



**Auxiliary contact module, 4 pole, I<sub>th</sub>= 16 A, 3 N/O, 1 NC, Front fixing, Screw terminals, DILM7 - DILM38**

**Part no. DILM32-XHI31**  
**Catalog No. 106112**  
**Alternate Catalog No. XTCEXFCC31**  
**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   |
| <b>Rated operational current</b>              |                 |   |  |   |
| 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                             | I <sub>e</sub>  | A |  | 4   |
| 380 V 400 V 415 V                             | I <sub>e</sub>  | 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                                  |                 |   |  | DILM(C)7-10...<br>DILM(C)9-10...<br>DILM(C)12-10...<br>DILM(C)15-10...<br>DILM(C)17-10...<br>DILM(C)25-10...<br>DILM(C)32-10...<br>DILM38-10...<br>DILMP20...<br>DILMP32-10...<br>DILMP45-10...<br>DILL...<br>DILMF8-10...<br>DILMF11-10...<br>DILMF14-10...<br>DILMF17-10...<br>DILMF25-10...<br>DILMF32-10... |
| Type  |                 |   |  | 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<br>Auxiliary contacts used as mirror contacts according to IEC/EN 60947-4-1 Appendix F (not N/C late open)                      |

**Technical data**

|                                       |            |                   |  |  |
|---------------------------------------|------------|-------------------|--|--|
| <b>General</b>                        |            |                   |  |  |
| 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<br>Damp heat, cyclic, to IEC 60068-2-30 |
| Ambient temperature                   |            |                   |  |  |

|   |  |                 |                                      |
|---|--|-----------------|--------------------------------------|
| Open  |  | °C              | -25 - +60                            |
| Enclosed  |  | °C              | - 25 - 40                            |
| Ambient temperature, storage  |  | °C              | - 40 - 80                            |
| <b>Mechanical shock resistance (IEC/EN 60068-2-27)</b>                |  |                 |                                      |
| Half-sinusoidal shock, 10 ms  |  |                 |                                      |
| Basic unit with auxiliary contact module                              |  | g               |                                      |
| N/O contact   |  | g               | 7                                    |
| N/C contact   |  | g               | 5                                    |
| <b>Degree of Protection</b>   |  |                 |                                      |
| Protection against direct contact when actuated from front (EN 50274) |  |                 | Finger and back-of-hand proof        |
| <b>Weight</b>   |  |                 |                                      |
|   |  | kg              | 0.048                                |
| <b>Terminal capacities</b>  |  |                 |                                      |
| Screw terminals   |  | mm <sup>2</sup> |                                      |
| Solid   |  | mm <sup>2</sup> | 1 x (0.75 - 2.5)<br>2 x (0.75 - 2.5) |
| Flexible with ferrule   |  | mm <sup>2</sup> | 1 x (0.75 - 2.5)<br>2 x (0.75 - 2.5) |
| Solid or stranded   |  | AWG             | 18 – 14                              |
| Pozidriv screwdriver  |  | Size            | 2                                    |
| Standard screwdriver  |  | mm              | 0.8 x 5.5<br>1 x 6                   |
| Max. tightening torque  |  | Nm              | 1.2                                  |

## 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   |
| Rated impulse withstand voltage   | U <sub>imp</sub> | V AC | 6000   |
| Overvoltage category/pollution degree   |                  |      | III/3  |
| Rated insulation voltage  | U <sub>i</sub>   | V AC | 690  |
| Rated operational voltage   | U <sub>e</sub>   | V AC | 500  |
| <b>Safe isolation to EN 61140</b>   |                  |      |  |
| between coil and auxiliary contacts   |                  | V AC | 400  |
| between the auxiliary contacts  |                  | V AC | 400  |
| Rated operational current   |                  |      | A  |
| Conventional free air thermal current, 1 pole   |                  |      |  |
| at 60 °C  | I <sub>th</sub>  | A    | 16   |
| <b>AC-15</b>  |                  |      |  |
| 220 V 230 V 240 V   | I <sub>e</sub>   | A    | 4  |
| 380 V 400 V 415 V   | I <sub>e</sub>   | A    | 4  |
| 500 V   | I <sub>e</sub>   | A    | 1.5  |
| DC current  |                  |      |  |
|   |                  |      | Switch-on and switch-off conditions based on DC-13, time constant as specified.  |
| <b>DC L/R ≤ 15 ms</b>   |                  |      |  |
| Contacts in series:   |                  | A    |  |
| 1   | 24 V             | A    | 10   |
| 1   | 60 V             | A    | 6  |
| 1   | 110 V            | A    | 3  |
| 1   | 220 V            | A    | 1  |
| <b>DC-13 (6xP)</b>  |                  |      |  |
| 24 V  | I <sub>e</sub>   | A    | 2.5  |
| 60 V  | I <sub>e</sub>   | A    | 1  |
| 110 V   | I <sub>e</sub>   | A    | 0.5  |
| 220 V   | I <sub>e</sub>   | A    | 0.25   |
| Control circuit reliability   | Failure rate     | λ    | <10 <sup>-8</sup> , < one failure at 100 million operations<br>(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 $I_{th}$                                  |  |         |      |
| AC operated  |  | W       | 2.6  |
| DC operated  |  | W       | 2.6  |
| Current heat loss per auxiliary circuit at $I_e$ (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                 |  | A | 10   |
| 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  | 0.16   |
| 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

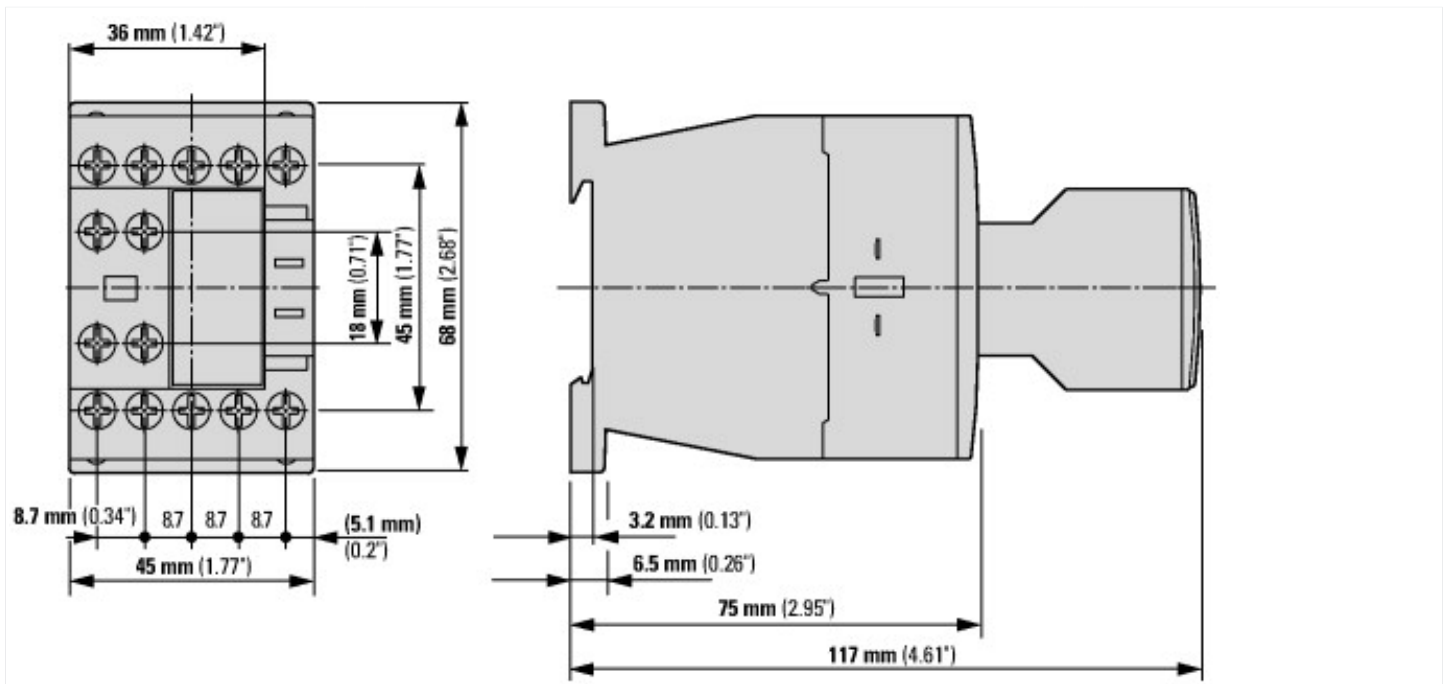
Electric engineering, automation, process control engineering / Low-voltage switch technology / Component for low-voltage switching technology / Auxiliary switch block (ec1@ss10.0.1-27-37-13-02 [AKN342013])

|   |   |                  |
|---|---|------------------|
| 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 Ie at AC-15, 230 V    | A | 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                     | <a href="http://www.eaton.eu/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_3258146.pdf">http://www.eaton.eu/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_3258146.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>   |
| 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>   |
| Busbar Component Adapters for modern Industrial control panels                                 | <a href="http://www.moeller.net/binary/ver_techpapers/ver960en.pdf">http://www.moeller.net/binary/ver_techpapers/ver960en.pdf</a>   |

