

Auxiliary contact module, 4 pole, 3 N/O, 1 NC, Front fixing, Screw terminals, DILE(E)M, DILER



Part no. 31DILE
 Catalog No. 048912
 Alternate Catalog No. XTMCXFA31
 EL-Nummer (Norway) 4130367

Delivery program

Accessories				Auxiliary contact modules
Description				with interlocked opposing contacts Switching elements according to EN 50005 Switching elements according to EN 50012 are to be preferred. Version E combinations correspond to EN 50011 and are to be preferred.
Function				for standard applications
Number of poles				4 pole
Connection technique				Screw 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		2
Contacts				
N/O = Normally open				3 N/O
N/C = Normally closed				1 NC
Mounting type				Front fixing
For use with				DILEM-10(-G)(...) DILEM-01(-G)(...) DILEM-4(-G)(...) DILER40(-G) DILER31(-G) DILER22 DILEEM-10(-G)(...) DILEEM-01(-G)(...) DILEM12-10(-G)(...) DILEM12-01(-G)(...)
Instructions				Interlocked opposing contacts according to IEC/EN 60947-5-1 appendix L, inside the auxiliary contact modules, also for the integrated auxiliary contacts of the DILE(E)M Auxiliary contacts used as mirror contacts according to IEC/EN 60947-4-1 Appendix F (not N/C late open)
Code number and version of combination				
Distinctive number				71E
with basic device				DILER-40(-G)
				62
with basic device				DILER-31(-G)
				53
with basic device				DILER-22

Technical data

General				
Standards				IEC/EN 60947, VDE 0660, UL, CSA
Lifespan, mechanical				
AC operated	Operations	$\times 10^6$		10
DC operated	Operations	$\times 10^6$		20
Component lifespan at $U_e = 240$ V				
AC-15	Operations	$\times 10^6$		0.2
DC				
L/R = 50 ms: 2 contacts in series at $I_e = 0.5$ A	Operations	$\times 10^6$		0.15
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
Ambient temperature, storage		°C	- 40 - 80
Mounting position			
Mounting position			As required, except vertical with terminals A1/A2 at the bottom
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			
Weight			
		kg	0.04
Terminal capacities			
mm ²			
Screw terminals			
Solid		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)
Flexible with ferrule		mm ²	1 x (0.75 - 1.5) 2 x (0.75 - 1.5)
Solid or stranded		AWG	Single 18 – 14/Double 18 – 14
Terminal screw			M3.5
Pozidriv screwdriver		Size	2
Standard screwdriver		mm	0.8 x 5.5 1 x 6
Max. tightening torque		Nm	1.2

Contacts

Interlocked opposing contacts within an auxiliary contact module (to IEC 60947-5-1 Annex L)				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	600	
Safe isolation to EN 61140				
between coil and auxiliary contacts		V AC	300	
between the auxiliary contacts		V AC	300	
Rated operational current				A
Conventional free air thermal current, 1 pole				
Notes				At maximum permissible ambient air temperature.
Conv. thermal current	I_{th}	A	10	
AC-15				
220 V 230 V 240 V	I_e	A	4	
380 V 400 V 415 V	I_e	A	2	
500 V	I_e	A	1.5	
DC current				
				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	2.5	
2	60 V	A	2.5	
3	110 V	A	1.5	
3	220 V	A	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)	
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	6
500 V	A fast	10
Current heat loss at I_{th}		
AC operated	W	1.5
DC operated	W	1.5
Current heat loss per auxiliary circuit at I_a (AC-15/230 V)	CO	0.24

Rating data for approved types

Auxiliary contacts		
Pilot Duty		
AC operated		A600
DC operated		P300
General Use		
AC	V	600
AC	A	10
DC	V	250
DC	A	0.5

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	4
Heat dissipation per pole, current-dependent	P_{vid}	W	0.24
Equipment heat dissipation, current-dependent	P_{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	0
Heat dissipation capacity	P_{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	50
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.

Technical data ETIM 8.0

Low-voltage industrial components (EG000017) / Auxiliary contact block (EC000041)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Component for low-voltage switching technology / Auxiliary switch block
(ecl@ss10.0.1-27-37-13-02 [AKN342013])

Number of contacts as change-over contact		0
Number of contacts as normally open contact		3
Number of contacts as normally closed contact		1
Number of fault-signal switches		0
Rated operation current I _e at AC-15, 230 V	A	4
Type of electric connection		Screw connection
Model		Top mounting
Mounting method		Front fastening
Lamp holder		None