

Hybrid motor starter - ELR H5-IES-SC-SWD/500AC-2 - 2903117

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Hybrid motor starter for reversing 3~ AC motors up to 550 V AC, 2.4 A output current, adjustable overload shutdown and safe emergency stop up to PLe/SIL 3 and SmartWire-DT™ adapter as a set.

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
- ✓ Adjustable current for bimetal function
- ✓ Low-wear switching



Key Commercial Data

| | |
|--------------------------------------|---|
| Packing unit | 1 pc |
| GTIN |  4 046356 712811 |
| GTIN | 4046356712811 |
| Weight per Piece (excluding packing) | 276.900 g |
| Custom tariff number | 85371098 |
| Country of origin | Germany |
| Note | Made to Order (non-returnable) |

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 |

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Technical data

Input data

| | |
|-------------------------------|-------------------------------|
| Input name | Control input right/left |
| 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 |
| 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 load output

| | |
|---|------------------------------------|
| Output name | 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 | 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 | Reversing 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 |
| Operating mode | 100% operating factor |
| Maximum power dissipation | 4.1 W |
| Minimum power dissipation | 0.88 W |
| Operating voltage display | Green LED |
| Status display | Yellow LED |
| Indication | Red LED |

Connection data, input side

| | |
|-------------------|------------------|
| Connection name | Control circuits |
| Connection method | Screw connection |

Hybrid motor starter - ELR H5-IES-SC-SWD/500AC-2 - 2903117

Technical data

Connection data, input side

| | |
|----------------------------------|---|
| 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 |
| | 5 lb _f -in. ... 7 lb _f -in. |

Connection data, output side

| | |
|----------------------------------|---|
| 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 |
| | 5 lb _f -in. ... 7 lb _f -in. |

Ambient conditions

| | |
|---|------------------------------------|
| Ambient temperature (operation) | -5 °C ... 55 °C (observe derating) |
| Ambient temperature (storage/transport) | -40 °C ... 80 °C |

Dimensions

| | |
|--------|---------|
| Width | 22.5 mm |
| Height | 165 mm |
| Depth | 114 mm |

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) at operating voltage ≤ 300 V AC |
| | Safe isolation (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 |

Hybrid motor starter - ELR H5-IES-SC-SWD/500AC-2 - 2903117

Technical data

Standards and Regulations

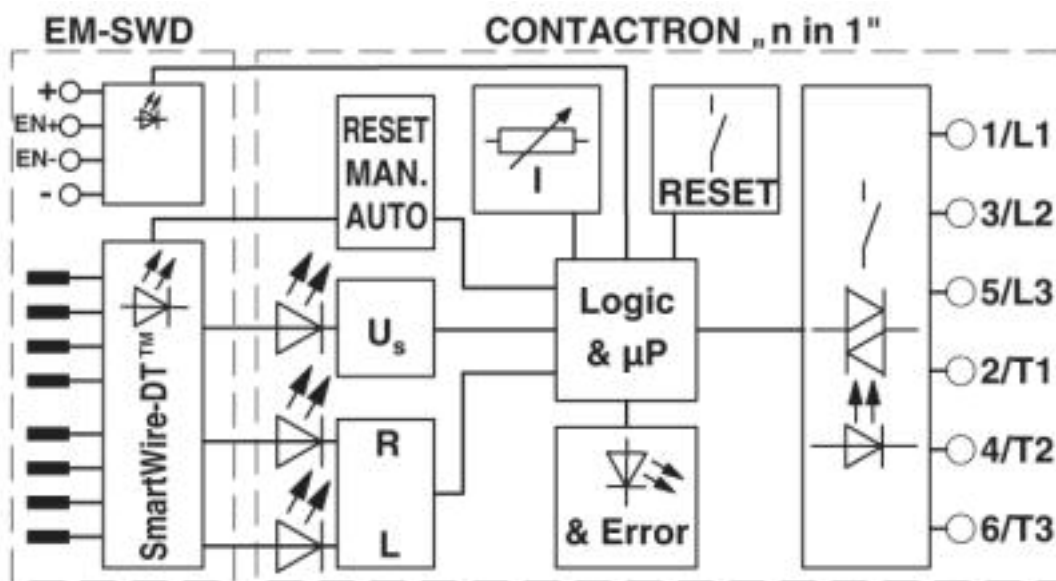
| | |
|-----------------------|-----------------------|
| Designation | Standards/regulations |
| Standards/regulations | IEC 60947-1 |
| | EN 60947-4-2 |
| | IEC 61508 |
| | ISO 13849 |

Environmental Product Compliance

| | |
|------------|---|
| REACH SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 50 |
| | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

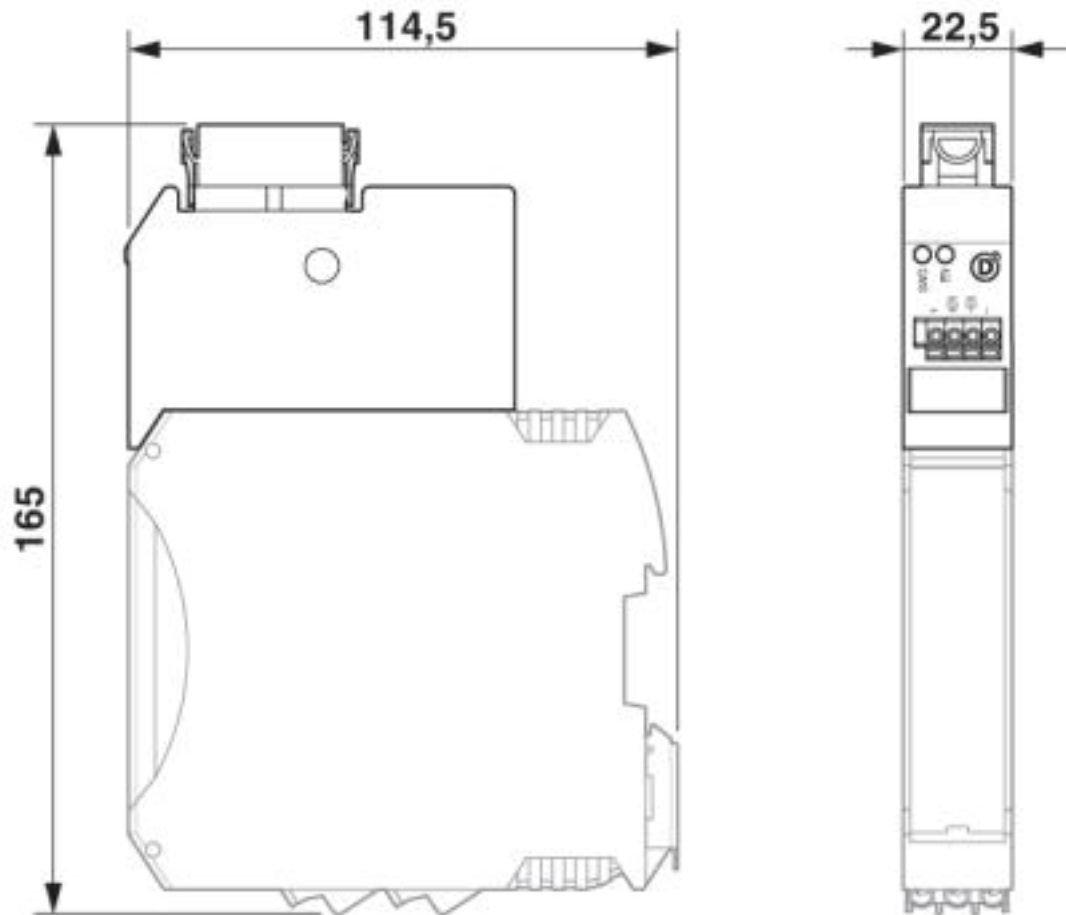
Drawings

Block diagram



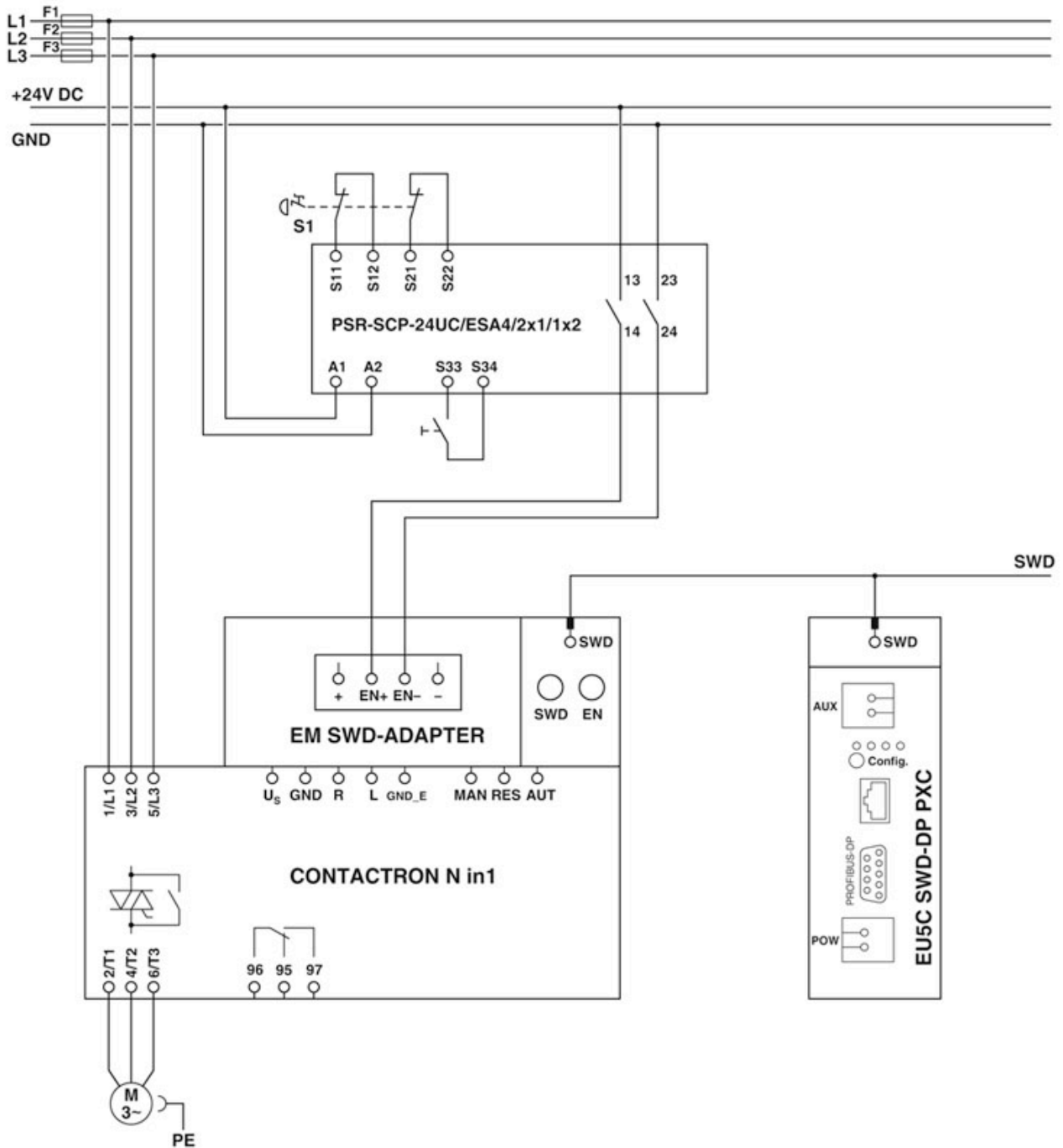
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Dimensional drawing



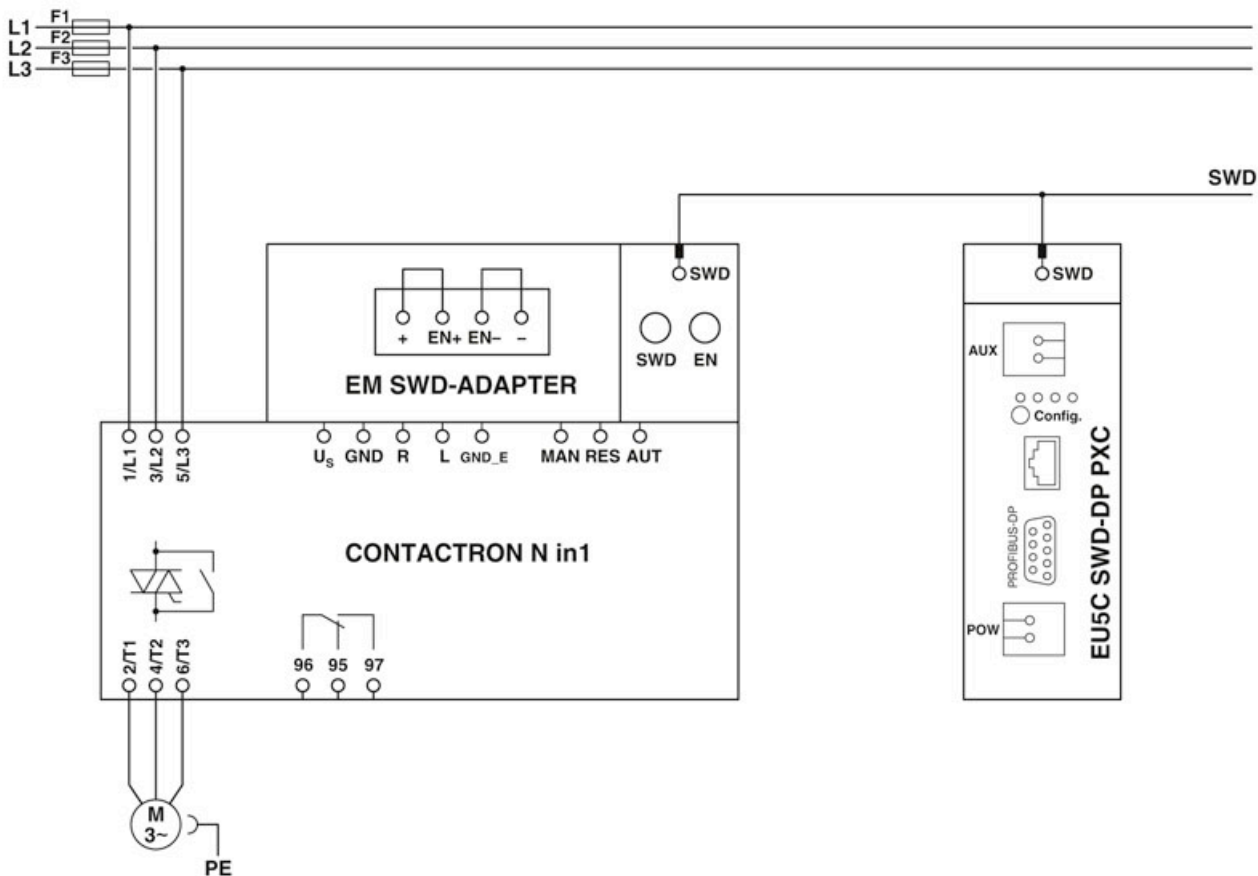
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Circuit diagram



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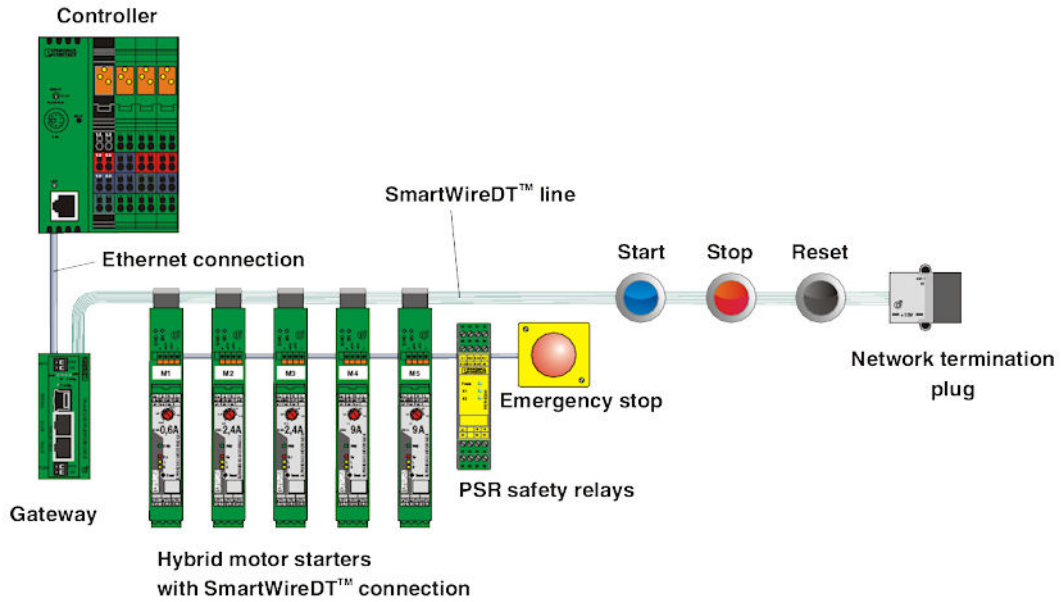
Circuit diagram



Wiring example without EMERGENCY STOP

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Application drawing



Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.0 | 27021100 |
| eCl@ss 4.1 | 27021100 |
| eCl@ss 5.0 | 27024000 |
| eCl@ss 5.1 | 27024000 |

Hybrid motor starter - ELR H5-IES-SC-SWD/500AC-2 - 2903117

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 6.0 | 27024000 |
| eCl@ss 7.0 | 27024002 |
| eCl@ss 8.0 | 27024002 |
| eCl@ss 9.0 | 27370905 |

ETIM

| | |
|----------|----------|
| ETIM 2.0 | EC001037 |
| ETIM 3.0 | EC001037 |
| ETIM 4.0 | EC001037 |
| ETIM 5.0 | EC001037 |
| ETIM 6.0 | EC001037 |
| ETIM 7.0 | EC001037 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30211915 |
| UNSPSC 7.0901 | 39121514 |
| UNSPSC 11 | 39121514 |
| UNSPSC 12.01 | 39121514 |
| UNSPSC 13.2 | 25173902 |
| UNSPSC 18.0 | 25173902 |
| UNSPSC 19.0 | 25173902 |
| UNSPSC 20.0 | 25173902 |
| UNSPSC 21.0 | 25173902 |

Approvals

Approvals

Approvals

CCC / EAC


Ex Approvals

Approval details

| | | |
|-----|--|------------------|
| CCC | | 2016010304900298 |
|-----|--|------------------|

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Approvals

| | | |
|-----|---|--------------------------|
| EAC |  | RU C- DE.A*30.B.01082 |
|-----|---|--------------------------|

Accessories

Accessories

Assembly adapter

Power distribution board - EM-CPS-225 - 1002634



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

Power distribution board - EM-CPS-405 - 1002635



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

Connection module - EM-CPS-TB3/63A - 1002633



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

Assembly tool

Tool - SWD4-CRP-1 PXC - 2903110



SmartWire DT[™] pliers for device plugs

Device marking

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Accessories

Plastic label - US-EMLP (15X5) - 0828790



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

Plastic label - UC-EMLP (15X5) - 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

Mounting material

Plug - SWD4-8SF2-5 PXC - 2903107



SmartWire DT™ device plug, 8-pos.