### DATASHEET - DILM32-XHI31



Auxiliary contact module, 4 pole, lth= 16 A, 3 N/O, 1 NC, Front fixing, Screw terminals, DILM7 - DILM38



Part no.	DILM32-XHI31
Catalog No.	106112
Alternate Catalog	XTCEXFCC31
No.	
EL-Nummer	4110193
(Norway)	

#### **Delivery program**

Accessories			Auxiliary contact modules
Description			with interlocked opposing contacts
Function			for standard 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 <sub>th</sub>	А	16
AC-15			
220 V 230 V 240 V	l <sub>e</sub>	А	4
380 V 400 V 415 V	l <sub>e</sub>	А	4
Contacts			
N/O = Normally open			3 N/O
N/C = Normally closed			1 NC
Mounting type			Front fixing
Contact sequence			$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
For use with			DILM(C)7-10 DILM(C)9-10 DILM(C)12-10 DILM(C)15-10 DILM(C)25-10 DILM(C)25-10 DILM(C)25-10 DILM(F)2-10 DILMP32-10 DILMP32-10 DILMP45-10 DILMF3-10 DILMF1-10 DILMF1-10 DILMF1-10 DILMF17-10 DILMF12-10 DILMF12-10
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			

Inclosed PC 25-40   Ambient temperature, storage PC 40-80   Mechanical shock resistance (IEC/EN 60008-2-27) PC PC   Ital-sinusidal shock, 10 ms PC PC   Basic unit with auxiliary contact module PC PC   NO contact PC PC   NO contact PC PC   NO contact PC PC   Protection PC PC   Protection segainst direct contact when actuated from front (EN 50274) PC   Protection segainst direct contact when actuated from front (EN 50274) PC   Solid PC PC   Solid contact PC PC   Solid contact PC PC   Solid contare due to from front (EN 50274) PC PC   Solid contare due to from front (EN 50274) PC PC   Solid contare due to from front (EN 50274) PC PC   Solid contare due to from front (EN 50274) PC PC   Solid contare due to from from from from from from from fro	Open		°C	-25 - +60
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Note of the sector of the s	N/O contact		g	7
Network<			g	5
NumberNumberNumberNumberNumberImport NumberNumberNumberNumberImport NumberNumberNumber </td <td>Degree of Protection</td> <td></td> <td></td> <td>IP20</td>	Degree of Protection			IP20
العامة     العام	Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof
Sover termination     Note of the source of the s	Weight		kg	0.048
Selic	Terminal capacities		mm <sup>2</sup>	
Review of the ruleReview of the ruleRevie	Screw terminals			
Paulie with rune     Paule	Solid		mm <sup>2</sup>	
Solid of andSolid of andSolid of andSolid of andSolid of activationSolid of andSolid of andSolid of andSolid of activationSolid of activationSolid of andSolid of andMax injurned to activationSolid of andSolid of andSolid of andSolid of activationSolid of andSolid of andSolid of andSolid of activationSolid of andSolid of andSolid of andSolid of and solid of and solid of and solid of andSolid of andSolid of andSolid of and solid of an	Flexible with ferrule		2	
Pacifivi servettiver     Size     Size<			mm	
Sandra GrowingImage of the second	Solid or stranded		AWG	18 - 14
Maximpone10Maximpone10Context </td <td>Pozidriv screwdriver</td> <td></td> <td>Size</td> <td>2</td>	Pozidriv screwdriver		Size	2
Contracts     Second S	Standard screwdriver		mm	
Contracts     Second S	Max. tightening torque		Nm	1.2
Annex 1     Annex 3     Annex 4     Annex 4 <t< td=""><td>Contacts</td><td></td><td></td><td></td></t<>	Contacts			
data functionUnionUnionUnionRand involution outsigeUnionModeModeRead involution outsigeVAModeModeRead involution outsigeVAModeModeRead involution outsigeVAModeModeRead involution outsigeVAModeModeRead involution outsigeVAModeModeRead outside	Interlocked opposing contacts within an auxiliary contact module (to IEC 60947-5- Annex L)	I		Yes
Networkspace category/polition degree     IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	N/C contact (not late-break contact) suitable as a mirror contact (to IEC/EN 60947-4-1 Annex F)			DILM7 - DILM38
Rated insultation voltageVi, iVi, iVi, iVi, iRated operational voltageUVi, iSolSale isolation to EN 61140Vi, iVi, iSolbetween oil and auxiliary contactsVi, iVi, iSolbetween oil and auxiliary contactsVi, iVi, iSolbetween oil and auxiliary contactsVi, iVi, iSolconventional free air themal current, 1 poleVi, iSolSolaction of Conventional free air themal current, 1 poleVi, iSolSolAct 15Vi, iVi, iSolSolAct 15Vi, iVi, iSolSolAct 15Vi, iVi, iSolSolAct 16Vi, iVi, iSolSolAct 17Vi, iVi, iSolSolBot 200 V Ato	Rated impulse withstand voltage	U <sub>imp</sub>	V AC	6000
Alter operation when the subserve of an auxiliary contactsUpper det auxiliary contactsVACSecond subserve operation subserv	Overvoltage category/pollution degree			III/3
Alter operation when the subserve of an auxiliary contactsUpper det auxiliary contactsVACSecond subserve operation subserv	Rated insulation voltage	Ui	V AC	690
Selection LPG FieldImage: selection of the select	-		V AC	500
bareauKeyKeyAuAubetwee tha uxiliary contactsKeyAuAuconventional tree air themal current, 1 poleKeyAuAuatB0°CKeyAuAuAuabor 200 200 V240 V15 VKeyAuAuAuabor 400 V15 VKeyAuAuAuabor 400 V15 VKeyAuAuAubor 400 V15 VKey<		- 6		
between the auxiliary contextsVACVACRetact operational current.NAa tio °CNAa tio °			VAC	400
Attach operational current, 1 pole     Attach     Attach       a for 0 °     I     I     I       A Ch 15     I     I     I       220 V 200 V 200 V 200 V 200 V 200 V     I     I     I     I       300 V 000 V 15 V     I     <				
Orvertional free air thema current, 1 poleImage: Normer and Section 1a do "CHaA $A C I S$ Image: Normer and Section 2 $20 V 230 V 240 V$ Image: Normer and Section 2 $20 V 230 V 240 V$ Image: Normer and Section 2 $300 V 405 V$ Image: Normer and Section 2 $300 V 405 V$ Image: Normer and Section 2 $500 V$ Image: Normer and Section 2 $D C urrentImage: Normer and Section 2D C L R S I S Section 2Image: Normer and Section 2D C L R S I S Section 2Image: Normer and Section 2D C L R S I S Section 2Image: Normer and Section 2I 1 C S C S Section 2Image: Normer and Section 21 1 C S C S Section 2Image: Normer and Section 21 1 C S C S Section 2Image: Normer and Section 21 1 C S Section 2Image: Normer and Section 21 1 C S Section 2Image: Normer and Section 21 1 C S Section 2Image: Normer and Section 21 1 C S Section 2Image: Normer and Section 21 1 C S Section 2Image: Normer and Section 21 1 C S S Section 2Image: Normer and Section 21 1 C S Section 2Image: Normer and Section 21 1 C S Section 2Image: Normer and Section 21 1 C S Section 2Image: Normer and Section 21 1 C S Section 2Image: Normer and Section 21 1 C S Section 2Image: Normer and Section 21 1 C S Section 2Image: Normer and Section 21 1 C S Section 2Image: Normer and Section 21 1 C S Section 2$				400
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380 V400 V415V     Ie     A     A       500 V     Ie     A     500 V       DC urrent     Ie     A     500 V       DC urrent     Ie     A     500 V       DC URE 15 ms     Ie     Multi-on and switch-off conditions based on DC-13, time constant as specified.       Contacts in series:     Ie     A     Switch-on and switch-off conditions based on DC-13, time constant as specified.       1     Contacts in series:     Ie     A     Switch-on and switch-off conditions based on DC-13, time constant as specified.       1     Contacts in series:     Ie     A     Switch-on and switch-off conditions based on DC-13, time constant as specified.       1     1     A     A     Switch-on and switch-off conditions based on DC-13, time constant as specified.       1     1     A     A     Switch-on and switch-off conditions based on DC-13, time constant as specified.       1     1     Ie     A     A       2     A     Ie     A       1     Ie     A     Ie       1     Ie     A     Ie       1     Ie	AC-15			
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DC current     Image: Participant of the section of the sect	380 V 400 V 415 V	le	А	4
Image: Problem series Image: Problem series Image: Problem series   1 24V A   1 24V A   1 24V A   1 10V A   1 24V A   24V A 3   24V A A   60V A A   10V A A   220V A A   220V A A   Control treliability A A	500 V	l <sub>e</sub>	А	1.5
DC L/R ≤ 15 msImage: series serie	DC current			
DC L/R ≤ 15 msImage: series serie				Switch-on and switch-off conditions based on DC-13, time constant as specified.
Contacts in series:AA124 VA0160 VA6110 VA3120 VA1DC-13 (6XP)24 VIA560 VIA110 VIA520 VIA520 VIA520 VIA520 VIA5Control circuit reliabilityIAAAAA5AAA5AAA5AAA5AAA5AA<	DC L/R ≦ 15 ms			· · ·
124VA9160VA6110VA3120VA1DC-13 (6xP)24VAA560VAA1110VAA5220VAA5220VAAA220VAAAAAAAAA200VAAA<			A	
1   60V   A   6     1   10V   A   5     1   20V   A   1     DC-13 (6XP)   -   -   -     24 V   I   A   5     60 V   I   A   1     10 V   I   A   5     24 V   I   A   5     10 V   I   A   5     20 V   I   A   9     Control cristified Biblity   Faiture at M   A   9		24 V		10
1     10 V     A     A       1     20 V     A     1       DC-13 (6xP)     -     -     -       24 V     I     A     5       60 V     I     A     1       100 V     I     A     1       24 V     I     A     5       100 V     I     A     1       20 V     I     A     5       20 V     I     A     05       Control crout reliability     Faiture at     A     10*				
1 20 V A   DC-13 (6XP) A A   24 V Ie A 5   60 V Ie A 10   110 V Ie A 5   220 V Ie A 50   20 V Ie A 5   20 V Ie A 5   20 V Ie A 50   20 V Ie A 5   20 V Ie A 5   20 V Ie A 50				
DC-13 (6xP)Image: Constraint of the second seco				
24 VIeA5.560 VIeA1.6110 VIeA5.5220 VIeA0.5Control Circuit reliabilityFaluer areaAA		220 V	~	
Formula Formula   60 V Ie A   110 V Ie A   220 V Ie A   Control circuit reliability Failure rate   A Internet   A A   A A   A B   A B			٨	25
110 VIeA0.5220 VIeA0.25Control circuit reliabilityFailure rateλ $10^{-8}$ , < one failure at 100 million operations (at Ue = 24 V DC, Umin = 17 V, Imin = 5.4 mA)				
220 VIeA0.25Control circuit reliabilityFailure rateλ $10^{-8}$ , < one failure at 100 million operations (at Ue = 24 V DC, Umin = 17 V, Imin = 5.4 mA)	60 V	l <sub>e</sub>	А	1
Control circuit reliabilityFailure rateλ<10°8, < one failure at 100 million operations (at Ue = 24 V DC, Umin = 17 V, Imin = 5.4 mA)	110 V	le	А	0.5
(at $U_e = 24 \text{ V DC}$ , $U_{min} = 17 \text{ V}$ , $I_{min} = 5.4 \text{ mA}$ )	220 V	le	А	0.25
	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 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)	C0	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	In	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.
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

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

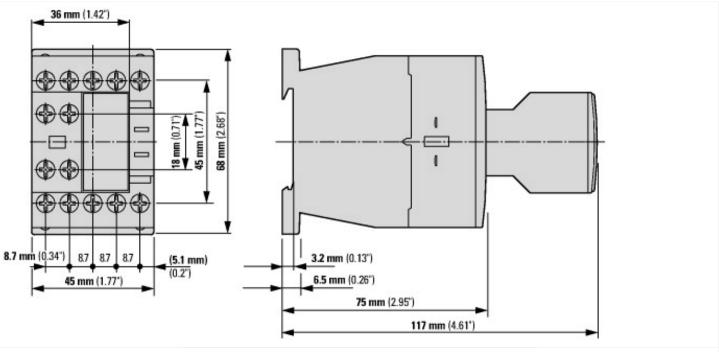
Low-voltage industrial components (EG000017) / Auxiliary contact block (EC0000	41)
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Electric engineering, automation, process control engineering / Low-voltage switch technology / Component for low-voltage switching technology / Auxiliary switch block (ecl@ss10.0.1-27-37-13-02 [AKN342013])			
Number of contacts as change-over contact			0
Number of contacts as normally open contact			3
Number of contacts as normally closed contact			1
Number of fault-signal switches			0
Rated operation current le at AC-15, 230 V		Α	6
Type of electric connection			Screw 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

#### **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