



Auxiliary contact module, 4 pole, I_{th}= 16 A, 3 N/O, 1 NC, Front fixing, Spring-loaded terminals, DILMC40 - DILMC150

Part no. **DILM150-XHIC31**
 Catalog No. **278045**
 Alternate Catalog No. **XTCEXFBGC31**

Delivery program

Accessories				Auxiliary contact modules
Description				with interlocked opposing contacts
Function				for standard applications
Number of poles				4 pole
Connection technique				Spring-loaded 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		6
380 V 400 V 415 V	I _e	A		4
Contacts				
N/O = Normally open				3 N/O
N/C = Normally closed				1 NC
Mounting type				Front fixing
Contact sequence				
For use with				DILMC40... DILMC50... DILMC65... DILMC80... DILMC95... DILMC115... DILMC150...
Type				Front mounting auxiliary contact
Instructions				Interlocked opposing contacts according to IEC/EN 60947-5-1 Appendix L, inside the auxiliary contact module Auxiliary contacts used as mirror contacts according to IEC/EN 60947-4-1 Appendix F (not N/C late open)

Technical data

General				
Standards				IEC/EN 60947, VDE 0660, UL, CSA
Component lifespan				
at U _e = 230 V, AC-15, 3 A	Operations	x 10 ⁶		1.3
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
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
Weight		kg	0.055
Terminal capacities		mm ²	
Spring-loaded terminals			
Flexible with ferrule		mm ²	1 x (0.75 - 1.5) 2 x (0.75 - 1.5)
Solid or stranded		AWG	18 – 14
Standard screwdriver		mm	0.6 x 3.5

Contacts

Interlocked opposing contacts within an auxiliary contact module (to IEC 60947-5-1 Annex L)			Yes
N/C contact (not late-break contact) suitable as a mirror contact (to IEC/EN 60947-4-1 Annex F)			DILM40 - DILM170
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	500
Safe isolation to EN 61140			
between coil and auxiliary contacts		V AC	440
between the auxiliary contacts		V AC	440
Rated operational current		A	
Conventional free air thermal current, 1 pole			
at 60 °C	I _{th}	A	16
AC-15			
220 V 230 V 240 V	I _e	A	6
380 V 400 V 415 V	I _e	A	4
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 ≤ 15 ms			
Contacts in series:		A	
1	24 V	A	10
1	60 V	A	6
1	110 V	A	3
1	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) <5.3 x 10 ⁻⁸ , < one failure in 19 millions operations (at U _e = 24 V DC, U _{min} = 17 V, I _{min} = 1 mA)
Short-circuit rating without welding			
Short-circuit protection maximum fuse			
500 V		A gG/gL	16
Current heat loss at I _{th}			
AC operated		W	3.7
DC operated		W	3.7
Current heat loss per auxiliary circuit at I _e (AC-15/230 V)		CO	0.5

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			
Rated operational current for specified heat dissipation	I_n	A	4
Heat dissipation per pole, current-dependent	P_{vid}	W	0.23
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	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) / Auxiliary contact block (EC000041)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Component for low-voltage switching technology / Auxiliary switch block
(ec@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	6
Type of electric connection		Spring clamp connection
Model		Top mounting
Mounting method		Front fastening
Lamp holder		None

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

Additional product information (links)

IL03407034Z (AWA2100-2251) Auxiliary contacts	
IL03407034Z (AWA2100-2251) Auxiliary contacts	https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407034Z2020_04.pdf
Motor starters and "Special Purpose Ratings" for the North American market	http://www.eaton.eu/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_3258146.pdf
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 Cabel Capacitance of Long Control Cables on the Actuation of Contactors	http://www.moeller.net/binary/ver_techpapers/ver949en.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