# **DATASHEET - DILA-XHI31**



Auxiliary contact module, Front mounting auxiliary contact, 4 pole, 380 V 400 V 415 V: 4 A, 3 N/O, 1 NC, Front fixing, Screw terminals



Part no. DILA-XHI31 Catalog No. 276427 Alternate Catalog XTCEXFAC31

No.

**EL-Nummer** 4130218

(Norway)

| Description  | (Norway)                                      |                 |   |  |
|--|---|-----------------|---|--|
| Description    Person  | Delivery program                              |                 |   |  |
| Switching elements according to EN 30005.  Vestors to contraction Contract DILACE-22 must only be combined and are to be preferred. The DC operated contractor DILACE-22 must only be combined with 2-poils availiary contract on technique  Consection technique  Rated or Conventional current  Conventional free air thermal current, 1 pole  Open  at 60 °C  270 V 200 V 240 V  380 V 900 V 15 V  380 V 900 V 15 V  380 V 900 V 15 V  The Contracts  Not – Romanily open  Not – Rom | Accessories                                   |                 |   | Auxiliary contact modules  |
| Number of poles Connection technique Conventional ter dentifermal current, 1 pole Open  at 80 °C   | Description                                   |                 |   | Switching elements according to EN 50005  Version E combinations correspond to EN 50011 and are to be preferred.  The DC operated contactor DILA(C)-22 must only be combined with 2-pole auxiliary |
| Connection technique  Rated operational current  Conventional free air thermal current, I pole  Gen  at 69 °C  ls  AC-15  220 V 280 V 240 V  380 V 260 V 415 V  ls  A 4  Contacts  N/O - Normally open N/C - Normally closed  Mounting type  Contact sequence  Contact sequence  Contact sequence  DILACD  DILMO(72  DI  | Function                                      |                 |   | for standard applications  |
| Rated operational current, 1 pole  Open at 80 °C   | Number of poles                               |                 |   | 4 pole   |
| Conventional free air thermal current, 1 pole Open 180 C AC-15  220 V 230 V 240 V 380 V 400 V 415 V 18 A 4  Contacts  N/O = Normally open N/O = Normally open Mounting type Contact sequence  For use with  For use with  In C Interpolation  In C Int | Connection technique                          |                 |   | Screw terminals  |
| Type  Type  Type  Timuse timus | Rated operational current                     |                 |   |  |
| Total   Tota   | Conventional free air thermal current, 1 pole |                 |   |  |
| AC-15  220 V 230 V 240 V   | Open  |                 |   |  |
| 220 V 230 V 240 V 15 V   10  | at 60 °C                                      | I <sub>th</sub> | Α | 16   |
| Contacts       NO - Normally open       3 N/O       1 NC       NO - Normally closed       1 NC       NO - Normally closed       1 NC       Contact sequence       1 NC       Contact sequence       1 NC       Front foing         Contact sequence       3 N/O       1 NC       1  | AC-15   |                 |   |  |
| Contacts  N/O = Normally closed  Mounting type  Contact sequence  For use with  For use with  For use with  For use with  Contact sequence  DILMCD: DILACC-40 E2 Unth basic device  DILACC-40 E2 DILACC-31   | 220 V 230 V 240 V                             | I <sub>e</sub>  | Α | 4  |
| N/O = Normally open N/C = Normally closed  Mounting type  Contact sequence  Contact sequence  For use with  For use with  For use with  For use with  Contact sequence  For use with  For use with  Contact sequence  For use with  Contact sequence  For use with  Contact sequence  Contact sequence | 380 V 400 V 415 V                             | I <sub>e</sub>  | Α | 4  |
| N/C = Normally closed  Mounting type  Contact sequence  For use with  DILA(C) DILM(C)? D   | Contacts                                      |                 |   |  |
| Mounting type   Front fixing   | N/0 = Normally open                           |                 |   | 3 N/O  |
| Contact sequence    For use with   DILA(C)   DILM(C)T  | N/C = Normally closed                         |                 |   | 1 NC   |
| For use with  DILA(C) 54 62 74 84  DILA(C) DILM(C)7 DILM(C)7 DILM(C)15 DILM(C)15 DILM(C)15 DILM(C)15 DILM(C)15 DILM(C)25 DILM(C)25.  | Mounting type                                 |                 |   | Front fixing   |
| DILMICIT DILMICIT DILMICIT DILMICIT DILMICIT DILMICIT DILMICIT DILMICIT DILMICIT DILMICISD DILMICISD DILMICISD DILMICISD DILMICISD DILMIP20 DILMIP20 DILMIP20 DILMIP20 DILMIP32 D   | Contact sequence                              |                 |   |  |
| 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)  Code number and version of combination  Distinctive number  71E  with basic device  DILA(C)-40  62  DILA(C)-31  |   |                 |   | DILM(C)7  DILM(C)9  DILM(C)12  DILM(C)15  DILM(C)15  DILM(C)25  DILM(C)32  DILMP20  DILMP20  DILMP45  DILMP45  DILMF8  DILMF11  DILMF11  DILMF17  DILMF17  DILMF25  DILMF25  DILMF32               |
| 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)  Code number and version of combination  Distinctive number  71E  with basic device  DILA(C)-40  62  with basic device  DILA(C)-31  | Туре  |                 |   | Front mounting auxiliary contact   |
| Distinctive number  71E  with basic device  DILA(C)-40  62  with basic device  DILA(C)-31  | Instructions                                  |                 |   | 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                    |
| with basic device DILA(C)-40 62 with basic device DILA(C)-31   | Code number and version of combination        |                 |   |  |
| 62 with basic device DILA(C)-31  | Distinctive number                            |                 |   | 71E  |
| with basic device DILA(C)-31   | with basic device                             |                 |   | DILA(C)-40   |
|  |   |                 |   | 62   |
|  | with basic device                             |                 |   |  |

# **Technical data**

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|---|---|---|---|---------|---|
|   |   |   |   |         |   |

| delicitat   |                  |                   |   |
|---|------------------|-------------------|---|
| Standards   |                  |                   | IEC/EN 60947, VDE 0660, UL, CSA   |
| Lifespan, mechanical  |                  |                   |   |
| AC operated   | Operations       | x 10 <sup>6</sup> | 10  |
| DC operated   | Operations       | x 10 <sup>6</sup> | 10  |
| Component lifespan  |                  |                   |   |
| at U <sub>e</sub> = 230 V, AC-15, 3 A   | Operations       | x 10 <sup>6</sup> | 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  |                  |                   | IP20  |
| Protection against direct contact when actuated from front (EN 50274)                           |                  |                   | Finger and back-of-hand proof   |
| Weight  |                  | kg                | 0.048   |
| Terminal capacities   |                  | mm <sup>2</sup>   |   |
| Screw terminals   |                  |                   |   |
| Solid   |                  | $\mathrm{mm}^2$   | 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   |
| Terminal screw  |                  |                   | M3.5  |
| 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-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 <sub>imp</sub> | V AC              | 6000  |
| Overvoltage category/pollution degree   |                  |                   | 111/3   |
| Rated insulation voltage  | Ui               | V AC              | 690   |
| Rated operational voltage   | U <sub>e</sub>   | 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   |                  | Α                 |   |

| Conventional free air thermal current, 1 pole                           |                 |         |   |
|---|-----------------|---------|---|
| at 60 °C  | I <sub>th</sub> | A       | 16  |
| AC-15   | ·ui             |         |   |
| 220 V 230 V 240 V   | I <sub>e</sub>  | A       | 4   |
| 380 V 400 V 415 V   |                 |         | 4   |
|   | l <sub>e</sub>  | A       |   |
| 500 V   | l <sub>e</sub>  | Α       | 1.5   |
| DC current  |                 |         |   |
| D0 1/D 7/15   |                 |         | Switch-on and switch-off conditions based on DC-13, time constant as specified.   |
| DC L/R ≦ 15 ms  |                 |         |   |
| Contacts in series:   | 24 V            | A       | 10  |
| 1   | 60 V            | A       | 10<br>6   |
| 2   |                 |         |   |
| 1   | 60 V<br>110 V   | A       | 10<br>3   |
| 3   | 110 V           |         | 6   |
| 1   | 220 V           | A       | 1   |
| 3   | 220 V           | A       | 5   |
| DC L/R ≦ 50 ms  | 220 V           | ^       |   |
| 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  | l <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                       |
|   |                 |         | (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                                   |                 | A 0/ I  |   |
| 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 I <sub>e</sub> (AC-15/230 V) |                 | CO      | 0.16  |
| Auxiliary contacts  |                 |         |   |
| Pilot Duty  |                 |         |   |
| AC operated   |                 |         | A600  |
| DC operated   |                 |         | P300  |
| General Use   |                 |         |   |
| AC  |                 | V       | 600   |
| AC  |                 | A       | 10  |
| DC  |                 | V       | 250   |
|   |                 |         |   |

# Design verification as per IEC/EN 61439

DC

| Technical data for design verification                   |                  |   |      |
|--|------------------|---|------|
| Rated operational current for specified heat dissipation | $I_n$            | Α | 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  | $P_{\text{diss}}$ | 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)

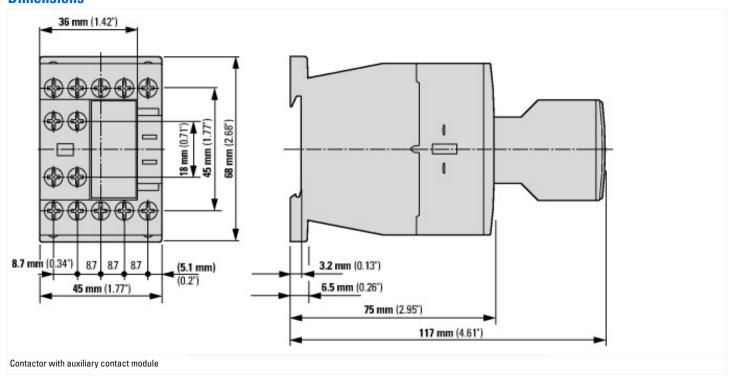
Electric engineering, automation, process control engineering / Low-voltage switch technology / Component for low-voltage switching technology / Auxiliary switch block (pc)@es10.01-27-37-13-02 [AKN342013])

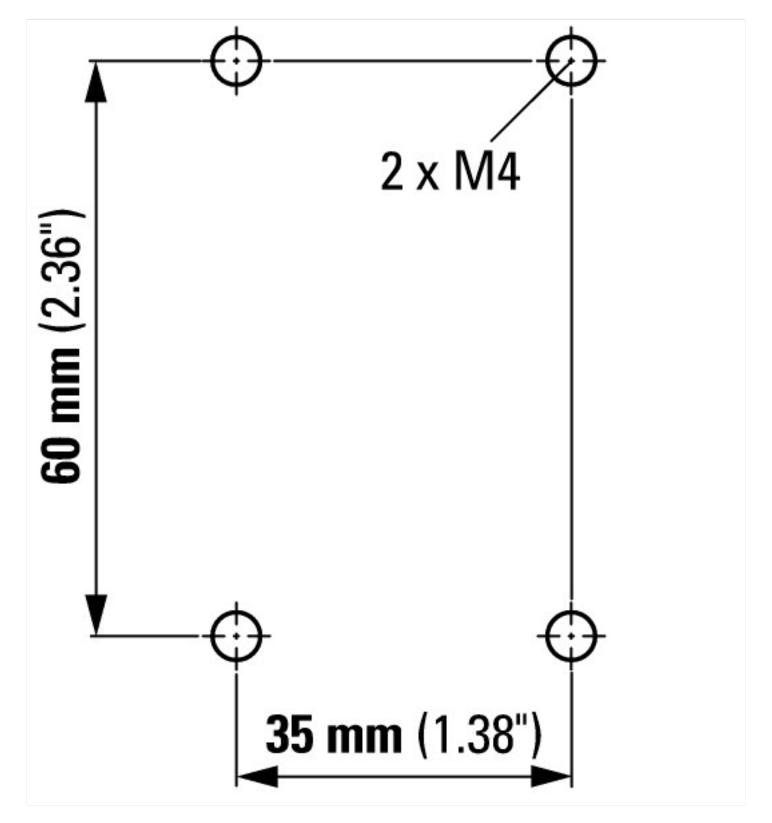
| (ecl@ss10.0.1-27-37-13-02 [AKN342013])        |   |                  |
|---|---|------------------|
| Number of contacts as change-over contact     |   | 0                |
| Number of contacts as normally open contact   |   | 3                |
| Number of contacts as normally closed contact |   | 1                |
| Number of fault-signal switches               |   | 0                |
| Rated operation current le at AC-15, 230 V    | Α | 4                |
| Type of electric connection                   |   | Screw connection |
| Model   |   | Top mounting     |
| Mounting method                               |   | Front fastening  |
| Lamp holder                                   |   | None             |

#### **Approvals**

| 7.155.014.0                          |   |
|--------------------------------------|---|
| 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**





# **Assets (links)**

**Declaration of CE Conformity** 

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Instruction Leaflets

IL03407013Z2018\_07