

ELR H5-IES-PT/500AC-3-IOL - Hybrid motor starter



2908669

<https://www.phoenixcontact.com/pc/products/2908669>

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Networkable hybrid motor starter for reversing 3~ AC motors up to 500 V AC and 3 A output current, with adjustable overload shutdown, emergency stop function up to SIL 3/PL e, and Push-in connection. Connection to IO-Link.

Commercial data

| | |
|--------------------------------------|--------------------|
| Item number | 2908669 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Product key | CK7432 |
| Catalog page | Page 25 (C-5-2019) |
| GTIN | 4055626321240 |
| Weight per piece (including packing) | 308.8 g |
| Weight per piece (excluding packing) | 282.7 g |
| Customs tariff number | 85371098 |
| Country of origin | DE |

Technical data

Notes

| | |
|---------|---|
| General | If this device is to be used in combination with the CrossPowerSystem power distribution board, the device mount for the 16 A fuse (order designation: EM-CPS-DA-22,5F/16A; order number: 1002668) is required in order to attach the hybrid motor starter to the power distribution board. |
|---------|---|

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 |
| Maximum power dissipation for nominal condition | 12 W |
| Switching frequency | ≤ 2 Hz (Load-dependent) |
| Maximum power dissipation | 4.1 W |
| Minimum power dissipation | 0.88 W |
| Coordination type | 1 |

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 | 65 mA |
| Protective circuit | Surge protection Reverse polarity protection; Parallel polarity protection diode |

Supply: IO-Link

| | |
|--------------------------------|--|
| Nominal voltage for I/O supply | 24 V DC (This supply voltage is provided via the IO-Link interface of the IO-Link master.) |
| Protective circuit | Reverse polarity protection Short-circuit protection Overload protection |

Insulation characteristics

| | |
|--|---|
| Rated insulation voltage | 550 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) |
| 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 |

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Emergency tripping

| | |
|-------------------|---------|
| Operate threshold | > 33 A |
| Response time | < 0.5 s |

Input data

Control

| | |
|-------------------------------|---|
| Input name | Enable input |
| Rated actuating voltage U_C | 24 V DC |
| Triggering voltage range | 19.2 V DC ... 30 V DC |
| Rated actuating current I_C | 7 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 |

IO-Link

| | |
|-----------------------|-------------|
| Number of ports | 1 |
| Connection method | COMBICON |
| Connection technology | 3-conductor |

Output data

AC output

| | |
|---|----------------------------------|
| Rated operating voltage U_e | 500 V AC |
| Operating voltage range | 42 V AC ... 550 V AC |
| Rated operating current I_e | 3 A (AC-51) 3 A (AC-53a) |
| Mains frequency | 50/60 Hz |
| Load current range | 180 mA ... 3 A (see to derating) |
| Trigger characteristic in acc. with IEC 60947-4-2 | Class 10 |
| Cooling time | 20 min. (for auto reset) |
| Leakage current | 0 mA |
| Protective circuit | Surge protection; Varistor |

Connection data

Control circuits

| | |
|----------------------------------|---|
| Connection method | Push-in connection |
| Stripping length | 10 mm |
| 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 |

Load circuit

| | |
|-------------------|--------------------|
| Connection method | Push-in connection |
|-------------------|--------------------|

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| | |
|----------------------------------|---|
| Stripping length | 10 mm |
| 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 |

Signaling

| | |
|---------------------------|------------|
| Status display | Yellow LED |
| Operating voltage display | Green LED |
| Error indication | Red LED |

Dimensions

| | |
|--------|---------|
| Width | 22.5 mm |
| Height | 127 mm |
| Depth | 114 mm |

Material specifications

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

Environmental and real-life conditions

Ambient conditions

| | |
|---|------------------------------------|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -5 °C ... 55 °C (observe derating) |
| Ambient temperature (storage/transport) | -40 °C ... 80 °C |
| Altitude | ≤ 2000 m |

Approvals

UKCA

| | |
|-------------|----------------|
| Certificate | UKCA-compliant |
|-------------|----------------|

UL approval

| | |
|-------------|--------------|
| Certificate | NLDX.E228652 |
| | NRNT.E172140 |

Safety Integrity Level (SIL, IEC 61508)

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

Performance Level (ISO 13849)

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

Category (ISO 13849)

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

UL data

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| | |
|--------------------|---|
| 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 | 3 A (480 V AC) |
| Group installation | 20 A (class RK5, SCCR 5kA (480 V AC), #24 - 14 AWG max. solid and stranded) |
| | 30 A (class CC or J, SCCR 100kA (480 V AC), #24 - 14 AWG max, solid and stranded) |
| Category code | NLDX / NRNT |
| Horsepower ratings | 0.5 hp (208 V AC) |
| | 0.5 hp (230 V AC) |
| | 0.5 hp (240 V AC) |
| | 1.5 hp (480 V AC) |

Standards and regulations

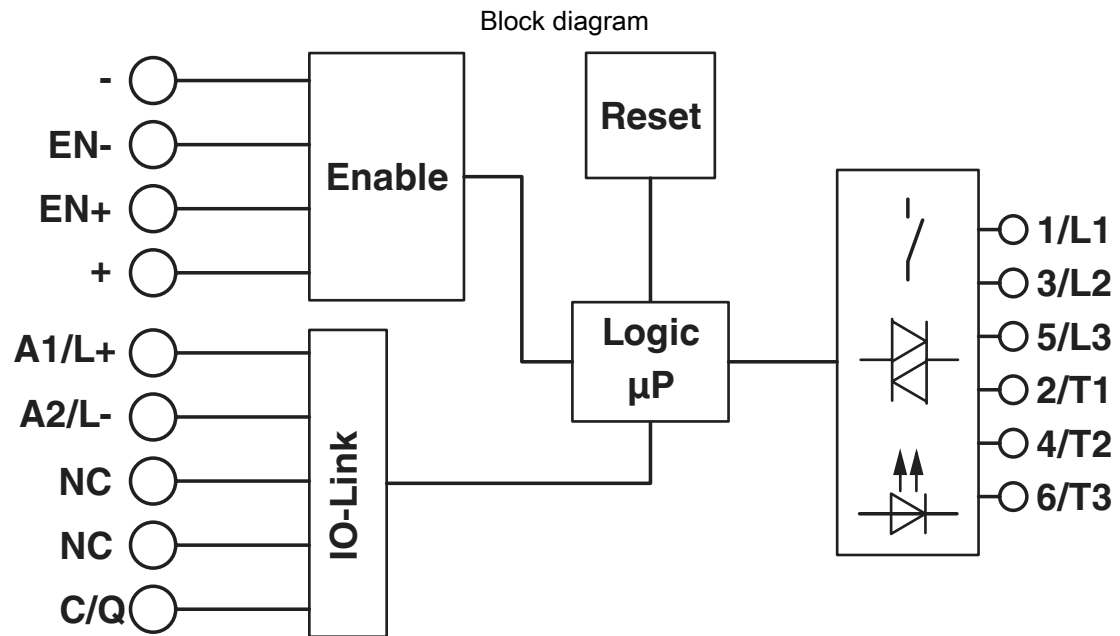
Standards/regulations

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

Mounting

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

Drawings



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/2908669>



IECEE CB Scheme

Approval ID: DE1-60807



EAC

Approval ID: RU*C-DE.*08.B.00520*



IECEE CB Scheme

Approval ID: DE1-60164



UL Listed

Approval ID: FILE E 172140



CCC

Approval ID: 2016010304900298



cUL Listed

Approval ID: FILE E 172140



cUL Listed

Approval ID: FILE E 228652



UL Listed

Approval ID: FILE E 228652

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27370905 |
| ECLASS-12.0 | 27370905 |
| ECLASS-13.0 | 27370905 |

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC001037 |
|----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 25173900 |
|-------------|----------|

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Environmental product compliance

| | |
|------------|--|
| REACH SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 50 years |
| | For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads" |

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Accessories

BRIDGE-PT 1 - Bridge

1161777

<https://www.phoenixcontact.com/pc/products/1161777>

3-phase loop bridge for 1 CONTACTRON module, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m



BRIDGE-PT 2 - Bridge

2904490

<https://www.phoenixcontact.com/pc/products/2904490>

3-phase loop bridge for 2 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m



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BRIDGE-PT 3 - Bridge

2904491

<https://www.phoenixcontact.com/pc/products/2904491>

3-phase loop bridge for 3 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m



BRIDGE-PT 4 - Bridge

2904492

<https://www.phoenixcontact.com/pc/products/2904492>

3-phase loop bridge for 4 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m



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BRIDGE-PT 5 - Bridge

2904493

<https://www.phoenixcontact.com/pc/products/2904493>

3-phase loop bridge for 5 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m



BRIDGE-PT 6 - Bridge

2904494

<https://www.phoenixcontact.com/pc/products/2904494>

3-phase loop bridge for 6 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m



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BRIDGE-PT 7 - Bridge

2904495

<https://www.phoenixcontact.com/pc/products/2904495>

3-phase loop bridge for 7 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m



BRIDGE-PT 8 - Bridge

2904496

<https://www.phoenixcontact.com/pc/products/2904496>

3-phase loop bridge for 8 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m



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BRIDGE-PT 9 - Bridge

2904497

<https://www.phoenixcontact.com/pc/products/2904497>

3-phase loop bridge for 9 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m



BRIDGE-PT 10 - Bridge

2904498

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3-phase loop bridge for 10 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m



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BRIDGE-PT 1-1M - Bridge

1161778

<https://www.phoenixcontact.com/pc/products/1161778>

3-phase loop bridge for 1 CONTACTRON module, with Push-in connection and 22.5 mm housing width, connecting cable: 1 m



BRIDGE-PT-2-1M - Bridge

1049407

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3-phase loop bridge for 2 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 1 m



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BRIDGE-PT-3-1M - Bridge

1049408

<https://www.phoenixcontact.com/pc/products/1049408>

3-phase loop bridge for 3 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 1 m



BRIDGE-PT-4-1M - Bridge

1049409

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3-phase loop bridge for 4 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 1 m



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BRIDGE-PT-5-1M - Bridge

1049413

<https://www.phoenixcontact.com/pc/products/1049413>

3-phase loop bridge for 5 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 1 m



BRIDGE-PT-2-2M/0,3M - Bridge

1107649

<https://www.phoenixcontact.com/pc/products/1107649>

3-phase loop bridge for 2 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, cable length between the modules: 0.3 m, connecting cable: 2 m



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BRIDGE-PT-3-2M/0,3M - Bridge

1107650

<https://www.phoenixcontact.com/pc/products/1107650>



3-phase loop bridge for 3 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, cable length between the modules: 0.3 m, connecting cable: 2 m

BRIDGE-PT-4-2M/0,3M - Bridge

1107644

<https://www.phoenixcontact.com/pc/products/1107644>



3-phase loop bridge for 4 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, cable length between the modules: 0.3 m, connecting cable: 2 m

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US-EMLP (15X5) - Plastic label

0828790

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Plastic label, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 189

UC-EMLP (15X5) - Plastic label

0819301

<https://www.phoenixcontact.com/pc/products/0819301>



Plastic label, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 10

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IOL-CONF - Network management software

1083065

<https://www.phoenixcontact.com/pc/products/1083065>



IOL-CONF is a browser-based configuration software tool for the easy startup of IO-Link masters and IO-Link devices

EM-CPS-225 - Power distribution board

1002634

<https://www.phoenixcontact.com/pc/products/1002634>



Modular power distribution board with CrossLink[®] interface, 125 A, 3-pos., touch-proof and protection against polarity reversal, width: 225 mm

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EM-CPS-405 - Power distribution board

1002635

<https://www.phoenixcontact.com/pc/products/1002635>

Modular power distribution board with CrossLink[®] interface, 125 A, 3-pos., touch-proof and protection against polarity reversal, width: 405 mm



EM-CPS-TB3/63A - Connection module

1002633

<https://www.phoenixcontact.com/pc/products/1002633>

Connection module with integrated spring-loaded terminals for cables from 1.5 to 16 mm², 3-pos., maximum 63 A



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EM-CPS-DA-22,5F/16A - Adapter

1002668

<https://www.phoenixcontact.com/pc/products/1002668>



Device adapter with fuse holder for 16 A fuse (10x38/Class CC), CrossLink[®] interface and fixed DIN rail

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