

Electronic device circuit breaker - EC-E1 1A - 0903023

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Electronic circuit breaker, signal contact: 1 N/O contact, nominal current: 1 A

Your advantages

- ✓ A combination of active electronic current limitation in the event of short circuit and overload shutdown ensures that the circuit breaker can respond to overloads faster than the switched-mode power supply unit
- ✓ Selective protection of all 24 V DC load circuits at switched-mode power supply units
- ✓ The residual current is always limited to 1.3 - 1.8 times the nominal current



Key Commercial Data

| | |
|--------------|---|
| Packing unit | 6 pc |
| GTIN |  4 046356 327992 |
| GTIN | 4046356327992 |

Technical data

General

| | |
|--|--|
| Installation instructions | When mounted in rows without convection cooling, the nominal device current should only be led to a maximum of 80% due to the thermal effect during continuous operation (100% operating factor). Special precautionary measures must be taken in systems or machines, to prevent components from restarting (e.g., use of a safety PLC). Parallel connection of multiple circuit breakers is not permitted. |
| Mounting type | DIN rail: 35 mm |
| Color | black |
| Number of positions | 1 |
| Flammability rating according to UL 94 | V0 |

Electrical data

| | |
|---------------------|------------------|
| Fuse | electronic |
| Fuse type | Automatic device |
| Rated surge voltage | 0.5 kV |

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Technical data

Electrical data

| | |
|------------------------------------|---|
| Operating voltage | 24 V DC |
| | 18 V DC ... 32 V DC |
| Nominal current I_N | 1 A |
| Required backup fuse | not required, integrated failsafe element |
| Dielectric strength | max. 32 V DC (Load circuit) |
| Degree of pollution | 2 |
| Switching capacity I_{CN} | Active current limitation |
| Closed-circuit current range I_0 | typ. 25 mA \pm 5 mA (When switched on) |

Dimensions

| | |
|------------------|---------|
| Height | 83 mm |
| Width | 12.5 mm |
| Depth | 80 mm |
| Height NS 35/7,5 | 83 mm |
| Height NS 35/15 | 90.5 mm |

Ambient conditions

| | |
|---------------------------------|---------------------------------|
| Degree of protection | IP20 (Housing) |
| Ambient temperature (operation) | 0 °C ... 50 °C (non-condensing) |

Connection data

| | |
|--|---------------------|
| Conductor cross section solid min. | 0.5 mm ² |
| Conductor cross section solid max. | 16 mm ² |
| Conductor cross section flexible min. | 0.5 mm ² |
| Conductor cross section flexible max. | 16 mm ² |
| Conductor cross section AWG min. | 20 |
| Conductor cross section AWG max. | 6 |
| Conductor cross section flexible, with ferrule without plastic sleeve min. | 0.5 mm ² |
| Conductor cross section flexible, with ferrule without plastic sleeve max. | 10 mm ² |
| Conductor cross section flexible, with ferrule with plastic sleeve min. | 0.5 mm ² |
| Conductor cross section flexible, with ferrule with plastic sleeve max. | 10 mm ² |
| 2 conductors with same cross section, solid min. | 0.5 mm ² |
| 2 conductors with same cross section, solid max. | 4 mm ² |
| 2 conductors with same cross section, stranded min. | 0.5 mm ² |
| 2 conductors with same cross section, stranded max. | 4 mm ² |
| Two conductors with the same cross section stranded, with ferrule and without plastic sleeve, minimum | 0.5 mm ² |
| Two conductors with the same cross section stranded, with ferrule and without plastic sleeve, maximum | 2.5 mm ² |
| Two conductors with the same cross section, flexible, with TWIN ferrules, with plastic sleeve, minimum | 0.5 mm ² |
| Two conductors with the same cross section, flexible, with TWIN ferrules, with plastic sleeve, maximum | 6 mm ² |
| Connection method | Screw connection |

Electronic device circuit breaker - EC-E1 1A - 0903023

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Connection data

| | |
|-----------------------|--------|
| Stripping length | 10 mm |
| Screw thread | M4 |
| Tightening torque max | 1.2 Nm |

Standards and Regulations

| | |
|--------------------------|------------------|
| Standards/specifications | UL 508 |
| | CSA 22.2 No. 14 |
| | UL 2367 |
| | CSA 22.2 No. 142 |
| | CSA 22.2 No. 213 |
| | UL 1604 |

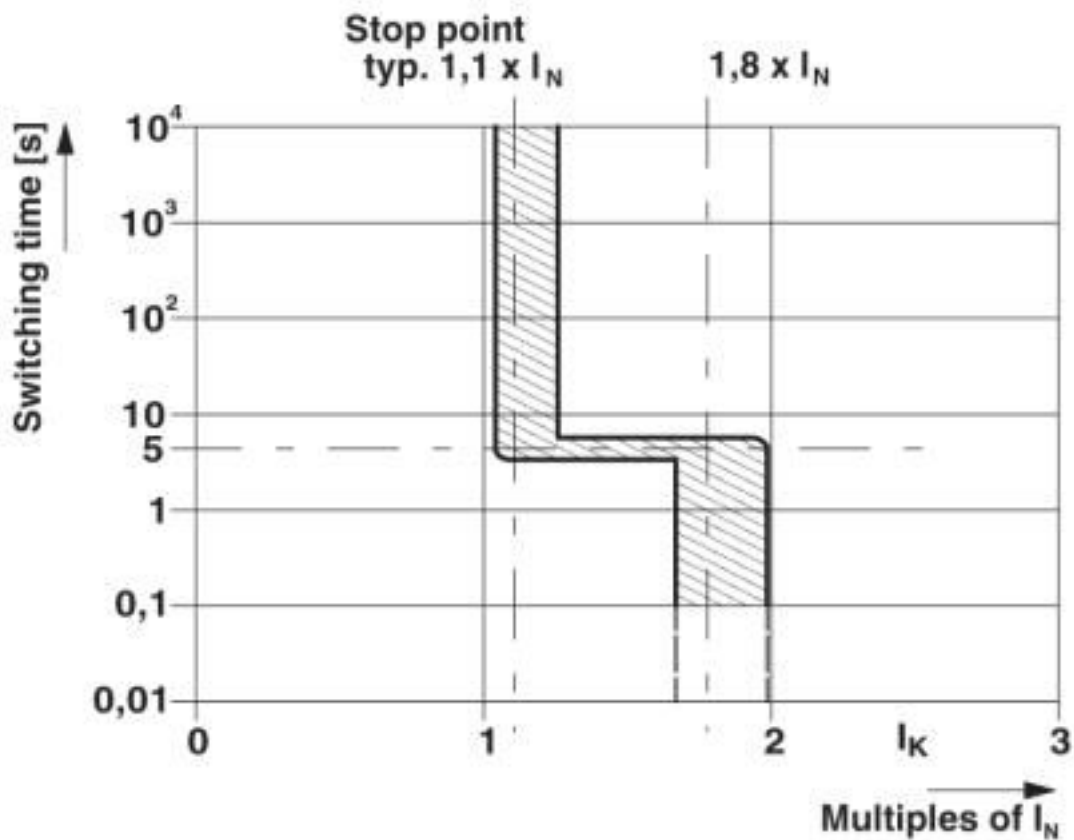
Environmental Product Compliance

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

Drawings

Electronic device circuit breaker - EC-E1 1A - 0903023

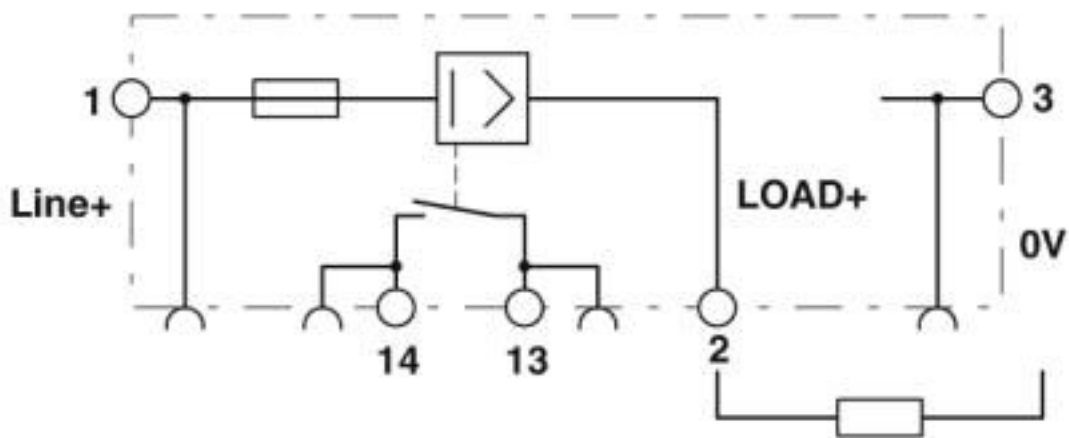
Diagram



Trigger characteristic

Circuit diagram

EC-E 1 ...



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Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27140401 |
| eCl@ss 4.0 | 27141100 |
| eCl@ss 4.1 | 27141100 |
| eCl@ss 5.0 | 27141100 |
| eCl@ss 5.1 | 27141100 |
| eCl@ss 6.0 | 27141100 |
| eCl@ss 7.0 | 27141116 |
| eCl@ss 8.0 | 27141116 |
| eCl@ss 9.0 | 27141116 |

ETIM

| | |
|----------|----------|
| ETIM 2.0 | EC000899 |
| ETIM 3.0 | EC000899 |
| ETIM 4.0 | EC000899 |
| ETIM 5.0 | EC000899 |
| ETIM 6.0 | EC000899 |
| ETIM 7.0 | EC000899 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30211812 |
| UNSPSC 7.0901 | 39121411 |
| UNSPSC 11 | 39121411 |
| UNSPSC 12.01 | 39121411 |
| UNSPSC 13.2 | 39121410 |
| UNSPSC 18.0 | 39121410 |
| UNSPSC 19.0 | 39121410 |
| UNSPSC 20.0 | 39121410 |
| UNSPSC 21.0 | 39121410 |

Approvals

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DNV GL / UL Listed / UL Recognized / cUL Listed / cULus Listed

Ex Approvals

UL Recognized / CSA

Approval details

Electronic device circuit breaker - EC-E1 1A - 0903023

Approvals

| | | | |
|--------|--|---|------------|
| DNV GL | | https://approvalfinder.dnvgl.com/ | TAE00002HC |
|--------|--|---|------------|

| | | | |
|-----------|--|---|---------------|
| UL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 140324 |
|-----------|--|---|---------------|

| | | | |
|---------------|--|---|---------------|
| UL Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 317172 |
|---------------|--|---|---------------|

| | | | |
|------------|--|---|---------------|
| cUL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 140324 |
|------------|--|---|---------------|

| | | | |
|--------------|--|--|--|
| cULus Listed | | | |
|--------------|--|--|--|

Accessories

Accessories

Bridge

Continuous plug-in bridge - FBST 500-PLC BU - 2966692



Continuous plug-in bridge, length: 500 mm, color: blue

Continuous plug-in bridge - FBST 500-PLC RD - 2966786



Continuous plug-in bridge, length: 500 mm, color: red

Electronic device circuit breaker - EC-E1 1A - 0903023

Accessories

Continuous plug-in bridge - FBST 500 TMC-N GY - 0901028



Continuous plug-in bridge, mounting type: Plug-in mounting, Color: gray

DIN rail

DIN rail perforated - NS 35/ 7,5 PERF 2000MM - 0801733



DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

DIN rail, unperforated - NS 35/ 7,5 CU UNPERF 2000MM - 0801762



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Copper, uncoated, length: 2000 mm, color: copper-colored

DIN rail, unperforated - NS 35/15 UNPERF 2000MM - 1201714



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

DIN rail, unperforated - NS 35/15 CU UNPERF 2000MM - 1201895



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Copper, uncoated, length: 2000 mm, color: copper-colored

Electronic device circuit breaker - EC-E1 1A - 0903023

Accessories

DIN rail, unperforated - NS 35/15-2,3 UNPERF 2000MM - 1201798



DIN rail, unperforated, Standard profile 2.3 mm, width: 35 mm, height: 15 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

DIN rail, unperforated - NS 35/15 AL UNPERF 2000MM - 1201756



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Aluminum, uncoated, length: 2000 mm, color: silver

DIN rail perforated - NS 35/15 PERF 2000MM - 1201730



DIN rail perforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

End block

End clamp - CLIPFIX 35-5 - 3022276



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, with parking option for FBS...5, FBS...6, KSS 5, KSS 6, width: 5.15 mm, color: gray

End clamp - E/UK 1 - 1201413



End clamps, for supporting the ends of double-level and three-level terminal blocks, width: 10 mm, color: gray

Screwdriver tools

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Accessories

Screwdriver - SZS 0,6X3,5 - 1205053



Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

Terminal marking

Marker for terminal blocks - UC-TMF 12 - 0819233



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 12 mm, lettering field size: 11.45 x 5.1 mm, Number of individual labels: 40

Zack Marker strip, flat - ZBF 12:UNBEDRUCKT - 0809735



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 12 mm, lettering field size: 5.15 x 12.15 mm, Number of individual labels: 5

Marker for terminal blocks - UCT-TMF 12 - 0829214



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snap into flat marker groove, for terminal block width: 12 mm, lettering field size: 11.2 x 4.7 mm, Number of individual labels: 30

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