

ELR-H51-9-BUSBAR-CLASSIC-SET - Hybrid motor starter



2904338

<https://www.phoenixcontact.com/us/products/2904338>

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Complete package consisting of ELR H51-IESSC-24DC500AC-9 and EM RI-ADAPTER CLASSIC for mounting on 60 mm busbar

Your advantages

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

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2904338 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Product key | DK7454 |
| GTIN | 4046356802987 |
| Weight per piece (including packing) | 463.1 g |
| Weight per piece (excluding packing) | 463 g |
| Country of origin | DE |

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Set consists of

ELR H51-IESSC-24DC500AC-9 - Hybrid motor starter

2902745

<https://www.phoenixcontact.com/us/products/2902745>



Short-circuit-proof hybrid motor starter for reversing 3~ AC motors up to 550 V AC, with 24 V DC input, 9 A output current, emergency stop function and adjustable overload shutdown. Can only be used with EM RD-ADAPTER.

EM RI-ADAPTER CLASSIC - Adapter

2902831

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Adapter for mounting short-circuit proof hybrid motor starters of type ELR-H51 ... on 60 mm power busbars. Classic design with 200 mm design height.

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FUSE-10X38-20A-GR - Fuse

2903384

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Fuse, number: 10 Pcs., fuse type: Fuse (CC), nominal current: 20 A, tripping characteristic: super-fast blow (gR)

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Technical data

Product properties

| | |
|----------------|-----------------------|
| Product type | Hybrid motor starters |
| Product family | CONTACTRON |
| Operating mode | 100% operating factor |

Electrical properties

| | |
|---|-------------------------|
| Number of phases | 3 |
| Motor starter type | Reversing starter |
| Switching frequency | ≤ 2 Hz (Load-dependent) |
| Maximum power dissipation for nominal condition | 11 W |
| Switching frequency | ≤ 2 Hz (Load-dependent) |
| Maximum power dissipation | 7 W |
| Minimum power dissipation | 0.88 W |
| Coordination type | 2 |

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 |
| Protective circuit | Surge protection Reverse polarity protection; Parallel polarity protection diode |

Insulation characteristics

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

Emergency tripping

| | |
|-------------------|--------|
| Operate threshold | > 45 A |
| Response time | < 2 s |

Input data

Control

| | |
|-------------------------------|--------------------------|
| Input name | Control input right/left |
| Rated actuating voltage U_C | 24 V DC |

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| | |
|-------------------------------|-------------------------------|
| Triggering voltage range | 19.2 V DC ... 30 V DC |
| Rated actuating current I_C | 5 mA |
| 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 |

Output data

AC output

| | |
|---|--------------------------------|
| Rated operating voltage U_e | 500 V AC |
| Operating voltage range | 42 V AC ... 550 V AC |
| Mains frequency | 50/60 Hz |
| Load current range | 1.5 A ... 9 A |
| Trigger characteristic in acc. with IEC 60947-4-2 | Class 10A |
| Cooling time | 20 min (for auto reset) |
| Leakage current | 0 mA |
| Protective circuit | Surge protection; Varistor |
| | Short-circuit protection; Fuse |

Acknowledge output

| | |
|---|--|
| Note | Confirmation: floating change-over contact, signal contact |
| Contact switching type | 1 changeover contact |
| Switching capacity in accordance with IEC 60947-5-1 | 3 A (230 V, AC15) |
| | 2 A (24 V (DC13)) |

Connection data

Control circuits

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Stripping length | 8 mm |
| Screw thread | M3 |
| Conductor cross-section rigid | 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 |
| Tightening torque | 0.5 Nm ... 0.6 Nm |
| | 5 lb _F -in. ... 7 lb _F -in. |

Load circuit

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Stripping length | 8 mm |
| Screw thread | M3 |
| Conductor cross-section rigid | 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 |
| Tightening torque | 0.5 Nm ... 0.6 Nm |

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| | |
|--|---|
| | 5 lb _F -in. ... 7 lb _F -in. |
|--|---|

Signaling

| | |
|---------------------------|--------------|
| Status display | LED (yellow) |
| Operating voltage display | Green LED |
| Error indication | Red LED |

Material specifications

| | |
|--|--------------|
| Flammability rating according to UL 94 (Housing) | V0 (Housing) |
|--|--------------|

Environmental and real-life conditions

Ambient conditions

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

Approvals

ATEX

| | |
|----------------|----------------------------------|
| Identification | ⊕ II (2) G [Ex e] [Ex d] [Ex px] |
| | ⊕ II (2) D [Ex t] [Ex p] |
| Certificate | PTB 07 ATEX 3145 |

UL approval

| | |
|-------------|--------------|
| Certificate | NLDX.E228652 |
|-------------|--------------|

Safety Integrity Level (SIL, IEC 61508)

| | |
|----------------|---------------|
| Identification | ≤ 3 |
| Note | Safe shutdown |

Safety Integrity Level (SIL, IEC 61508)

| | |
|----------------|------------------|
| Identification | 2 |
| Note | Motor protection |

Performance Level (ISO 13849)

| | |
|----------------|---------------|
| Identification | e |
| Note | Safe shutdown |

Category (ISO 13849)

| | |
|----------------|---------------|
| Identification | 3 |
| Note | Safe shutdown |

UL data

| | |
|------|---|
| SCCR | 100 kA (480 V AC (fuse: 30 A class CC/30 A class J (high fault))) |
| | 5 kA (480 V AC (fuse: 20 A RK5 (standard fault))) |
| FLA | 6.5 A (480 V AC) |

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| | |
|--------------------|--|
| 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 / NRNT |

Standards and regulations

Standards/regulations

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

Mounting

| | |
|-------------------|--|
| Mounting type | Bus bar mounting |
| | DIN rail mounting |
| Assembly note | alignable, for spacing see derating |
| Mounting position | vertical (horizontal DIN rail, motor output below) |

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Classifications

UNSPSC

UNSPSC 21.0

25173902

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Environmental product compliance

EU RoHS

| | |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 6(c), 7(a), 7(c)-I |

China RoHS

| | |
|--|---|
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

EU REACH SVHC

| | |
|-------------------------------------|----------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
|-------------------------------------|----------------------|

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