## DATASHEET - DILM32-XHI11



Auxiliary contact module, 2 pole, lth= 16 A, 1 N/O, 1 NC, Front fixing, Screw terminals, DILM7 - DILM38



Part no.	DILM32-XHI11
Catalog No.	277376
Alternate Catalog	XTCEXFDC11
No.	
EL-Nummer	4130434
(Norway)	

## **Delivery program**

Accessories			Auxiliary contact modules
Accessories Description			Auxiliary contact modules with interlocked opposing contacts
Function			for standard applications
Number of poles			2 pole
Connection technique			Screw terminals
Rated operational current			
Conventional free air thermal current, 1 pole			
Open			
at 60 °C	I <sub>th</sub>	A	16
AC-15			
220 V 230 V 240 V	le	A	4
380 V 400 V 415 V	l <sub>e</sub>	А	4
Contacts			
N/O = Normally open			1 N/O
N/C = Normally closed			1 NC
Mounting type			Front fixing
Contact sequence			$\begin{bmatrix} 21 \\ -7 \\ -7 \\ 22 \end{bmatrix}$ 34
For use with			DILM(C)7-10 DILM(C)9-10 DILM(C)12-10 DILM(C)17-10 DILM(C)25-10 DILM(C)25-10 DILM(C)25-10 DILM782-10 DILM782-10 DILMF82-10 DILMF8-10 DILMF1-10 DILMF1-10 DILMF14-10 DILMF17-10 DILMF125-10 DILMF125-10
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**

General			
Standards			IEC/EN 60947, VDE 0660, UL, CSA
Component lifespan			
at U <sub>e</sub> = 230 V, AC-15, 3 A	Operations	x 10 <sup>6</sup>	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	0.038
Terminal capacities		mm <sup>2</sup>	
Screw terminals			
Solid		mm <sup>2</sup>	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)
Flexible with ferrule		mm <sup>2</sup>	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)
Solid or stranded		AWG	18 – 14
Pozidriv screwdriver		Size	2
Standard screwdriver		mm	0.8 x 5.5 1 x 6
Max. tightening torque Contacts		Nm	1.2
Interlocked opposing contacts within an auxiliary contact module (to IEC 60947-5 Annex L)	-1		Yes
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 <sub>imp</sub>	V AC	6000
Overvoltage category/pollution degree			111/3
Overvoltage category/pollution degree Rated insulation voltage	Ui	V AC	III/3 690
	U <sub>i</sub> U <sub>e</sub>	V AC V AC	
Rated insulation voltage			690
Rated insulation voltage Rated operational voltage			690
Rated insulation voltage Rated operational voltage Safe isolation to EN 61140		V AC	690 500
Rated insulation voltage Rated operational voltage Safe isolation to EN 61140 between coil and auxiliary contacts		V AC	690 500 400
Rated insulation voltage Rated operational voltage Safe isolation to EN 61140 between coil and auxiliary contacts between the auxiliary contacts		V AC V AC V AC	690 500 400
Rated insulation voltage Rated operational voltage Safe isolation to EN 61140 between coil and auxiliary contacts between the auxiliary contacts Rated operational current		V AC V AC V AC	690 500 400
Rated insulation voltage Rated operational voltage Safe isolation to EN 61140 between coil and auxiliary contacts between the auxiliary contacts Rated operational current Conventional free air thermal current, 1 pole	Ue	V AC V AC V AC A	690 500 400
Rated insulation voltage Rated operational voltage Safe isolation to EN 61140 between coil and auxiliary contacts between the auxiliary contacts Rated operational current Conventional free air thermal current, 1 pole at 60 °C	Ue	V AC V AC V AC A	690 500 400
Rated insulation voltage         Rated operational voltage         Safe isolation to EN 61140         between coil and auxiliary contacts         between the auxiliary contacts         Rated operational current         Conventional free air thermal current, 1 pole         at 60 °C         AC-15	U <sub>e</sub>	V AC V AC V AC A	690 500 400 400
Rated insulation voltageRated operational voltageSafe isolation to EN 61140between coil and auxiliary contactsbetween the auxiliary contactsRated operational currentConventional free air thermal current, 1 poleat 60 °CAC-15220 V 230 V 240 V	Ue I I I t t I e I e	V AC V AC V AC A	690 500 400 400 16 4
Rated insulation voltageRated operational voltageSafe isolation to EN 61140between coil and auxiliary contactsbetween the auxiliary contactsRated operational currentConventional free air thermal current, 1 poleat 60 °CAC-15220 V 230 V 240 V380 V 400 V 415 V500 V	Ue Ith Ie	V AC V AC A A A A	690         500         400         400         10         400         4         4         4         4         4
Rated insulation voltageRated operational voltageSafe isolation to EN 61140between coil and auxiliary contactsbetween the auxiliary contactsRated operational currentConventional free air thermal current, 1 poleat 60 °CAC-15220 V 230 V 240 V380 V 400 V 415 V	Ue I I I t t I e I e	V AC V AC A A A A	690         500         400         400         10         16         4         4         15
Rated insulation voltage         Rated operational voltage         Safe isolation to EN 61140         between coil and auxiliary contacts         between the auxiliary contacts         Rated operational current         Conventional free air thermal current, 1 pole         at 60 °C         AC-15         220 V 230 V 240 V         380 V 400 V 415 V         500 V         DC current	Ue I I I t t I e I e	V AC V AC A A A A	690         500         400         400         10         400         4         4         4         4         4
Rated insulation voltage         Rated operational voltage         Safe isolation to EN 61140         between coil and auxiliary contacts         between the auxiliary contacts         Rated operational current         Conventional free air thermal current, 1 pole         at 60 °C         AC-15         220 V 230 V 240 V         380 V 400 V 415 V         500 V         DC current	Ue I I I t t I e I e	V AC V AC A A A A A	690         500         400         400         10         16         4         4         15
Rated insulation voltage         Rated operational voltage         Safe isolation to EN 61140         between coil and auxiliary contacts         between the auxiliary contacts         Rated operational current         Conventional free air thermal current, 1 pole         at 60 °C         AC-15         220 V 230 V 240 V         380 V 400 V 415 V         500 V         DC current         DC current         Contacts in series:	Ue I I I I I I I I I I I I I I I I I I I	V AC V AC A A A A A A A	690         500         400         400         16         4         4         15         Switch-on and switch-off conditions based on DC-13, time constant as specified.
Rated insulation voltage         Rated operational voltage         Safe isolation to EN 61140         between coil and auxiliary contacts         between the auxiliary contacts         Rated operational current         Conventional free air thermal current, 1 pole         at 60 °C         AC-15         220 V 230 V 240 V         380 V 400 V 415 V         500 V         DC current         DC L/R ≦ 15 ms         Contacts in series:         1	Ue I I I th I e I e I e I e I e I e I e I e I e I	V AC V AC A A A A A A A A A	690         500         400         400         10         4         16         4         15         5         15         5         5         5         5         5         5         5         10
Rated insulation voltage         Rated operational voltage         Safe isolation to EN 61140         between coil and auxiliary contacts         between the auxiliary contacts         Rated operational current         Conventional free air thermal current, 1 pole         at 60 °C         AC-15         220 V 230 V 240 V         380 V 400 V 415 V         500 V         DC current         DC current         1         1         1	U <sub>e</sub> U <sub>th</sub> I <sub>e</sub> I <sub>e</sub> I <sub>e</sub> 24 V 60 V	V AC V AC A A A A A A A A A A A A	690 500 400 400 16 4 4 4 4 5 5 5 5 5 5 10 6
Rated insulation voltage         Rated operational voltage         Safe isolation to EN 61140         between coil and auxiliary contacts         between the auxiliary contacts         Rated operational current         Conventional free air thermal current, 1 pole         at 60 °C         AC-15         220 V 230 V 240 V         380 V 400 V 415 V         500 V         DC current         DC L/R ≦ 15 ms         Contacts in series:         1	Ue I I I th I e I e I e I e I e I e I e I e I e I	V AC V AC A A A A A A A A A	690         500         400         400         10         4         16         4         15         5         15         5         5         5         5         5         5         5         10
Rated insulation voltage         Rated operational voltage         Safe isolation to EN 61140         between coil and auxiliary contacts         between the auxiliary contacts         Rated operational current         Conventional free air thermal current, 1 pole         at 60 °C         AC-15         220 V 230 V 240 V         380 V 400 V 415 V         500 V         DC current         DC current         1          1          1          1          1	Ue Ith Ie Ie Ie Z4 V 60 V 110 V	V AC V AC A A A A A A A A A A A A A	690         500         400         400         10         4         5         Switch-on and switch-off conditions based on DC-13, time constant as specified.         10         6         3
Rated insulation voltage         Rated operational voltage         Safe isolation to EN 61140         between coil and auxiliary contacts         between the auxiliary contacts         Rated operational current         Conventional free air thermal current, 1 pole         at 60 °C         AC-15         220 V 230 V 240 V         380 V 400 V 415 V         500 V         DC current         Interview         1          1          1          1          1          1          1 </td <td>Ue Ue Inth Ie Ie Ie Ie Ie Ie Ie Ie Inth Inth Inth Inth Inth Inth Inth Inth</td> <td>V AC V AC A A A A A A A A A A A A A A</td> <td>690         500         400         400         10         4         5         Switch-on and switch-off conditions based on DC-13, time constant as specified.         10         6         3</td>	Ue Ue Inth Ie Ie Ie Ie Ie Ie Ie Ie Inth Inth Inth Inth Inth Inth Inth Inth	V AC V AC A A A A A A A A A A A A A A	690         500         400         400         10         4         5         Switch-on and switch-off conditions based on DC-13, time constant as specified.         10         6         3
Rated insulation voltage         Rated operational voltage         Safe isolation to EN 61140         between coil and auxiliary contacts         between the auxiliary contacts         Rated operational current         Conventional free air thermal current, 1 pole         at 60 °C         AC-15         220 V 230 V 240 V         380 V 400 V 415 V         500 V         DC L/R ≤ 15 ms         Contacts in series:         1         1         1         2         1         2         380 V 400 V         500 V         DC L/R ≤ 15 ms         Contacts in series:         1         2       1         1       1         2       1         2       1         3       1         1       1         1       1         2       1         1       1         1       1         1       1         1       1         2       1         1       1         2       2	Ue Ue Int Int Int Int Int Int Int Int Int Int	V AC V AC A A A A A A A A A A A A A A A A A A	690         500         400         400         400         10         4         1.5         Switch-on and switch-off conditions based on DC-13, time constant as specified.         10         6         3         1         2.5
Rated insulation voltage         Rated operational voltage         Safe isolation to EN 61140         between coil and auxiliary contacts         between the auxiliary contacts         Rated operational current         Conventional free air thermal current, 1 pole         at 60 °C         AC-15         220 V 230 V 240 V         380 V 400 V 415 V         500 V         DC current         DC L/R ≦ 15 ms         Contacts in series:         1         1         1         20 DC 13 (6xP)         24 V         60 V	Ue Ue Inthe	V AC V AC A A A A A A A A A A A A A A A A A A	690         500         400         400         100         16         17         18         19         19         10         10         10         10         10         11         12         13         14         15         16         17         18         19         10         10         11         12         13         14         15         10         10         11         12         13         14         15         16         17         18         19         10         10         10         10         10         11         12         13         14         15         16         17         18
Rated insulation voltage         Rated operational voltage         Safe isolation to EN 61140         between coil and auxiliary contacts         between the auxiliary contacts         Rated operational current         Conventional free air thermal current, 1 pole         at 60 °C         AC-15         220 V 230 V 240 V         380 V 400 V 415 V         500 V         DC L/R ≤ 15 ms         Contacts in series:         1         1         1         2         1         2         380 V 400 V         500 V         DC L/R ≤ 15 ms         Contacts in series:         1         2       1         1       1         2       1         2       1         3       1         1       1         1       1         2       1         1       1         1       1         1       1         1       1         2       1         1       1         2       2	Ue Ue Int Ith Ie Ie Ie Ie Ie Ie Ie Ie Ie Ie Ie Ie Int Int Ie Ie Ie Ie Ie Ie Ie Ie Ie Ie Ie Ie Ie	V AC V AC A A A A A A A A A A A A A A A A A A	690         500         400         400         400         10         5         10         6         3         1         10         6         3         1         2.5

Control circuit reliability	Failure rate	λ	<10 <sup>-8</sup> , < 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)
Short-circuit rating without welding			
Short-circuit protection maximum fuse			
500 V		A gG/gL	10
Current heat loss at I <sub>th</sub>			
AC operated		W	2.6
DC operated		W	2.6
Current heat loss per auxiliary circuit at $\rm I_{e}$ (AC-15/230 V)		CO	0.16
Rating data for approved types			
Auxiliary contacts			
Pilot Duty			
AC operated			A600
DC operated			P300
General Use			
AC		V	600
AC		А	10
DC		V	250
DC		А	1

# Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I <sub>n</sub>	А	4
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0.16
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	0
Static heat dissipation, non-current-dependent	P <sub>vs</sub>	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.

The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

#### **Technical data ETIM 7.0**

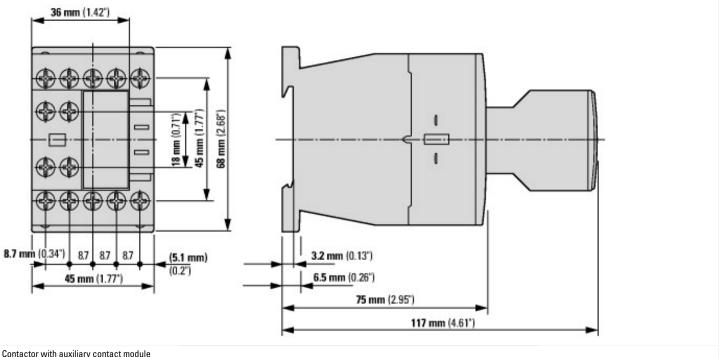
Low-voltage industrial components (EG000017) / Auxiliary contact block (EC000041)

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])			
Number of contacts as change-over contact			0
Number of contacts as normally open contact			1
Number of contacts as normally closed contact			1
Number of fault-signal switches			0
Rated operation current le at AC-15, 230 V		А	6
Type of electric connection			Screw connection
Model			Top mounting
Mounting method			Front fastening
Lamp holder			None

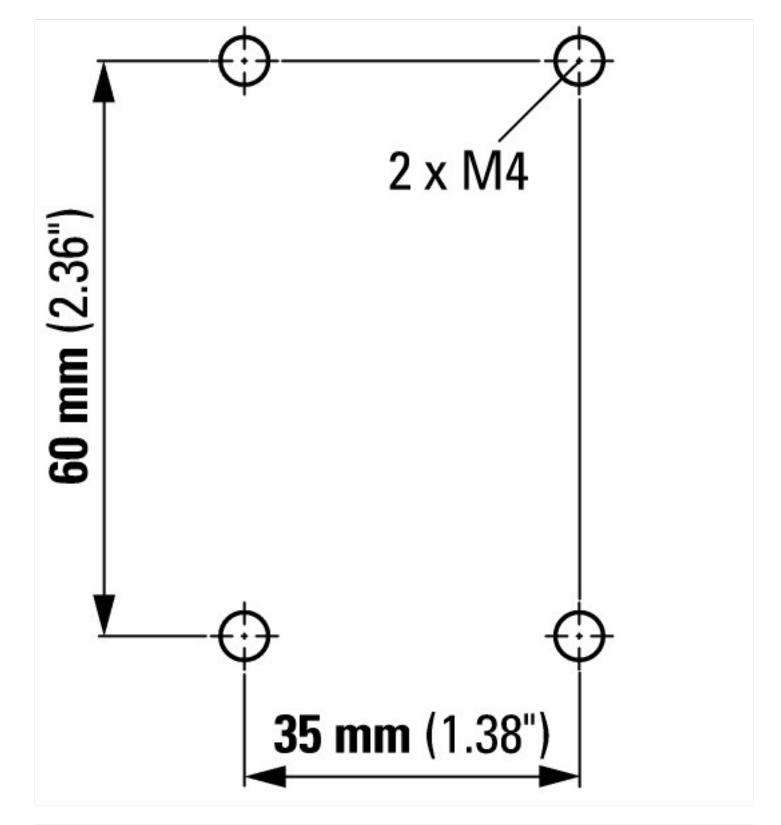
#### **Approvals**

Approvais	
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**



Contactor with auxiliary contact module



## Additional product information (links)

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