### **DATASHEET - DILM32-XHIC22**



#### Auxiliary contact module, 2N/0+2N/C

Part no. DILM32-XHIC22
Catalog No. 277752
Eaton Catalog No. XTCEXFCCC22
EL-Nummer 0004110335
(Norway)



#### **Delivery program**

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 <sub>th</sub>	Α	16
AC-15			
220 V 230 V 240 V	l <sub>e</sub>	Α	4
380 V 400 V 415 V	l <sub>e</sub>	Α	4
Contacts			
N/0 = Normally open			2 N/O
N/C = Normally closed			2 NC
Mounting type			Front fixing
Contact sequence			121 131 143 153 
For use with			DILM(C)7-10  DILM(C)9-10  DILM(C)12-10  DILM(C)15-10  DILM(C)17-10  DILM(C)25-10  DILM(C)32-10  DILM(C)32-10  DILMP20  DILMP20  DILMP81-10  DILMP45-10  DILMF11-10  DILMF11-10  DILMF17-10  DILMF17-10  DILMF17-10  DILMF17-10  DILMF17-10  DILMF32-10
Туре			Front mounting auxiliary contact
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 DILM 7 - DILM32  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

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)			DILM7 - DILM38
Overvoltage category/pollution degree			III/3
Rated insulation voltage	$U_{i}$	V AC	690
Rated operational voltage	U <sub>e</sub>	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		Α	
Conventional free air thermal current, 1 pole			
Open			
at 60 °C	I <sub>th</sub>	Α	16
AC-15			
220 V 230 V 240 V	I <sub>e</sub>	Α	4
380 V 400 V 415 V	I <sub>e</sub>	Α	4
500 V	I <sub>e</sub>	Α	1.5
DC current			
DC L/R ≦ 15 ms			
Contacts in series:		Α	
1	24 V	Α	10
1	60 V	Α	6
1	110 V	Α	3
1	220 V	Α	1
DC-13 (6xP)			
24 V	I <sub>e</sub>	Α	2.5
60 V	Ie	Α	1
110 V	I <sub>e</sub>	Α	0.5
220 V	I <sub>e</sub>	Α	0.25
Control circuit reliability	Failure rate	λ	$<10^{-8}$ , $<$ one failure at 100 million operations (at U <sub>e</sub> = 24 V DC, U <sub>min</sub> = 17 V, I <sub>min</sub> = 5.4 mA)
			(at 0 <sub>e</sub> - 24 V DG, O <sub>min</sub> - 17 V, I <sub>min</sub> - 3.4 IIIA)
Component lifespan			(at 0 <sub>6</sub> = 24 V D0, 0 <sub>min</sub> = 17 V, 1 <sub>min</sub> = 3.4 mA)
Component lifespan at $U_e = 230 \text{ V}$ , AC-15, 3 A	Operations	x 10 <sup>6</sup>	1.3
	Operations	x 10 <sup>6</sup>	
at U <sub>e</sub> = 230 V, AC-15, 3 A  Short-circuit rating without welding max. fuse	Operations	x 10 <sup>6</sup>	1.3
at U <sub>e</sub> = 230 V, AC-15, 3 A  Short-circuit rating without welding max. fuse  Terminal capacity control circuit cables	Operations	A gG/gL	1.3
at U <sub>e</sub> = 230 V, AC-15, 3 A  Short-circuit rating without welding max. fuse  Terminal capacity control circuit cables  Solid	Operations	A gG/gL	1.3 10 1 x (0.75 - 2.5) 2 x (0.75 - 2.5)
at U <sub>e</sub> = 230 V, AC-15, 3 A  Short-circuit rating without welding max. fuse  Terminal capacity control circuit cables  Solid  Flexible with ferrule	Operations	A gG/gL  mm <sup>2</sup> mm <sup>2</sup>	1.3  10  1 x (0.75 - 2.5) 2 x (0.75 - 2.5) 1 x (0.75 - 1.5) 2 x (0.75 - 1.5)
at U <sub>e</sub> = 230 V, AC-15, 3 A  Short-circuit rating without welding max. fuse  Terminal capacity control circuit cables  Solid  Flexible with ferrule  Solid or stranded	Operations	A gG/gL	1.3 10 1 x (0.75 - 2.5) 2 x (0.75 - 2.5) 1 x (0.75 - 1.5)
at U <sub>e</sub> = 230 V, AC-15, 3 A  Short-circuit rating without welding max. fuse  Terminal capacity control circuit cables  Solid  Flexible with ferrule  Solid or stranded  Tool	Operations	A gG/gL  mm <sup>2</sup> mm <sup>2</sup>	1.3  10  1 x (0.75 - 2.5) 2 x (0.75 - 2.5) 1 x (0.75 - 1.5) 2 x (0.75 - 1.5)
at U <sub>e</sub> = 230 V, AC-15, 3 A  Short-circuit rating without welding max. fuse  Terminal capacity control circuit cables  Solid  Flexible with ferrule  Solid or stranded  Tool  Control circuit cables	Operations	A gG/gL  mm²  mm²  AWG	1.3  10  1 x (0.75 - 2.5) 2 x (0.75 - 2.5) 1 x (0.75 - 1.5) 2 x (0.75 - 1.5) 18 - 14
at U <sub>e</sub> = 230 V, AC-15, 3 A  Short-circuit rating without welding max. fuse  Terminal capacity control circuit cables  Solid  Flexible with ferrule  Solid or stranded  Tool  Control circuit cables  Standard screwdriver	Operations	A gG/gL  mm <sup>2</sup> mm <sup>2</sup>	1.3  10  1 x (0.75 - 2.5) 2 x (0.75 - 2.5) 1 x (0.75 - 1.5) 2 x (0.75 - 1.5)
at U <sub>e</sub> = 230 V, AC-15, 3 A  Short-circuit rating without welding max. fuse  Terminal capacity control circuit cables  Solid  Flexible with ferrule  Solid or stranded  Tool  Control circuit cables	Operations	A gG/gL  mm²  mm²  AWG	1.3  10  1 x (0.75 - 2.5) 2 x (0.75 - 2.5) 1 x (0.75 - 1.5) 2 x (0.75 - 1.5) 18 - 14
at U <sub>e</sub> = 230 V, AC-15, 3 A  Short-circuit rating without welding max. fuse  Terminal capacity control circuit cables  Solid  Flexible with ferrule  Solid or stranded  Tool  Control circuit cables  Standard screwdriver  Rating data for approved types	Operations	A gG/gL  mm²  mm²  AWG	1.3  10  1 x (0.75 - 2.5) 2 x (0.75 - 2.5) 1 x (0.75 - 1.5) 2 x (0.75 - 1.5) 18 - 14
at U <sub>e</sub> = 230 V, AC-15, 3 A  Short-circuit rating without welding max. fuse  Terminal capacity control circuit cables  Solid  Flexible with ferrule  Solid or stranded  Tool  Control circuit cables  Standard screwdriver  Rating data for approved types  Auxiliary contacts	Operations	A gG/gL  mm²  mm²  AWG	1.3  10  1 x (0.75 - 2.5) 2 x (0.75 - 2.5) 1 x (0.75 - 1.5) 2 x (0.75 - 1.5) 18 - 14
at U <sub>e</sub> = 230 V, AC-15, 3 A  Short-circuit rating without welding max. fuse  Terminal capacity control circuit cables  Solid  Flexible with ferrule  Solid or stranded  Tool  Control circuit cables  Standard screwdriver  Rating data for approved types  Auxiliary contacts Pilot Duty	Operations	A gG/gL  mm²  mm²  AWG	1.3  10  1 × (0.75 - 2.5) 2 × (0.75 - 2.5) 1 × (0.75 - 1.5) 2 × (0.75 - 1.5) 18 – 14  0.6 × 3.5
at U <sub>e</sub> = 230 V, AC-15, 3 A  Short-circuit rating without welding max. fuse  Terminal capacity control circuit cables  Solid  Flexible with ferrule  Solid or stranded  Tool  Control circuit cables  Standard screwdriver  Rating data for approved types  Auxiliary contacts  Pilot Duty  AC operated	Operations	A gG/gL  mm²  mm²  AWG	1.3  10  1 × (0.75 - 2.5) 2 × (0.75 - 2.5) 1 × (0.75 - 1.5) 2 × (0.75 - 1.5) 18 – 14  0.6 × 3.5
at U <sub>e</sub> = 230 V, AC-15, 3 A  Short-circuit rating without welding max. fuse  Terminal capacity control circuit cables  Solid  Flexible with ferrule  Solid or stranded  Tool  Control circuit cables  Standard screwdriver  Rating data for approved types  Auxiliary contacts  Pilot Duty  AC operated  DC operated	Operations	A gG/gL  mm²  mm²  AWG	1.3  10  1 × (0.75 - 2.5) 2 × (0.75 - 2.5) 1 × (0.75 - 1.5) 2 × (0.75 - 1.5) 18 – 14  0.6 × 3.5
at U <sub>e</sub> = 230 V, AC-15, 3 A  Short-circuit rating without welding max. fuse  Terminal capacity control circuit cables  Solid  Flexible with ferrule  Solid or stranded  Tool  Control circuit cables  Standard screwdriver  Rating data for approved types  Auxiliary contacts  Pilot Duty  AC operated  DC operated  General Use	Operations	A gG/gL  mm²  mm²  AWG	1.3  10  1 x (0.75 - 2.5) 2 x (0.75 - 2.5) 1 x (0.75 - 1.5) 2 x (0.75 - 1.5) 18 - 14  0.6 x 3.5  A600 P300
at U <sub>e</sub> = 230 V, AC-15, 3 A  Short-circuit rating without welding max. fuse  Terminal capacity control circuit cables  Solid  Flexible with ferrule  Solid or stranded  Tool  Control circuit cables  Standard screwdriver  Rating data for approved types  Auxiliary contacts  Pilot Duty  AC operated  DC operated  General Use  AC	Operations	A gG/gL  mm²  mm²  AWG  mm	1.3  10  1 x (0.75 - 2.5) 2 x (0.75 - 2.5) 1 x (0.75 - 1.5) 2 x (0.75 - 1.5) 18 - 14  0.6 x 3.5  A600 P300  600
at U <sub>e</sub> = 230 V, AC-15, 3 A  Short-circuit rating without welding max. fuse  Terminal capacity control circuit cables  Solid  Flexible with ferrule  Solid or stranded  Tool  Control circuit cables  Standard screwdriver  Rating data for approved types  Auxiliary contacts  Pilot Duty  AC operated  DC operated  General Use  AC  AC	Operations	A gG/gL  mm²  mm²  AWG  mm  V  A	1.3  10  1 × (0.75 - 2.5) 2 × (0.75 - 2.5) 1 × (0.75 - 1.5) 2 × (0.75 - 1.5) 18 – 14  0.6 × 3.5  A600  P300  600  10

## **Design verification as per IEC/EN 61439**

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	4
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0.16
Equipment heat dissipation, current-dependent	$P_{\text{vid}}$	W	0
Static heat dissipation, non-current-dependent	$P_{vs}$	W	0
Heat dissipation capacity	P <sub>diss</sub>	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 (ecl@ss10.0.1-27-37-13-02 [AKN342013])

	0
	2
	2
	0
Α	6
	Spring clamp connection
	Top mounting
	Front fastening
	None
	A

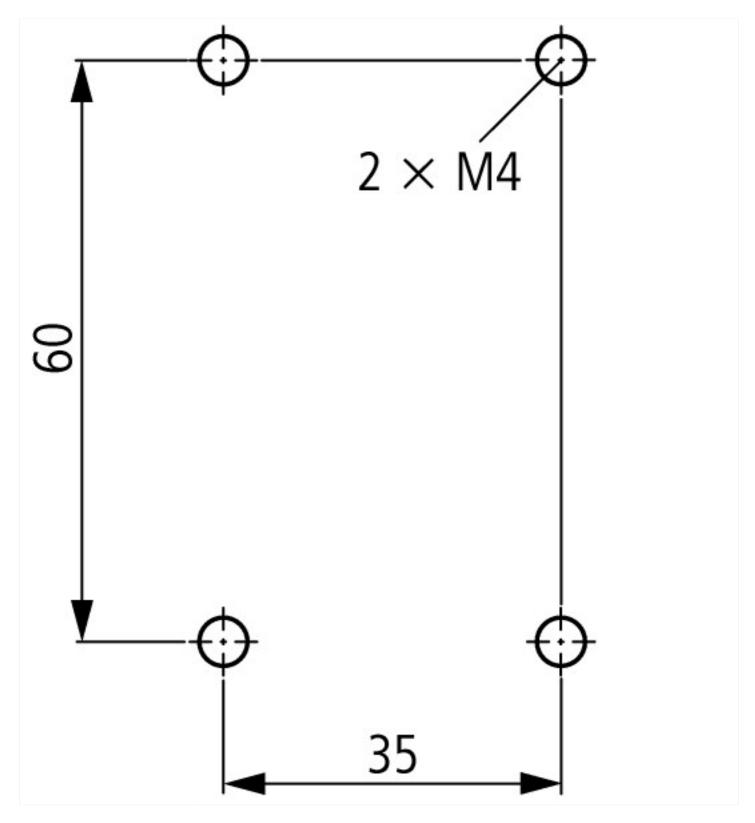
## Approvals

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

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125

10.2



# Additional product information (links)

IL03407013Z (AWA2100-2126) Contactors	
IL03407013Z (AWA2100-2126) Contactors	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407013Z2018_07.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/yer_techpapers/yer955en.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