

Hybrid motor starter - ELR H3-IES-SC- 24DC/500AC-2 - 2900567

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Hybrid motor starter for starting 3~ AC motors up to 500 V AC and 2.4 A output current, with 24 V DC control voltage, adjustable overload shutdown and emergency stop function to SIL 3/PL e and, screw connection.

Your advantages

- 22.5 mm wide
- Safety level according to IEC 61508-1: SIL 3, ISO 13849: PL e
- Reduction in wiring
- Long service life
- Space saving
- 3-phase loop bridges
- Adjustable current for bimetal function
- Low-wear switching



Key Commercial Data

| | |
|--------------|---------------|
| Packing unit | 1 pc |
| GTIN | |
| GTIN | 4046356526135 |

Technical data

Dimensions

| | |
|--------|----------|
| Width | 22.5 mm |
| Height | 106.6 mm |
| Depth | 113.7 mm |

Ambient conditions

| | |
|---|-------------------------------------|
| Ambient temperature (operation) | -25 °C ... 70 °C (observe derating) |
| Ambient temperature (storage/transport) | -40 °C ... 80 °C |
| Maximum altitude | ≤ 2000 m |
| Degree of protection | IP20 |

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Technical data

Device supply

| | |
|--|-----------------------------|
| Rated control circuit supply voltage U_s | 24 V DC |
| Control supply voltage range | 19.2 V DC ... 30 V DC |
| Rated control supply current I_s | 40 mA |
| Type of protection | Surge protection |
| | Reverse polarity protection |

Input data

| | |
|-------------------------------|-------------------------------|
| Input name | Control input |
| Rated actuating voltage U_c | 24 V DC |
| Triggering voltage range | 19.2 V DC ... 30 V DC |
| Rated actuating current I_c | 5 mA (Input type 1) |
| Switching threshold | 9.6 V ("0" signal) |
| | 19.2 V ("1" signal) |
| Switching level | < 5 V DC (For EMERGENCY STOP) |
| Typical turn-off time | < 30 ms |
| Type of protection | Reverse polarity protection |

Output data load output

| | |
|---|------------------------------------|
| Output name | AC output |
| Rated operating voltage U_e | 500 V AC |
| Operating voltage range | 42 V AC ... 550 V AC |
| Rated operating current I_e | 2.4 A (AC-51) |
| | 2.4 A (AC-53a) |
| Mains frequency | 50/60 Hz |
| Load current range | 180 mA ... 2.4 A (see to derating) |
| Trigger characteristic in acc. with IEC 60947-4-2 | Class 10A |
| Cooling time | 20 min. (for auto reset) |
| Leakage current | 0 mA |
| Type of protection | Surge protection |

Output data reply output

| | |
|---|--|
| Output name | Acknowledge output |
| Note | Confirmation: floating change-over contact, signal contact |
| Contact type | 1 PDT |
| Switching capacity according to IEC 60947-5-1 | 3 A (230 V, AC15) |
| | 2 A (24 V, DC13) |

General

| | |
|-----------------------|--|
| Motor starter type | Direct starter |
| Switching frequency | ≤ 2 Hz (Load-dependent) |
| Mounting position | vertical (horizontal DIN rail, motor output below) |
| Mounting type | DIN rail mounting |
| Assembly instructions | alignable, for spacing see derating |

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General

| | |
|---------------------------|-----------------------|
| Operating mode | 100% operating factor |
| Maximum power dissipation | 3.3 W |
| Minimum power dissipation | 1.1 W |
| Operating voltage display | Green LED |
| Status display | Yellow LED |
| Indication | Red LED |

Connection data

| | |
|----------------------------------|---|
| Connection name | Control circuits |
| Connection method | Screw connection |
| Stripping length | 8 mm |
| Screw thread | M3 |
| Conductor cross section solid | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section AWG | 24 ... 14 |
| Torque | 0.5 Nm ... 0.6 Nm |

Connection data 2

| | |
|----------------------------------|---|
| Connection name | Load circuit |
| Connection method | Screw connection |
| Stripping length | 8 mm |
| Screw thread | M3 |
| Conductor cross section solid | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section AWG | 24 ... 14 |
| Torque | 0.5 Nm ... 0.6 Nm |

Insulation characteristics

| | |
|--------------------------|--|
| Rated insulation voltage | 500 V |
| Rated surge voltage | 6 kV |
| Overvoltage category | III |
| Degree of pollution | 2 |
| Designation | Insulation characteristics between the control input and control supply voltage, and auxiliary circuit to the main circuit |
| Insulation | Safe isolation (IEC 60947-1/EN 50178) at operating voltage ≤ 300 V AC |
| | Basic isolation (IEC 60947-1) at operating voltage 300 ... 500 V AC |
| | Safe isolation (EN 50178) at operating voltage 300 ... 500 V AC |
| Designation | Isolation characteristics between the control input and control supply voltage to auxiliary circuit |
| Insulation | Safe isolation (IEC 60947-1) in the auxiliary circuit ≤ 300 V AC |
| | Safe isolation (EN 50178) in the auxiliary circuit ≤ 300 V AC |

Standards and Regulations

| | |
|-------------|-----------------------|
| Designation | Standards/regulations |
|-------------|-----------------------|

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Technical data

Standards and Regulations

| | |
|-----------------------|---------------|
| Standards/regulations | IEC 60947-1 |
| | IEC 60947-4-2 |
| | IEC 61508 |
| | ISO 13849 |

Conformance/approvals

| | |
|-----------------|---|
| Designation | ATEX |
| Identification | # II (2) G [Ex e] [Ex d] [Ex px] |
| | # II (2) D [Ex t] [Ex p] |
| Certificate | PTB 07 ATEX 3145 |
| Designation | UL approval |
| Certificate | NLDX.E228652 |
| Designation | Safety Integrity Level (SIL, IEC 61508) |
| Identification | ≤ 3 |
| Additional text | Safe shutdown |
| Designation | Safety Integrity Level (SIL, IEC 61508) |
| Identification | 2 |
| Additional text | Motor protection |
| Designation | Performance Level (ISO 13849) |
| Additional text | Safe shutdown |
| Identification | ≤ 3 |
| Additional text | Safe shutdown |

| | |
|--------------------|--|
| SCCR | 100 kA (500 V AC (fuse: 30 A class CC/30 A class J (high fault))) |
| | 5 kA (500 V AC (fuse: 20 A RK5 (standard fault))) |
| FLA | 2.4 A (500 V AC) |
| Group installation | 20 A (class RK5, SCCR 5kA, #24 - 14 AWG max. solid and stranded) |
| | 30 A (class CC or J, SCCR 100kA, #24 - 14 AWG max, solid and stranded) |
| Category code | NLDX |

Environmental Product Compliance

| | |
|------------|---|
| China RoHS | Environmentally Friendly Use Period = 50 |
| | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

Approvals

Approvals

Approvals

UL Listed / cUL Listed / GL / GL-SW / UL Listed / IECCEB Scheme / cUL Listed / CCC / EAC / GL

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Approvals

Ex Approvals

ATEX

Approval details

| | | | |
|-----------------|--|---|--------------------------|
| UL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 228652 |
| cUL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 228652 |
| GL | | https://approvalfinder.dnvgl.com/ | 54757-08 HH |
| GL-SW | | | 54757-08 HH |
| UL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 323771 |
| IECEE CB Scheme | | http://www.iecee.org/ | DE1-55728 |
| cUL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 323771 |
| CCC | | | 2016010304871315 |
| EAC | | | RU C- DE.A*30.B.01082 |

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Approvals

GL



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