



Auxiliary contact module, 2N/O+2N/C, electronic

Part no. DILA-XHIR22
Catalog No. 139580
Eaton Catalog No. XTCEXFARC22
EL-Nummer (Norway) 4110223



Delivery program

Product range			Accessories
Accessories			Auxiliary contact modules
Description			with interlocked opposing contacts (except microswitches)
Function			for standard applications for electronic applications
Number of poles			4 pole
Connection technique			Screw terminals
Rated operational current			
Conventional free air thermal current, 1 pole			
Open			
at 60 °C	I_{th}	A	16
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			2 N/O (1 N/O above microswitch for electronic applications)
N/C = Normally closed			2 NC (1 NC above microswitch for electronic applications)
Mounting type			Front fixing
Contact sequence			
For use with			DILA... DILM(C)7... DILM(C)9... DILM(C)12... DILM(C)15... DILM(C)17... DILM(C)25... DILM(C)32... DILM38... DILMP20... DILMP32... DILMP45... DILL...
Type			Front mounting auxiliary contact
Instructions			Conventional 63/64 N/O and 71/72 N/C auxiliary contacts with interlocked opposing contacts, in accordance with IEC/EN 60947-5-1 Appendix L, inside the auxiliary contact modules and for the integrated auxiliary contacts in DILM 7 - DILM32 units (not microswitches) All auxiliary N/C contacts (81/82 N/C microswitches as well) can be used as a mirror contact as defined in IEC/EN 60947-4-1 Appendix F (not NC late-break)
Code number and version of combination			
Distinctive number			51E
with basic device			DILA(C)-40
			42
with basic device			DILA(C)-31
			33
with basic device			DILA(C)-22

Technical data

Electrical specifications for standard auxiliary contacts

Interlocked opposing contacts within an auxiliary contact module (to IEC 60947-5-1 Annex L)			Yes
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N/C contact (not late-break contact) suitable as a mirror contact (to IEC/EN 60947-4-1 Annex F)			DILM7 - DILM38
Rated impulse withstand voltage	U_{imp}	kV	6
Overtoltage category/pollution degree			III/3
Rated insulation voltage	U_i	V AC	690
Rated operational voltage	U_e	V AC	500
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}	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			
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			
3	24 V	A	2.5
3	60 V	A	1
3	110 V	A	0.5
3	220 V	A	0.25
DC-13 (6xP)			
24 V	I_e	A	2.5
60 V	I_e	A	1
110 V	I_e	A	0.5
220 V	I_e	A	0.25
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) $<5.3 \times 10^{-8}$, < one failure in 19 millions operations (at $U_e = 24$ V DC, $U_{min} = 17$ V, $I_{min} = 1$ mA)
Component lifespan			
at $U_e = 230$ V, AC-15, 3 A	Operations	$\times 10^6$	1.3
Short-circuit rating without welding			
max. fuse		A gG/gL	10

Electrical specifications for microswitch auxiliary contacts 53-54 and 81-82

Rated insulation voltage	U_i	V AC	250
Rated operational voltage	U_e	V AC	250
Rated operational voltage	U_e	V DC	60
Rated operational current AC-12, 240 V	I_e	A	0.1
Rated operational current DC-12, 24 V	I_e	A	0.5
Rated operational current DC-12, 60 V	I_e	A	0.3
Conventional free air thermal current	I_{th}	A	0.5
Control circuit reliability	Failure rate	λ	$<10^{-8}$, < one failure at 100 million operations

			(at $U_e = 24\text{ V DC}$, $U_{\min} = 17\text{ V}$, $I_{\min} = 1\text{ mA}$)
Component lifespan at DC-12, 24 V / 50 mA	Operations	$\times 10^6$	1.3
Minimum voltage	U_e	V	3
Minimum current	I_e	mA	1
Short-circuit rating without welding, max. fuse		A gG/gL	1.6

Terminal capacity control circuit cables

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	18 - 14

Tool

Control circuit cables			
Standard screwdriver		mm	0.6 x 3.5

Rating data for approved types

Auxiliary contacts			
General Use			
DC		V	250
DC		A	0.1

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	0.16
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 max.		°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 6.0

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

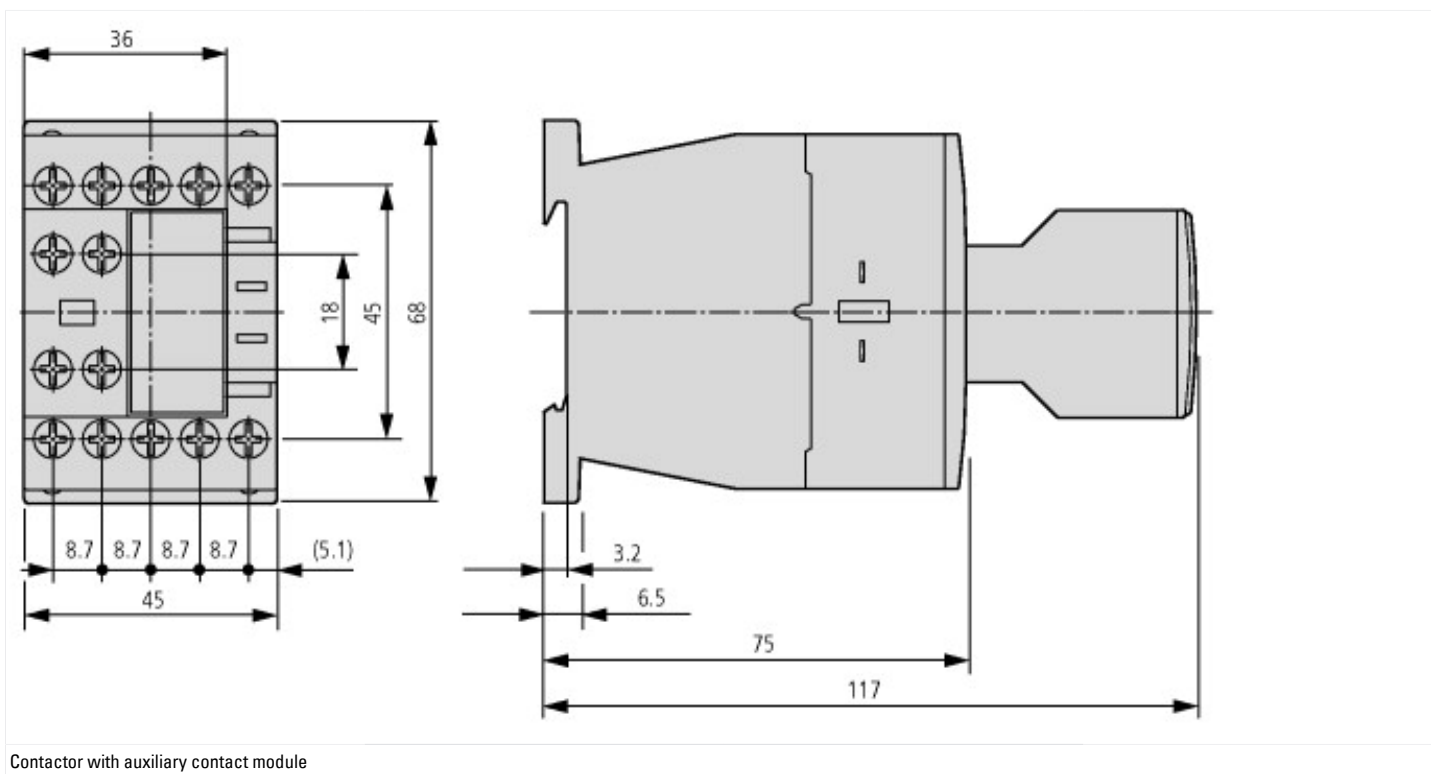
Electric engineering, automation, process control engineering / Low-voltage switch technology / Component for low-voltage switching technology / Auxiliary switch block (ec1@ss8.1-27-37-13-02 [AKN342010])

Number of contacts as change-over contact		0
Number of contacts as normally open contact		2
Number of contacts as normally closed contact		2
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

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





Additional product information (links)

IL03407013Z (AWA2100-2126) Contactors

IL03407013Z (AWA2100-2126) Contactors	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407013Z2012_03.pdf
UL/CSA: Approved rating data	http://de.ecat.moeller.net/flip-cat/?edition=HPLTE&startpage=5.84
Switchgear of Power Factor Correction Systems	http://www.moeller.net/binary/ver_techpapers/ver934en.pdf
X-Start - Modern Switching Installations Efficiently Fitted and Wired Securely	http://www.moeller.net/binary/ver_techpapers/ver938en.pdf
Mirror Contacts for Highly-Reliable Information Relating to Safety-Related Control Functions	http://www.moeller.net/binary/ver_techpapers/ver944en.pdf
Effect of the Cable Capacitance of Long Control Cables on the Actuation of Contactors	http://www.moeller.net/binary/ver_techpapers/ver949en.pdf
Motor starters and "Special Purpose Ratings" for the North American market	http://www.moeller.net/binary/ver_techpapers/ver953en.pdf
Switchgear for Luminaires	http://www.moeller.net/binary/ver_techpapers/ver955en.pdf

Standard Compliant and Functionally Safe Engineering Design with Mechanical Auxiliary Contacts	http://www.moeller.net/binary/ver_techpapers/ver956en.pdf
The Interaction of Contactors with PLCs	http://www.moeller.net/binary/ver_techpapers/ver957en.pdf
Busbar Component Adapters for modern Industrial control panels	http://www.moeller.net/binary/ver_techpapers/ver960en.pdf