

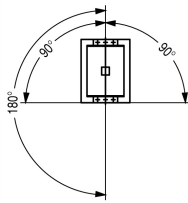
Contactor relay, 220 V 50/60 Hz, 3 N/O, 1 NC, Push in terminals, AC operation

Part no. DILA-31(220V50/60HZ)-PI
Catalog No. 199639
Alternate Catalog No. XTREPI10B31AO

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				220 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	$\times 10^6$		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 \leq 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 \leq 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 U_s at AC 50HZ	V	220 - 220
Rated control supply voltage U_s at AC 60HZ	V	220 - 220
Rated control supply voltage U_s at DC	V	0 - 0
Voltage type for actuating		AC
Rated operation current I_e , 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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