DATASHEET - DILAC-31(48V50HZ)



Contactor relay, 48 V 50 Hz, 3 N/O, 1 NC, Spring-loaded terminals, AC operation



Part no. Catalog No. No.

DILAC-31(48V50HZ) 276464 Alternate Catalog XTREC10B31Y

Similar to illustration

Delivery program

Application Contactor relays Connection technique Spring-loaded terminals Rated operational current P AC-15 - 200 V 200 V 240 V Iso 380 V 400 V 415 V Iso N/O = Normally closed Iso N/O = Normally closed N/O N/C = Normally closed InC Contact sequence InC Distinctive number Iso Distinctive number Iso Distinctive number Iso Contact sequence Iso Materian Back (ADD) Iso Distinctive number Iso Cantact unubers to EN 500015 Iso Cantact numbers to EN 500005 Iso Cantact numbers to EN 500015 Iso Cantact numbers to EN 500005 Iso Cantact numbers to EN 500015 Iso Cantact numbers to EN 500015 Iso Cantact num				
Connection technique Spring-loaded terminals Rated operational current Spring-loaded terminals AC-15	Product range			DILA relays
Rated operational current Ref Ref <td>Application</td> <td></td> <td></td> <td>Contactor relays</td>	Application			Contactor relays
AC-15 Image: Contract sequence Image: Contact sequence Imag	Connection technique			Spring-loaded terminals
20 V 200 V 240 V Ie A 4 380 V 400 V 415 V Ie A 4 Contacts Im A 4 N/0 = Normally open Im Im Im N/C = Normally closed Im Im Im Contact sequence Im Im Im Im Contact sequence Im	Rated operational current			
380 V 400 V 415 V Image: second	AC-15			
Contacts N/O = Normally open 3 N/O N/C = Normally closed 1 NC Contact sequence 1 1 ¹³ 1 ²¹ 1 ³³ 1 ⁴³ Instructions Contact numbers to EN 50011 Contact number and version of combination Contact numbers to EN 50011 Distinctive number 31E Can be combined with auxiliary contact module DILA-XHIC(V) Actuating voltage 48 V 50 Hz Notage AC/DC no Contact numbers to EN 50011 Contact numbers to EN 50011 Contact number 31E Dila-XHIC(V) At v 50 Hz Actuating voltage No Paration Voltage AC/DC no Contact numbers to EN 50011 Contact numbers to EN 50011	220 V 230 V 240 V	l _e	А	4
N/0 = Normally open 3 N/0 N/C = Normally closed 1 NC Contact sequence Image: Contact sequence Image: Contact sequence Instructions Image: Contact numbers of EN 50011 Coll terminal markings to EN 50015 Code number and version of combination Image: Contact numbers of EN 50015 Distinctive number Image: Contact numbers of EN 50015 Can be combined with auxiliary contact module Image: Contact numbers of EN 50015 Actuating voltage Image: Contact numbers of EN 50015 Voltage AC/DC Image: Contact numbers of EN 50015 Connection to SmartWire-DT Image: Contact numbers of EN 50015 Instructions Image: Contact numbers of EN 50015 Sconection to SmartWire-DT Image: Contact numbers of EN 50011 Instructions Image: Contact numbers of EN 50015	380 V 400 V 415 V	l _e	А	4
N/C = Normally closed INC Contact sequence INC Instructions Int I 13 I 21 I 33 I 43 Code number and version of combination Contact numbers to EN 50011 Distinctive number IE Can be combined with auxiliary contact module IIE Actuating voltage IIE Voltage AC/DC IIE Connection to SmartWire-DT IIE Instructions IIE Instructions IIE Contact numbers to EN 50011 IIE Contact numbers to EN 50005 IIE Contact numbers to EN 50011 IIE	Contacts			
Contact sequence A1 1 1 21 3 143 instructions Contact numbers to EN 50011 Code number and version of combination Contact numbers to EN 50011 Distinctive number Stef P Can be combined with auxiliary contact module Stef P Actuating voltage Stef P Voltage AC/DC K2 50 Hz Connection to SmartWire-DT no Instructions Contact numbers to EN 50011 Contact numbers to EN 50011 Contact numbers to EN 50011	N/O = Normally open			3 N/O
Instructions Cotact numbers to EN 50011 Coil terminal markings to EN 50005 Code number and version of combination Cotact numbers to EN 50005 Distinctive number State of the second	N/C = Normally closed			1 NC
Code number and version of combination Cole number Cole number Distinctive number 31E Can be combined with auxiliary contact module MLA-XHIC(V) Actuating voltage 48 V 50 Hz Voltage AC/DC Actoperation Connection to SmartWire-DT Image: Contact numbers to EN 50011	Contact sequence			<u></u>
Distinctive number 31E Can be combined with auxiliary contact module DILA-XHIC(V) Actuating voltage 48 V 50 Hz Voltage AC/DC Acto peration Connection to SmartWire-DT Imate and the set of t	Instructions			
Can be combined with auxiliary contact module DILA-XHIC(V) Actuating voltage 48 V 50 Hz Voltage AC/DC Act operation Connection to SmartWire-DT on Instructions Contact numbers to EN 50011	Code number and version of combination			
Actuating voltage 48 V 50 Hz Voltage AC/DC AC operation Connection to SmartWire-DT Model Instructions Contact numbers to EN 50011	Distinctive number			31E
Voltage AC/DC AC operation Connection to SmartWire-DT No Instructions Contact numbers to EN 50011	Can be combined with auxiliary contact module			DILA-XHIC(V)
Connection to SmartWire-DT no no no Contact numbers to EN 50011	Actuating voltage			48 V 50 Hz
nstructions Contact numbers to EN 50011	Voltage AC/DC			AC operation
	Connection to SmartWire-DT			no
	Instructions			

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	0.24
Terminal capacities		mm ²	
Spring-loaded terminals			
Solid		mm ²	1 x (0.75 - 2.5)
		mm	2 x (0.75 - 2.5)
Flexible with or without ferrule DIN 46228		mm ²	1 x (0,75 - 1.5) 2 x (0,75 - 1.5)
Solid or stranded		AWG	18 - 14
Stripping length		mm	10
Standard screwdriver		mm	0.6 x 3.5
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			111/3
Rated insulation voltage	Ui	V AC	690
Rated operational voltage		V AC	690
	U _e	V AG	000
Safe isolation to EN 61140			100
between coil and auxiliary contacts		V AC	400
between the auxiliary contacts		V AC	400
Rated operational current		А	
Conventional free air thermal current, 1 pole			
Open			
at 60 °C	$I_{th} = I_e$	А	16
AC-15			
220 V 230 V 240 V	le	А	4
380 V 400 V 415 V	l _e	Α	4
500 V	le	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:		٨	
	24.14	A	10
1	24 V	A	10
1	60 V	A	6
2	60 V	A	10
1	110 V	А	3
3	110 V	Α	6
1	220 V	А	1
3	220 V	А	5
DC L/R ≦ 50 ms			
Contacts in series:		А	
3	24 V	А	4
3	60 V	Α	4
3	110 V	A	2
3	220 V	А	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			
Single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz	Pick-up	x U _c	0.8 - 1.1
Power consumption			
AC operation			
Single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz	Pick-up	VA	24
Single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz	Sealing	VA	3.4
Single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz	Sealing	W	1.4
duty factor		% DF	100
Changeover time at 100 $\%~\text{U}_S$ (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		А	15
DC		V	250
DC		А	1

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I _n	А	15.5
Heat dissipation per pole, current-dependent	P _{vid}	W	0.5
Equipment heat dissipation, current-dependent	P _{vid}	W	0
Static heat dissipation, non-current-dependent	P _{vs}	W	1.4
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.

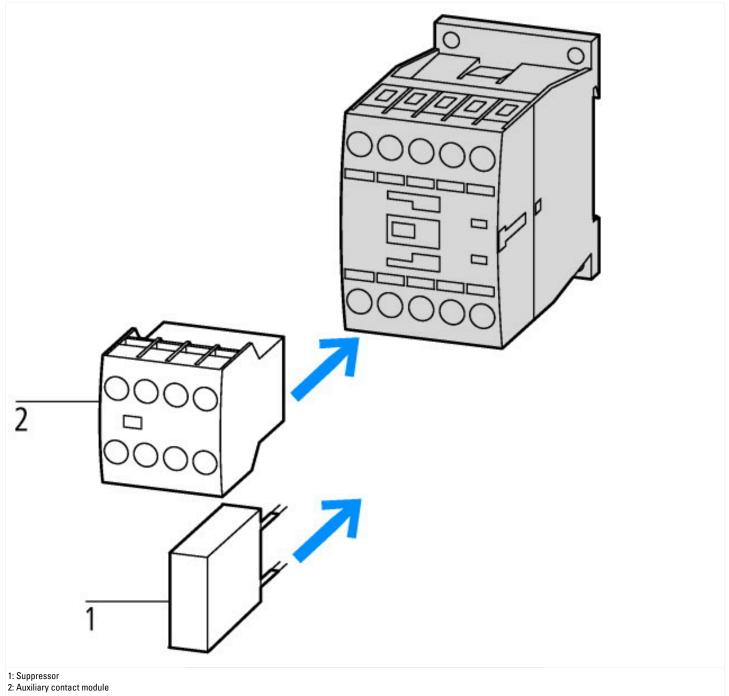
10.8 Connections for external conductors	Is the panel builder's responsibility.
10.9 Insulation properties	
10.9.2 Power-frequency electric strength	Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage	Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating 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.

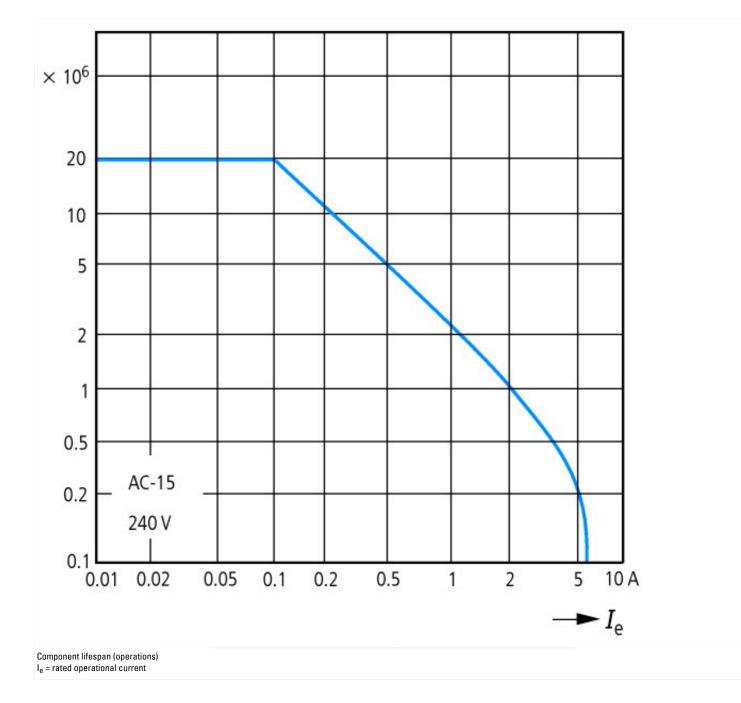
Technical data ETIM 7.0

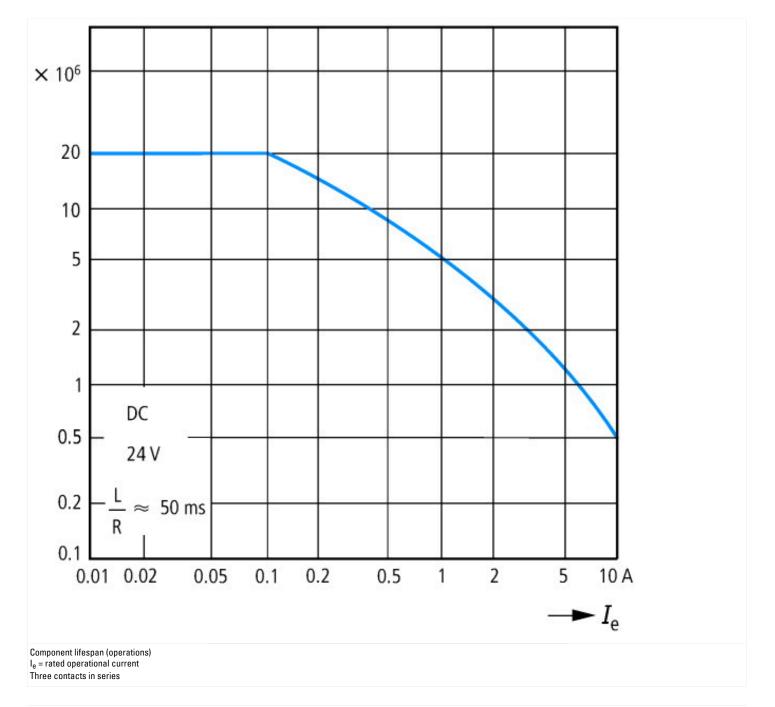
Low-voltage industrial components (EG000017) / Contactor relay (EC000196)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Contactor relay (ecl@ss10.0.1-27-37-10-01 [AAB716014])			
Rated control supply voltage Us at AC 50HZ	,	V	48 - 48
Rated control supply voltage Us at AC 60HZ	١	V	0 - 0
Rated control supply voltage Us at DC	N N	V	0 - 0
Voltage type for actuating			AC
Rated operation current le, 400 V	/	4	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
With LED indication			No
Number of auxiliary contacts as change-over contact			0
Manual operation possible			No

Approvals

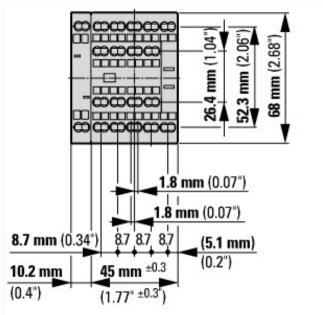
Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29184
UL Category Control No.	NKCR
CSA File No.	012528
CSA Class No.	3211-03
North America Certification	UL listed, CSA certified
Specially designed for North America	No

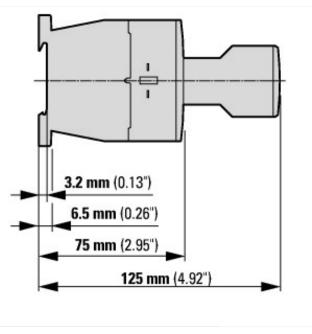






Dimensions





Contactor with auxiliary contact module

