



Auxiliary contact module, 3N/O+1N/C

**Part no.** DILM150-XHI31  
**Catalog No.** 277949  
**Eaton Catalog No.** XTCEXFBG31  
**EL-Nummer** 4130498  
**(Norway)**

**Delivery program**

Product range			Accessories
Accessories			Auxiliary contact modules
Description			with interlocked opposing contacts
Function			for standard applications
Number of poles			4 pole
Connection technique			Screw terminals
<b>Rated operational current</b>			
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
<b>Contacts</b>			
N/O = Normally open			3 N/O
N/C = Normally closed			1 NC
Mounting type			Front fixing
Contact sequence			
For use with			DILM40... DILM50... DILM65... DILM72... DILM80... DILM95... DILM115... DILM150... DILM170... DILMP63... DILMP80... DILMP125... DILMP160... DILMP200... DILMF40... DILMF50... DILMF65... DILMF80... DILMF95... DILMF115... DILMF150...
Type			Front mounting auxiliary contact
<b>Instructions</b>			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**

**Electrical specifications for standard auxiliary 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
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			
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
500 V	$I_e$	A	1.5
DC current			
DC L/R $\leq$ 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	$\lambda$	$<10^{-8}$ , < one failure at 100 million operations (at $U_e = 24$ V DC, $U_{min} = 17$ V, $I_{min} = 5.4$ 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	16

### 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 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 (ecl@ss8.1-27-37-13-02 [AKN342010])

Number of contacts as change-over contact		0
Number of contacts as normally open contact		3
Number of contacts as normally closed contact		1
Rated operation current I <sub>e</sub> at AC-15, 230 V	A	6
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

## Additional product information (links)

### IL03407034Z (AWA2100-2251) Auxiliary contact

IL03407034Z (AWA2100-2251) Auxiliary contact	<a href="ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407034Z2010_10.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407034Z2010_10.pdf</a>
Switchgear of Power Factor Correction Systems	<a href="http://www.moeller.net/binary/ver_techpapers/ver934en.pdf">http://www.moeller.net/binary/ver_techpapers/ver934en.pdf</a>
X-Start - Modern Switching Installations Efficiently Fitted and Wired Securely	<a href="http://www.moeller.net/binary/ver_techpapers/ver938en.pdf">http://www.moeller.net/binary/ver_techpapers/ver938en.pdf</a>
Mirror Contacts for Highly-Reliable Information Relating to Safety-Related Control Functions	<a href="http://www.moeller.net/binary/ver_techpapers/ver944en.pdf">http://www.moeller.net/binary/ver_techpapers/ver944en.pdf</a>
Effect of the Cable Capacitance of Long Control Cables on the Actuation of Contactors	<a href="http://www.moeller.net/binary/ver_techpapers/ver949en.pdf">http://www.moeller.net/binary/ver_techpapers/ver949en.pdf</a>
Motor starters and "Special Purpose Ratings" for the North American market	<a href="http://www.moeller.net/binary/ver_techpapers/ver953en.pdf">http://www.moeller.net/binary/ver_techpapers/ver953en.pdf</a>
Switchgear for Luminaires	<a href="http://www.moeller.net/binary/ver_techpapers/ver955en.pdf">http://www.moeller.net/binary/ver_techpapers/ver955en.pdf</a>
Standard Compliant and Functionally Safe Engineering Design with Mechanical Auxiliary Contacts	<a href="http://www.moeller.net/binary/ver_techpapers/ver956en.pdf">http://www.moeller.net/binary/ver_techpapers/ver956en.pdf</a>
The Interaction of Contactors with PLCs	<a href="http://www.moeller.net/binary/ver_techpapers/ver957en.pdf">http://www.moeller.net/binary/ver_techpapers/ver957en.pdf</a>

