

Auxiliary contact module, 4 pole, I_{th}= 16 A, 3 N/O, 1 NC, Front fixing, Push in terminals, DILA, DILM7 - DILM38



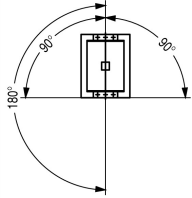
Part no. DILA-XHI31-PI
Catalog No. 199318
Alternate Catalog No. XTREXFABPI31

Delivery program

| | | | | |
|---|-----------------|---|--|---|
| Accessories | | | | Auxiliary contact modules |
| Description | | | | with interlocked opposing contacts |
| Function | | | | for standard applications |
| Number of poles | | | | 4 pole |
| Connection technique | | | | Push in 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 | | 4 |
| 380 V 400 V 415 V | I _e | A | | 4 |
| Contacts | | | | |
| N/O = Normally open | | | | 3 N/O |
| N/C = Normally closed | | | | 1 NC |
| Mounting type | | | | Front fixing |
| Contact sequence | | | | |
| For use with | | | | DILA...-PI nicht mit DILA-22...(VDC) DILM7...(-PI) DILM8...-PI DILM9...(-PI) DILM11...-PI DILM12...(-PI) DILM14...-PI DILM15...(-PI) DILM17...(-PI) DILM25...(-PI) DILM32...(-PI) DILM38...(-PI) DILMP20...(-PI) DILMP32...(-PI) DILMP45...(-PI) |
| 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 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 |
| Lifespan, mechanical | | | | |
| AC operated | Operations | x 10 ⁶ | | 10 |
| DC operated | Operations | x 10 ⁶ | | 10 |
| Component lifespan | | | | |
| at U _e = 230 V, AC-15, 3 A | Operations | x 10 ⁶ | | 1.3 |
| Maximum operating frequency | Operations/h | | | 9000 |
| 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 |
| Mounting position | | |
| Mounting position | |  |
| 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 | | |
| Protection against direct contact when actuated from front (EN 50274) | | |
| Finger and back-of-hand proof | | |
| Weight | | |
| kg 0.05 | | |
| Terminal capacities | | |
| mm ² | | |
| Push-in terminals | | |
| Solid | mm ² | 1 x (0,5 - 2,5) 2 x (0,5 - 2,5) |
| flexible | mm ² | 1 x (0,5 - 2,5) 2 x (0,5 - 2,5) |
| flexible with ferrules | mm ² | 1 x (0,5 - 1,5) 2 x (0,5 - 1,5) |
| flexible with ultrasonic welded busbar end | mm ² | 1 x (0,5 - 2,5) 2 x (0,5 - 2,5) |
| flexible with uninsulated wire end ferrule | mm ² | 1 x (0,5 - 2,5) 2 x (0,5 - 2,5) |
| Solid or stranded | AWG | 20 - 14 |
| Stripping length | mm | 10 |
| Standard screwdriver | | 3.0 x 0.5 |

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 - DILM32 |
| 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 | 400 |
| between the auxiliary contacts | | V AC | 400 |
| 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 | 4 |
| 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: | | | |
| 1 | 24 V | A | 10 |
| 1 | 60 V | A | 6 |
| 2 | 60 V | A | 10 |

| | | | |
|---|----------------|-----------|---|
| 1 | 110 V | A | 3 |
| 3 | 110 V | A | 6 |
| 1 | 220 V | A | 1 |
| 3 | 220 V | A | 5 |
| DC L/R \leq 50 ms | | | |
| Contacts in series: | | A | |
| 3 | 24 V | A | 2.5 |
| 3 | 60 V | A | 1 |
| 3 | 110 V | A | 0.5 |
| 3 | 220 V | A | 0.25 |
| DC-13 (6xP) | | | |
| 24 V | I _e | A | 2.5 |
| 60 V | I _e | A | 1 |
| 110 V | I _e | A | 0.5 |
| 220 V | I _e | A | 0.25 |
| Control circuit reliability | Failure rate | λ | $<10^{-8}$, < one failure at 100 million operations (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 | 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 | | | |
| Operating ambient temperature min. | | °C | -25 |
| Operating ambient temperature max. | | °C | 60 |

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 | | | 3 |
| Number of contacts as normally closed contact | | | 1 |
| Number of fault-signal switches | | | 0 |
| Rated operation current I _e at AC-15, 230 V | | A | 4 |
| Type of electric connection | | | Spring clamp 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

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Additional product information (links)

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|--|---|
| 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 Cable 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 |