# UW 50/S - Panel feed-through terminal block

1713709

https://www.phoenixcontact.com/us/products/1713709

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The figure shows the standard item

Panel feed-through terminal block, connection method: Screw connection with tension sleeve, Screw connection with tension sleeve, number of positions: 1, load current: 150 A, connection direction of the conductor to plug-in direction: 0 °, width: 18.8 mm, color: gray

## Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Tool-free snap-in principle enables easy mounting on the device panel
- Automatic panel thickness compensation enables universal use

## Commercial data

| | |
|---|---|
| Item number | 1713709 |
| Packing unit | 20 pc |
| Minimum order quantity | 20 pc |
| Sales key | AA28 |
| Product key | AA1FDA |
| GTIN | 4055626325996 |
| Weight per piece (including packing) | 93.27 g |
| Weight per piece (excluding packing) | 89.3 g |
| Customs tariff number | 85369010 |
| Country of origin | CN |

## Technical data

### Product properties

| | |
|---|---|
| Product type | Panel feed-through terminal block |
| Product family | UW 50 |
| Number of positions | 1 |
| Pitch | 18.8 mm |
| Number of connections | 2 |
| Number of potentials | 1 |

Fitting of components

| | |
|---|---|
| Partial assembly | No |

### Electrical properties

Properties

| | |
|---|---|
| Nominal current $I_N$ | 150 A |
| Nominal voltage $U_N$ | 800 V |
| Rated voltage (III/3) | 800 V |
| Rated surge voltage (III/3) | 8 kV |
| Rated voltage (III/2) | 1000 V |
| Rated surge voltage (III/2) | 8 kV |
| Rated voltage (II/2) | 1000 V |
| Rated surge voltage (II/2) | 6 kV |

### Connection data

Connection technology

| | |
|---|---|
| Connector system | UW 50 |
| Nominal cross section | 50 mm² |

Conductor connection exterior

| | |
|---|---|
| Connection method | Screw connection with tension sleeve |
| Connection direction of the conductor to plug-in direction | 0 ° |
| Single-conductor/terminal point multi-stranded | 16 mm² ... 50 mm² |
| Conductor cross-section flexible | 16 mm² ... 50 mm² |
| Conductor cross-section, flexible, with ferrule, without plastic sleeve | 10 mm² ... 50 mm² |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve | 10 mm² ... 50 mm² |
| 2 conductors with same cross section, rigid | 6 mm² ... 16 mm² |
| 2 conductors with same cross section, flexible | 10 mm² ... 16 mm² |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 6 mm² ... 16 mm² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 6 mm² ... 10 mm² |
| Internal cylindrical gage | A10 / B10 |

| | |
|---|---|
| Stripping length | 24 mm |
| Tightening torque | 6 Nm ... 8 Nm |

Conductor connection interior

| | |
|---|---|
| Connection method | Screw connection with tension sleeve |
| Connection direction of the conductor to plug-in direction | 0 ° |
| Single-conductor/terminal point multi-stranded | 16 mm² ... 50 mm² |
| Conductor cross-section flexible | 16 mm² ... 50 mm² |
| Conductor cross-section, flexible, with ferrule, without plastic sleeve | 10 mm² ... 50 mm² |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve | 10 mm² ... 50 mm² |
| 2 conductors with same cross section, rigid | 6 mm² ... 16 mm² |
| 2 conductors with same cross section, flexible | 10 mm² ... 16 mm² |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 6 mm² ... 16 mm² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 6 mm² ... 10 mm² |
| Internal cylindrical gage | A10 / B10 |
| Stripping length | 24 mm |
| Tightening torque | 6 Nm ... 8 Nm |

## Mounting

| | |
|---|---|
| Panel thickness | 1 mm...4 mm |

## Material specifications

Material data - contact

| | |
|---|---|
| Note | WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201 |
| Contact material | Al alloy |
| Surface characteristics | tin-plated |

Material data - housing

| | |
|---|---|
| Color (Housing) | gray (7042) |
| Insulating material | PA |
| Insulating material group | I |
| CTI according to IEC 60112 | 600 |
| Flammability rating according to UL 94 | V0 |
| Glow wire flammability index GWFI according to EN 60695-2-12 | 850 |
| Glow wire ignition temperature GWIT according to EN 60695-2-13 | 775 |
| Temperature for the ball pressure test according to EN 60695-10-2 | 125 °C |

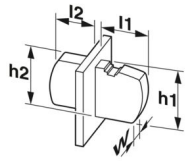
## Notes

| | |
|---|---|
| Notes on safety | The cable entry funnel is not touch-proof. Never connect or disconnect the terminal when it is energized. Take appropriate steps to ensure touch proofness. |

Safety note

| | |
|---|---|
| Safety note | • Only electrically qualified personnel may install and operate the product.<br>To recognize and prevent danger, the qualified personnel must be familiar with the basics of electrical engineering. |
| | • Observe the technical data provided here and refer to the documents listed under “Downloads”. The download area contains important information, such as installation notes, technical drawings, and 3D data. |
| | • The cable entry funnel is not safe to touch. Never connect or disconnect the terminal when it is energized. Take appropriate steps to ensure touch protection. |

## Dimensions

| | |
|---|---|
| Dimensional drawing |  |
| Pitch | 18.8 mm |
| | 18.8 mm |
| Width [w] | 18.8 mm |

External dimensions

| | |
|---|---|
| Height [h1] | 54 mm |
| Length [l1] | 35 mm |

Internal dimensions

| | |
|---|---|
| Height [h2] | 54 mm |
| Length [l2] | 45.3 mm |

## Mechanical tests

Test for conductor damage and slackening

| | |
|---|---|
| Specification | IEC 60947-7-1:2009-04 |
| Result | Test passed |

Pull-out test

| | |
|---|---|
| Specification | IEC 60947-7-1:2009-04 |
| Conductor cross-section/conductor type/tractive force setpoint/actual value | 16 mm² / stranded / > 100 N |
| | 16 mm² / flexible / > 100 N |
| | 50 mm² / stranded / > 236 N |
| | 50 mm² / flexible / > 236 N |

## Electrical tests

Temperature-rise test

| | |
|---|---|
| Specification | IEC 60947-7-1:2009-04 |

| | |
|---|---|
| Requirement temperature-rise test | Increase in temperature ≤ 45 K |

Short-time withstand current

| | |
|---|---|
| Specification | IEC 60947-7-1:2009-04 |

Air clearances and creepage distances | 1. Insulation coordination

| | |
|---|---|
| Specification | IEC 60947-1:2007-06 + A1:2010-12 |
| Insulating material group | I |
| Comparative tracking index (IEC 60112) | CTI 600 |
| Rated insulation voltage (III/3) | 800 V |
| Rated surge voltage (III/3) | 8 kV |
| minimum clearance value - non-homogenous field (III/3) | 8 mm |
| minimum creepage distance (III/3) | 10 mm |
| Rated insulation voltage (III/2) | 1000 V |
| Rated surge voltage (III/2) | 8 kV |
| minimum clearance value - non-homogenous field (III/2) | 8 mm |
| minimum creepage distance (III/2) | 8 mm |
| Rated insulation voltage (II/2) | 1000 V |
| Rated surge voltage (II/2) | 6 kV |
| minimum clearance value - non-homogenous field (II/2) | 5.5 mm |
| minimum creepage distance (II/2) | 5.5 mm |

## Environmental and real-life conditions

Vibration test

| | |
|---|---|
| Specification | IEC 60068-2-6:2007-12 |
| Frequency | 10 - 150 - 10 Hz |
| Sweep speed | 1 octave/min |
| Amplitude | 0.35 mm (10 Hz ... 60.1 Hz) |
| Acceleration | 5g (60.1 Hz ... 150 Hz) |
| Test duration per axis | 2.5 h |
| Test directions | X-, Y- and Z-axis |

Shocks

| | |
|---|---|
| Specification | IEC 60068-2-27:2008-02 |
| Pulse shape | Semi-sinusoidal |
| Acceleration | 50g |
| Shock duration | 11 ms |
| Test directions | X-, Y- and Z-axis (pos. and neg.) |

Glow-wire test

| | |
|---|---|
| Specification | IEC 60695-2-11:2014-02 |
| Temperature | 960 °C |
| Time of exposure | 30 s |

Ambient conditions

| | |
|---|---|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |

| | |
|---|---|
| Relative humidity (storage/transport) | 30 % ... 70 % |
| Ambient temperature (assembly) | -5 °C ... 100 °C |
| Ambient temperature (operation) | -40 °C ... 100 °C (Depending on the current carrying capacity/derating curve) |

Ambient conditions

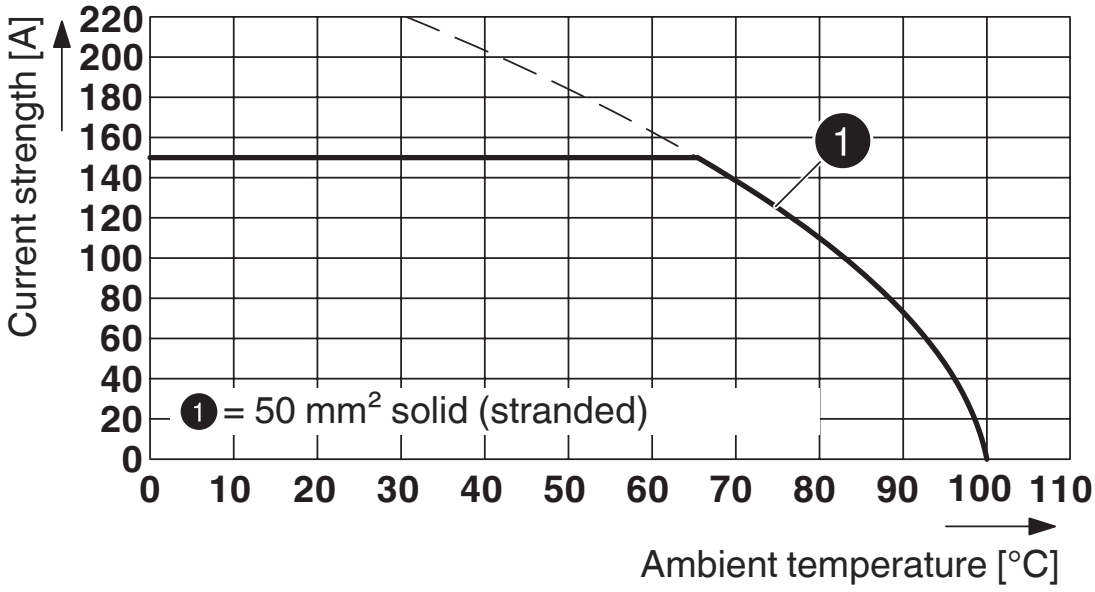
| | |
|---|---|
| Ambient temperature (operation) | -40 °C ... 100 °C (Depending on the current carrying capacity/derating curve) |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport) | 30 % ... 70 % |
| Ambient temperature (assembly) | -5 °C ... 100 °C |

## Packaging specifications

| | |
|---|---|
| Type of packaging | packed in cardboard |

## Drawings

Diagram




Type: UW 50/S

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1713709

**cULus Recognized**
Approval ID: E60425-20171106

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| B | | | | |
| | 600 V | 151 A | 6 - 2/0 | - |
| C | | | | |
| | 600 V | 151 A | 6 - 2/0 | - |

**VDE approval of drawings**
Approval ID: 40047737

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 1000 V | 150 A | - | 16 - 50 |

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27141134 |
| ECLASS-15.0 | 27141134 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC001283 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 39121400 |

## Environmental product compliance

EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |

China RoHS

| | |
|---|---|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|---|---|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |


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