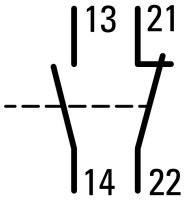
# DATASHEET - DILM150-XHI11

**Auxiliary contact module, 2 pole, Ith= 16 A, 1 N/O, 1 NC, Front fixing, Screw terminals, DILM40 - DILM170**

| | |
|---|---|
| **Part no.** | **DILM150-XHI11** |
| **Catalog No.** | **277946** |
| **Alternate Catalog No.** | **XTCEXFBG11** |
| **EL-Nummer (Norway)** | **4130493** |

## Delivery program

| | | | |
|---|---|---|---|
| Accessories | | | Auxiliary contact modules |
| Description | | | 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 | $I_{th}$ | A | 16 |
| AC-15 | | | |
| 220 V 230 V 240 V | $I_e$ | A | 6 |
| 380 V 400 V 415 V | $I_e$ | A | 4 |
| **Contacts** | | | |
| N/O = Normally open | | | 1 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

### General

| | | | |
|---|---|---|---|
| Standards | | | IEC/EN 60947, VDE 0660, UL, CSA |
| Component lifespan | | | |

| | | | |
|---|---|---|---|
| at $U_e$ = 230 V, AC-15, 3 A | Operations | x $10^6$ | 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 |
| 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 | 0.03 |
| Terminal capacities | | $mm^2$ | |
| Screw terminals | | | |
| Solid | | $mm^2$ | 1 x (0.75 - 2.5)<br>2 x (0.75 - 2.5) |
| Flexible with ferrule | | $mm^2$ | 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) | | | DILM40 - DILM170 |
| Rated impulse withstand voltage | $U_{imp}$ | V AC | 6000 |
| Overvoltage category/pollution degree | | | III/3 |
| Rated insulation voltage | $U_i$ | 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 | | | |
| 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 | | | |
| | | | Switch-on and switch-off conditions based on DC-13, time constant as specified. |
| DC L/R ≦ 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 | λ | $<10^{-8}$, < one failure at 100 million operations<br>(at $U_e$ = 24 V DC, $U_{min}$ = 17 V, $I_{min}$ = 5.4 mA) |
| Short-circuit rating without welding | | | |
| Short-circuit protection maximum fuse | | | |

| | | | |
|---|---|---|---|
| 500 V | | A gG/gL | 16 |
| Current heat loss at $I_{th}$ | | | |
| AC operated | | W | 3.7 |
| DC operated | | W | 3.7 |
| Current heat loss per auxiliary circuit at $I_e$ (AC-15/230 V) | | CO | 0.5 |

### 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 8.0

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 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 |

## 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 |