



**Auxiliary contact module, Type: Front mounting auxiliary contact, 4 pole, I<sub>th</sub>= 16 A, 3 N/O, 1 NC, Front fixing, Screw terminals**



**Part no. DILM150-XHI31**  
**Catalog No. 277949**  
**Alternate Catalog No. XTCEXFBG31**  
**EL-Nummer 4130498**  
**(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 |  | 6   |
| 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                                  |                 |   |  | DILM40...<br>DILM50...<br>DILM65...<br>DILM72...<br>DILM80...<br>DILM95...<br>DILM115...<br>DILM150...<br>DILM170...<br>DILMP63...<br>DILMP80...<br>DILMP125...<br>DILMP160...<br>DILMP200...<br>DILMF40...<br>DILMF50...<br>DILMF65...<br>DILMF80...<br>DILMF95...<br>DILMF115...<br>DILMF150... |
| Type  |                 |   |  | Front mounting auxiliary contact  |
| Instructions                                  |                 |   |  | Interlocked opposing contacts according to IEC/EN 60947-5-1 Appendix L, inside the auxiliary contact module<br>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 <sub>i</sub> | 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<br>(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 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])

|  |   |                  |
|--|---|------------------|
| 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 I <sub>e</sub> 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  |

## Assets (links)

### Declaration of CE Conformity

00003252

### Instruction Leaflets

IL03407034Z2018\_05

## Additional product information (links)

|  |   |
|--|---|
| <b>IL03407034Z (AWA2100-2251) Auxiliary contact</b>                            |   |
| IL03407034Z (AWA2100-2251) Auxiliary contact                                   | <a href="ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407034Z2018_05.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407034Z2018_05.pdf</a>   |
| 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 Cabel 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> |