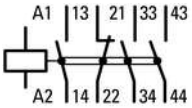
DATASHEET - DILA-31(24V50/60HZ)-PI



Contactor relay, 24 V 50/60 Hz, 3 N/O, 1 NC, Push in terminals, AC operation

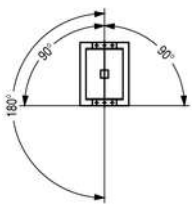
Part no.	**DILA-31(24V50/60HZ)-PI**
Catalog No.	**199211**
Alternate Catalog No.	**XTREPI10B31T**

Delivery program

Product range			DILA relays
Application			Contactor relays
Description			Basic devices with positive operation contacts
Connection technique			Push in terminals
Rated operational current			
AC-15			
220 V 230 V 240 V	I_e	A	4
380 V 400 V 415 V	I_e	A	4
Contacts			
N/O = Normally open			3 N/O
N/C = Normally closed			1 NC
Contact sequence			
Code number and version of combination			
Distinctive number			31E
Can be combined with auxiliary contact module			DILA-XHI(V)…-PI
Actuating voltage			24 V 50/60 Hz
Voltage AC/DC			AC operation
Connection to SmartWire-DT			no
Instructions			Contact numbers to EN 50011 Coil terminal markings to EN 50005

Technical data

General

Standards			IEC/EN 60947, EN 60947-5-1, VDE 0660, UL, CSA
Lifespan, mechanical			
AC 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			
Mechanical shock resistance (IEC/EN 60068-2-27)			
Half-sinusoidal shock, 10 ms			
Basic unit with auxiliary contact module		g	

N/O contact		g	7
N/C contact		g	5
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			
AC operated		kg	0.23
Terminal capacities		mm^2	
Push-in terminals			
Solid		mm^2	1 x (0,5 - 2,5) 2 x (0,5 - 2,5)
flexible		mm^2	1 x (0,5 - 2,5) 2 x (0,5 - 2,5)
flexible with ferrules		mm^2	1 x (0,5 - 1,5) 2 x (0,5 - 1,5)
flexible with ultrasonic welded busbar end		mm^2	1 x (0,5 - 2,5) 2 x (0,5 - 2,5)
flexible with uninsulated wire end ferrule		mm^2	1 x (0,5 - 2,5) 2 x (0,5 - 2,5)
Solid or stranded		AWG	20 - 14
Stripping length		mm	10
Standard screwdriver			3.0 x 0.5

Contacts

Positive operating contacts to ZH 1/457, including auxiliary contact module			yes
Rated impulse withstand voltage	U_{imp}	V AC	6000
Overvoltage category/pollution degree			III/3
Rated insulation voltage	U_i	V AC	690
Rated operational voltage	U_e	V AC	690
Safe isolation to EN 61140			
between coil and auxiliary contacts		V AC	400
between the auxiliary contacts		V AC	400
Rated operational current		A	
Conventional free air thermal current, 1 pole			
Open			
at 60 °C	$I_{th} = I_e$	A	16
AC-15			
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 constant as specified.
DC L/R ≦ 15 ms			
Contacts in series:		A	
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:		A	
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 V DC, U_{min} = 17 V, I_{min} = 5.4 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}			
AC operated		W	0.53

Magnet systems

Voltage tolerance			
AC operated			
Dual-frequency coil 50/60 Hz	Pick-up	x U_c	0.8 - 1.1
Power consumption			
AC operation			
Dual-frequency coil 50/60 Hz at 60 Hz	Pick-up	VA	27 25
Dual-frequency coil 50/60 Hz	Hold	VA	4.2 3.3
Dual-frequency coil 50/60 Hz	Sealing	W	1.4
duty factor		% DF	100
Changeover time at 100 % U_S (recommended value)			
AC operated closing delay		ms	15 - 21
AC operated N/O contact opening delay		ms	9 - 18

Rating data for approved types

Auxiliary contacts			
Pilot Duty			
AC operated			A600
DC operated			P300
General Use			
AC		V	600
AC		A	15
DC		V	250
DC		A	1

Design verification as per IEC/EN 61439

Technical data for design verification			
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	60

Technical data ETIM 8.0

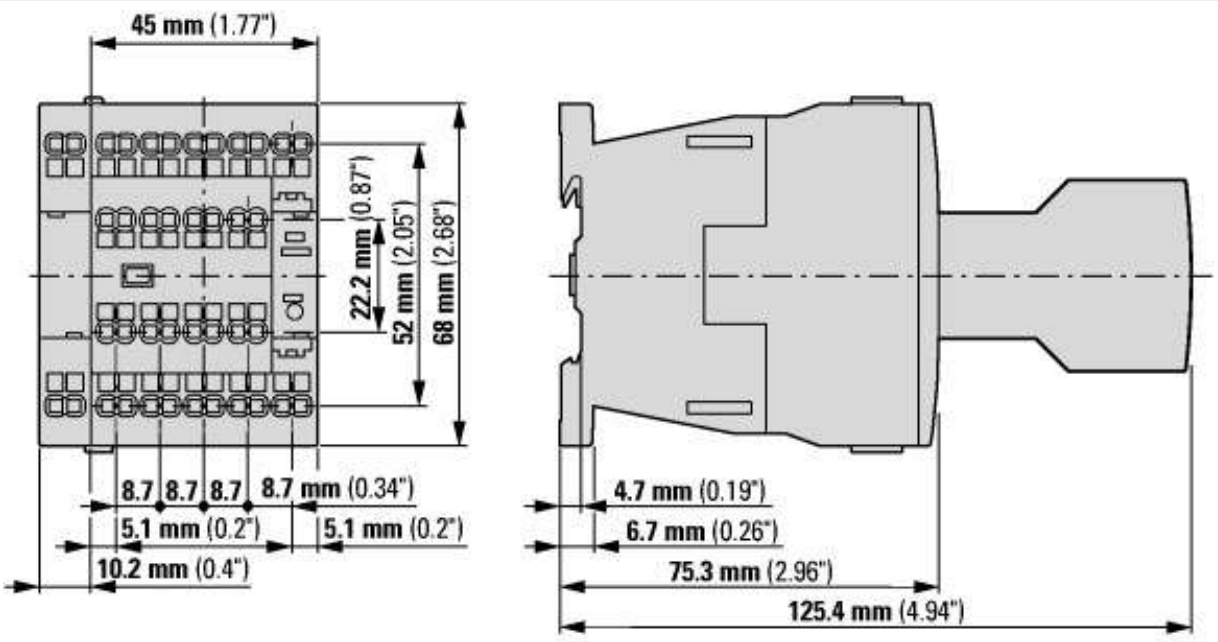
Low-voltage industrial components (EG000017) / Contactor relay (EC000196)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Contactor relay (ecl@ss10.0.1-27-37-10-01 [AAB716014])			
Rated control supply voltage Us at AC 50HZ		V	24 - 24
Rated control supply voltage Us at AC 60HZ		V	24 - 24
Rated control supply voltage Us at DC		V	0 - 0
Voltage type for actuating			AC
Rated operation current Ie, 400 V		A	4
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
Number of auxiliary contacts as change-over contact			0

With LED indication		No
Suitable for manual operation		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



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