# INSTALLATION INSTRUCTIONS & CONDITIONS FOR SAFE USE

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**Modular TERMINAL Blocks: W- Series**

**TÜV 20 ATEX 8502 U**
**IECEx TUR 20.0014 U**
**TÜV 22 UKEX 7091 U**

Standards:
EN 60079-0:2018 and EN 60079-7:2015 A1:2018
IEC 60079-0: 7th Edition and IEC 60079-7: 5.1th Edition

**Fuse Terminal Blocks: W2T 4 FS-FT…**

| Version: | Type* | Order No |
|---|---|---|
| | W2T 4 FS-FT BK | 2893870000 |
| | W2T 4 FS-FT 10-36V BK | 2893900000 |
| | W2T 4 FS-FT 30-70V BK | 2893930000 |
| | W2T 4 FS-FT 60-150V BK | 2893960000 |
| | W2T 4 FS-FT 100-250V BK | 2893990000 |
| | W2T 4 FS-FT BK STB | 2894000000 |
| | W2T 4 FS-FT 10-36V BK STB | 2894010000 |
| | W2T 4 FS-FT 30-70V BK STB | 2894020000 |
| | W2T 4 FS-FT 60-150V BK STB | 2894030000 |
| | W2T 4 FS-FT 100-250V BK STB | 2894040000 |
| | W2T 4 FS-FT-PE BK | 2894050000 |
| | W2T 4 FS-FT-PE 10-36V BK | 2894060000 |
| | W2T 4 FS-FT-PE 30-70V BK | 2894070000 |
| | W2T 4 FS-FT-PE 60-150V BK | 2894080000 |
| | W2T 4 FS-FT-PE 100-250V BK | 2894090000 |
| | W2T 4 FS-FT-PE BK STB | 2894100000 |
| | W2T 4 FS-FT-PE 10-36V BK STB | 2894110000 |
| | W2T 4 FS-FT-PE 30-70V BK STB | 2894120000 |
| | W2T 4 FS-FT-PE 60-150V BK STB | 2894130000 |
| | W2T 4 FS-FT-PE 100-250V BK STB | 2894140000 |

| Accessories: | Type* | Order No |
|---|---|---|
| Endplate | WEP 2T 4 | 2894240000 |
| End bracket | WEW 35/2 SW | 1061210000 |
| Terminal rail | TS 35/… acc.to IEC 60715 | |
| Cross-connection | Plugable* | |
| | ZQV 4N/2 | ZQV 4N/7 |
| | ZQV 4N/3 | ZQV 4N/8 |
| | ZQV 4N/4 | ZQV 4N/9 |
| | ZQV 4N/5 | ZQV 4N/10 |
| | ZQV 4N/6 | |

**Insulation material:**

| | |
|---|---|
| - Type | Wemid |
| - Tracking resistance (A) to IEC 60112 | CTI ≥ 600 |
| - Flammability class to UL 94 | V0 |
| - Operating temperature range | -60°C…+130°C (insulating material limit) |

* in all colours

**Technical data according to IEC/EN 60079-7 (increased safety "ec"):**

| | Rated Voltage Sepatate arrangement | Rated Voltage Compound arrangement |
|---|---|---|
| W2T 4 FS-FT BK | 550 V Basicmodule 250 V with fuse link | |
| W2T 4 FS-FT BK STB | | |
| W2T 4 FS-FT-PE BK | | |
| W2T 4 FS-FT-PE BK STB | | |
| W2T 4 FS-FT 10-36V BK | 10-36 V | |
| W2T 4 FS-FT 10-36V BK STB | | |
| W2T 4 FS-FT-PE 10-36V BK | | |
| W2T 4 FS-FT-PE 10-36V BK STB | | |
| W2T 4 FS-FT 30-70V BK | 30-70 V | |
| W2T 4 FS-FT 30-70V BK STB | | |
| W2T 4 FS-FT-PE 30-70V BK | | |
| W2T 4 FS-FT-PE 30-70V BK STB | | |
| W2T 4 FS-FT 60-150V BK | 60-150 V | |
| W2T 4 FS-FT 60-150V BK STB | | |
| W2T 4 FS-FT-PE 60-150V BK | | |
| W2T 4 FS-FT-PE 60-150V BK STB | | |
| W2T 4 FS-FT 100-250V BK | 100-250 V | |
| W2T 4 FS-FT 100-250V BK STB | | |
| W2T 4 FS-FT-PE 100-250V BK | | |
| W2T 4 FS-FT-PE 100-250V BK STB | | |

The operating voltage is limited by the used fuse link or the LED (fuse blown indication).

| | |
|---|---|
| - Rated current | 6,3 A |
| - Rated power dissipation Pvk | |
| Separate arrangement | 4 W (6,3 A) |
| Compound arrangement | 2,5 W (6,3 A) |
| - Rated conductor cross section | 4 mm² |
| - Conductor cross section solid | 0,5 - 4,0 mm² |
| - Conductor cross section flexible | 0,5 - 4,0 mm² |
| - Conductor cross section flexible with ferrule | 0,5 - 4,0 mm² |
| - Cross section, American Wire Gauge | 24 - 12 AWG |
| - Tightening torque range, terminal screw | 0,5 - 0,8 Nm |
| - Tightening torque range, STB | 0,5 - 0,7 Nm |
| - Stripping length | 8 mm |

**CONDITIONS FOR SAFE USE:**

This document should be read carefully before starting installation. Respect the information stated on the certification label of the terminal, e.g. Type/s of protection, gas group and temperature class. The installation of these terminals should only be carried out by authorized and qualified personnel whose training has included instruction on the various types of protection and installation practices, the relevant rules and regulations, and on the general principles of area classification.

The fuse holder shall be fully closed all times. Do not remove or replace the fuse when energized.

The fuse link shall not be opened or replaced in the presence of a hazardous area. The associated enclosure shall be marked "Switch off supply and discharge any stored energy safely before removing fuse(s)". The "stored energy" statement may be replaced by a statement declaring a de-energizing time before opening.

The fuse terminal is safe under the following conditions:
- Use only fuse links according to the Table 1.
- The temperature class must be verified in the final customers specific application.
- T4 based on 130 °C of the insulating material and 85 °C for the fuse carrier.

The informativ temperatures of Table 2 were determined with a nominal current of 100 % according to the IEC 60947-7-3.

The fuse terminal blocks maybe used only for short circuit protecting and overload protectionapplications based on the operational self heating at nominal current in combination with the specified fuse links at ambient temperatures according to the following table:

**Table 1**

| **Cartridge fuse-links (5 x 20 mm) **** | **EN 60127-2 Spec. Sheet** | **Rated current** | **Breaking capacity** |
|---|---|---|---|
| ** only permissible for sandfilled fuse link | 1 | 50 mA … 10 A | 1,5 kA |
| | 2 | 32 mA … 10 A | 35 A resp.10 x $I_N$ |
| | 3 | 32 mA … 10 A | 35 A resp.10 x $I_N$ |
| | 5 | 100 mA … 10 A | 1,5 kA |
| | 6 | 32 mA … 10 A | 150 A |

**Table 2:**
W2T 4 FS-FT / W2T 4 FS-FT-PE
W2T 4 FS-FT STB / W2T 4 FS-FT-PE STB

***1. Short-circuit***

| | | Temperature class: | | |
|---|---|---|---|---|
| | | T4 (120 °C) | T5 (100 °C) | T6 (85 °C) |
| | Cartridge fuse-link | | max. ambient temperature (°C) | |
| Separate arrangement: | 4 W/ 6,3A | 83 | 58 | 43 |
| | Cartridge fuse-link | | max. ambient temperature (°C) | |
| Compound arrangement: | 2,5 W/ 6,3A | 34 | 9 | - |

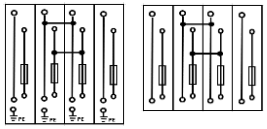
***2. Short-circuit and overload protection***

| | | Temperature class: | | |
|---|---|---|---|---|
| | | T4 (120 °C) | T5 (100 °C) | T6 (85 °C) |
| | Cartridge fuse-link | | max. ambient temperature (°C) | |
| Separate arrangement: | 1,6 W/ 6,3A | 62 | 37 | 22 |
| | Cartridge fuse-link | | max. ambient temperature (°C) | |
| Compound arrangement: | 1,6 W/ 6,3A | 31 | 6 | - |

## IECEx / ATEX / UKCA Terminal and Cross-Connection Arrangements:

**Max voltage data according to IEC/EN 60079-7 :**
***Application Case***

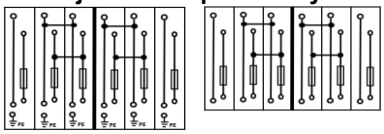
**A - Continuous no difference between one or two cross connections**



550 V 550 V

The operating voltage is limited by the used fuse link or the LED (fuse blown indication).

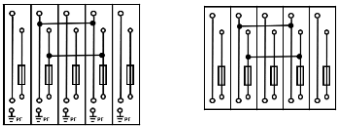
**C - Adjacent – separated by an end plate no difference between one or two cross-connections**



550 V 550 V

The operating voltage is limited by the used fuse link or the LED (fuse blown indication).

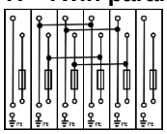
**D - Intermediate - bridging one or more unconnected terminals (e.g. every 3rd terminal) no difference between one or two cross connections**

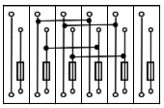


550 V 550 V

The operating voltage is limited by the used fuse link or the LED (fuse blown indication).

**H - Twin parallel**





440 V 440 V

The operating voltage is limited by the used fuse link or the LED (fuse blown indication).

Information for further cross-connector arrangements will be provided on request.

**Mounting instructions:**

The fuse terminal blocks are suitable for application in enclosures in atmospheres with flammable gases or combustible dust. For use in flammable gases these enclosures must satisfy the requirements according to IEC/EN60079-0 and IEC/EN60079-7. For use in combustible dust these enclosures must satisfy the requirements according to IEC/EN60079-0 and IEC/EN60079-31.

**Schedule of Limitations:**

The fuse terminal blocks are suitable for use in enclosures in atmospheres with flammable gases or combustible dust. For flammable gases these enclosures must satisfy the requirements according to IEC/EN 60079-0 and 60079-7. For combustible dust these enclosures must satisfy the requirements according to IEC/EN 60079-31.

In combination with other terminal block series and sizes and if other accessories are used, the applicable creepage and clearance distances shall be met.

Regarding the use of accessories the instructions of the manufacturer must be followed.

The terminal blocks shall be placed inside a suitable IECEx/ATEX certified IP54 enclosure for gas atmosphere. For dust atmosphere the terminal blocks shall be mounted inside a suitable IECEx/ATEX certified ‘t’ enclosure (IEC/EN60079-31).

The enclosure shall be constructed to block all sun and UV light from affecting the terminal blocks.

WARNING – Do not remove or replace the fuse disconnect lever when energized!

When using the W2T 4 FS-FT... terminal blocks with other terminal blocks series or sizes or accessories, the requirements for clearance and creepages distances according to IEC/EN 60079-7 has to be observed. Regarding the use of covers, cross-connectors and end brackets the instructions of the manufacturer must be followed.

For cross connection accessories current rating, resistance across the terminal please refer to the table under “Technical data” above.

No other wire sizes or types than the ones specified in instructions must be used. The terminal blocks must either be mounted next to another block of the same type and size or with an end plate.

Unused terminals shall be tightened.

If smaller conductor cross sections than the rated conductor cross sections are used, then the corresponding lower current shall be stated in the Certificate of the complete apparatus.

- Cross connections with blank ends shall not be used.
- Manually cut cross connections shall not be used.

**Essential Health and Safety Requirements:**

Concerning ESRs this Schedule verifies compliance with the Annex III of ATEX directive only. By placing the product on the market, the of this manufacturer declares compliance with other relevant Directives, and all other safety related requirements including those of Annex II of this Directive.