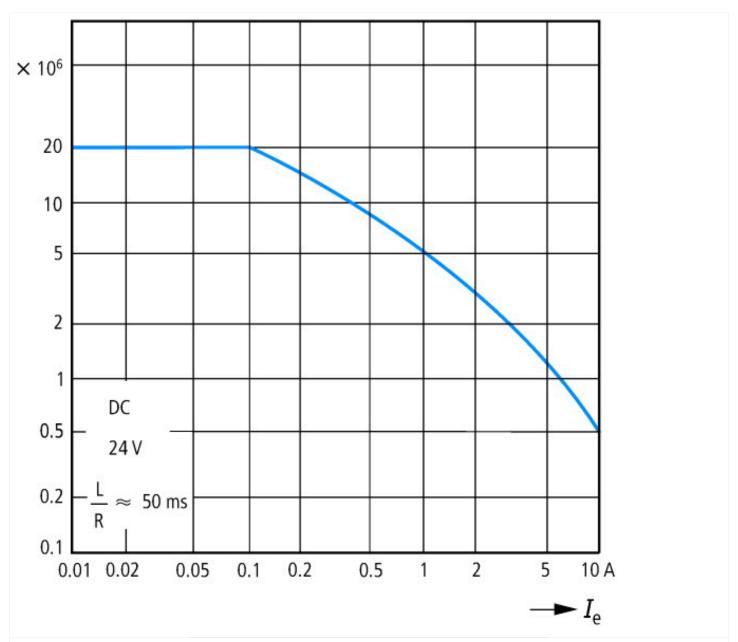
Approvals

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



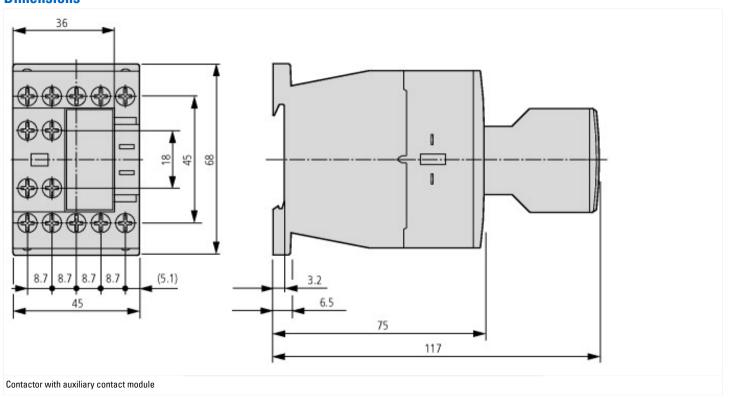
1: Suppressor 2: Auxiliary contact module

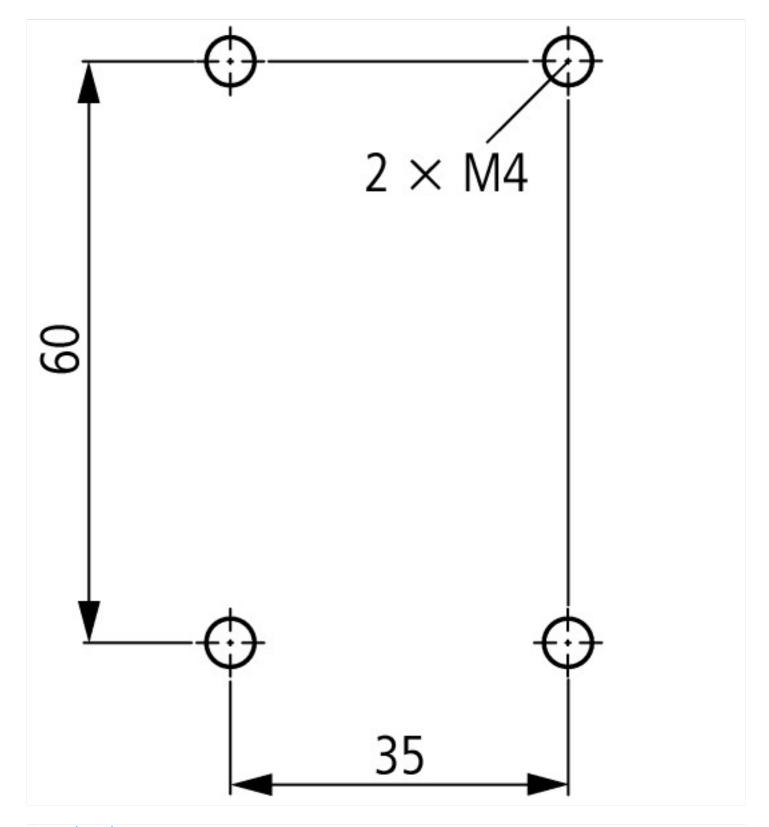




Component lifespan (operations)
I_e = rated operational current
Three contacts in series

Dimensions





Assets (links)

Declaration of CE Conformity

00002875

Instruction Leaflets

IL03407013Z2018_07

Additional product information (links)

IL03407013Z (AWA2100-2126) Contactors

IL03407013Z (AWA2100-2126) Contactors

ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407013Z2018_07.pdf