**Extract from the online catalog**

# ELR H3-ES-SC-230AC/500AC-9

Order No.: 2900555



http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2900555

"2 in 1" hybrid motor starter for starting 3~ AC motors up to 550 V AC, with 230 V AC input, 9 A output current, and emergency stop function.




Product notes

WEEE/RoHS-compliant since: 03/01/2010

http://www.download.phoenixcontact.com
Please note that the data given here has been taken from the online catalog. For comprehensive information and data, please refer to the user documentation. The General Terms and Conditions of Use apply to Internet downloads.

## Commercial data

| | |
|---|---|
| GTIN (EAN) | 4 046356 527798 |
| Note | Made-to-order |
| sales group | G411 |
| Pack | 1 pcs. |
| Customs tariff | 85364900 |

## Technical data

### Input data

| | |
|---|---|
| Mains frequency | 40 Hz |
| | 100 Hz |
| Rated control supply voltage $U_S$ | 230 V AC |

| | |
|---|---|
| Rated control supply voltage range with reference to $U_S$ | 0.4 ... 1.1 |
| Rated control supply current $I_S$ | 3.5 mA |
| Rated actuating voltage $U_C$ | 230 V AC |
| Rated actuating voltage range with reference to $U_C$ | 0.4 ... 1.1 |
| Rated actuating current $I_C$ | 7 mA |
| Switching threshold "0" signal, voltage | 44 V AC |
| Switching threshold "1" signal voltage | 85 V AC |
| Protective circuit | Surge protection |
| Typical response time | < 35 ms |
| Typical turn-off time | < 80 ms |
| Operating voltage display | Green LED |
| Status display | Yellow LED |
| Indication | Red LED |

**Output data, load relay**

| | |
|---|---|
| Output name | AC output |
| Nominal output voltage | 500 V AC |
| Nominal output voltage range | 48 V AC ... 550 V AC |
| Load current | max. 9 A (see derating curve) |
| Leakage current | 0 mA |
| Residual voltage | < 0.5 V |
| Surge current | 100 A (t = 10 ms) |
| Type of protection | Surge protection |
| Output name | Acknowledge output |
| Note | Confirmation 01: Floating PDT contact |
| Nominal output voltage | max. 253 V AC 0% ... 100% (300 V DC) |
| Continuous load current | 2 A |

**Output data, signaling contact**

| | |
|---|---|
| Measuring via | Current transformer for line current on L1 and L3 |

**Connection data**

| | |
|---|---|
| Connection method | Screw connection |
| Conductor cross section solid min. | 0.14 mm² |
| Conductor cross section solid max. | 2.5 mm² |

| | |
|---|---|
| Conductor cross section stranded min. | 0.14 mm² |
| Conductor cross section stranded max. | 2.5 mm² |
| Conductor cross section AWG/kcmil min. | 26 |
| Conductor cross section AWG/kcmil max | 12 |

**General data**

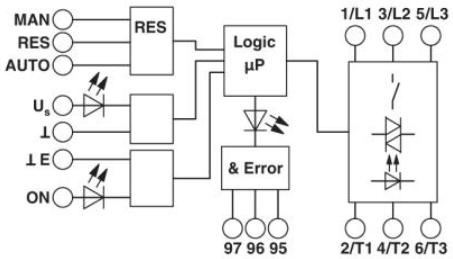
| | |
|---|---|
| Width | 22.5 mm |
| Height | 99 mm |
| Depth | 114.5 mm |
| Test voltage input/output | 4 $kV_{rms}$ |
| Ambient temperature (operation) | -25 °C ... 70 °C |
| Ambient temperature (storage/transport) | -25 °C ... 70 °C |
| Mounting position | Vertical (horizontal DIN rail) |
| Assembly instructions | Can be aligned with spacing = 20 mm |
| Operating mode | 100% operating factor |
| Degree of protection | IP20 |
| Name | Standards/regulations |
| Standards/regulations | DIN EN 50178 |
| | EN 60947 |
| Name | Power station requirements |
| Standards/regulations | DWR 1300 / ZXX01/DD/7080.8d |
| Name | Air and creepage distances between the power circuits |
| Standards/regulations | DIN EN 50178 |
| Rated surge voltage / insulation | 4 kV/safe isolation |
| Rated insulation voltage | 500 V |
| Pollution degree | 2 |
| Surge voltage category | III |
| Safety integrity level according to IEC 61508-1 | SIL 3 (safe shutdown) |
| Category as per ISO 13849-1 | 3 |
| Performance Level as per ISO 13849-1 | e |
| Category in acc. with EN 954-1 | 3 |

**Certificates / Approvals**

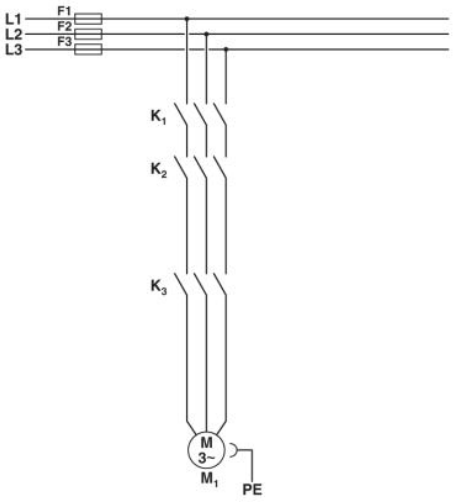
| | |
|---|---|
| Certification | CB, CUL Listed, UL Listed |
| Certification Ex: | PTB |

## Diagrams/Drawings

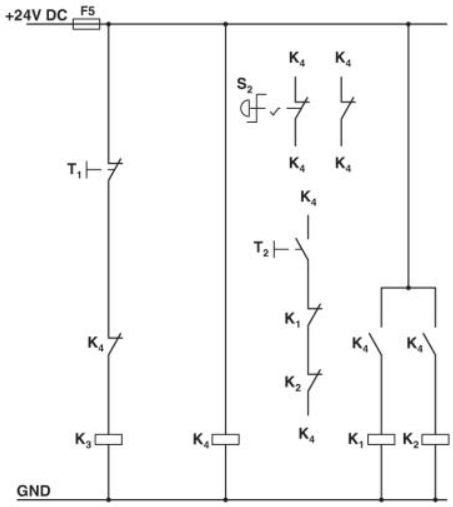
Block diagram



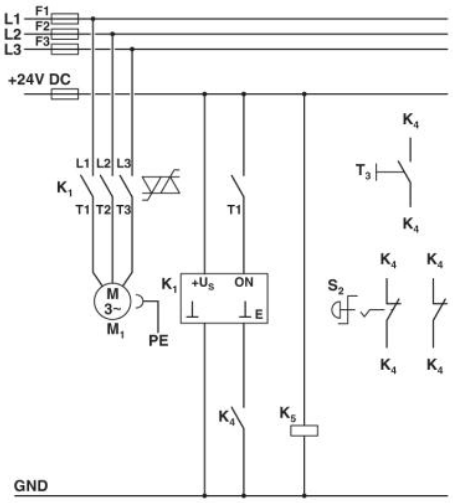

Circuit diagram




**Conventional structure**
Main current path for contactor according to category 3
K1 + K2 = Emergency stop contactor
K3 = Right contactor




**Conventional structure**
Control current path for contactor according to category 3
K1 + K2 = Emergency stop contactor
K3 = Right contactor
K4 = PSR SCP-24DC.../safety relay
T1 = Right, T3 = Reset
S2 = Emergency stop




**Structure with CONTACTRON**
Main and control current path for "2 in 1" hybrid motor starter according to category 3
K1 = "2 in 1" hybrid motor starter
K4 = PSR SCP-24DC.../safety relay
T1 = Right, T3 = Reset
S2 = Emergency stop

## Address

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