

INSTALLATION INSTRUCTIONS
& CONDITIONS FOR SAFE USE

 II 3 G Ex ec IIC Gc

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: W2C 4 FS...

Version:

Type

W2C 4 FS*
W2C 4 FS 10-36V*
W2C 4 FS 30-70V*
W2C 4 FS 60-150V*
W2C 4 FS 100-250V*
W2C 4 FS-PE*
W2C 4 FS-PE 10-36V*
W2C 4 FS-PE 30-70V*
W2C 4 FS-PE 60-150V*
W2C 4 FS-PE 100-250V*
W2C 4 FS * STB
W2C 4 FS 10-36V * STB
W2C 4 FS 30-70V * STB
W2C 4 FS 60-150V * STB
W2C 4 FS 100-250V * STB
W2C 4 FS-PE * STB
W2C 4 FS-PE 10-36V * STB
W2C 4 FS-PE 30-70V * STB
W2C 4 FS-PE 60-150V * STB
W2C 4 FS-PE 100-250V * STB

Accessories:

Type

Endplate
End bracket

WEP 2C 4*
WEW 35/2 SW*

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
- Tracking resistance (A) to IEC 60112
- Flammability class to UL 94

Wemid
CTI ≥ 600
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		The operating voltage is limited by the used fuse link or the LED (fuse blown indication).
Seperate arrangement	Compound arrangement	
W2C 4 FS BK	550 V Basicmodule 250 V with fuse link	
W2C 4 FS-PE BK		
W2C 4 FS BK STB		
W2C 4 FS-PE BK STB		
W2C 4 FS 10-36V BK	10-36 V	
W2C 4 FS-PE 10-36V BK		
W2C 4 FS 10-36V BK STB		
W2C 4 FS-PE 10-36V BK STB		
W2C 4 FS 30-70V BK	30-70 V	
W2C 4 FS-PE 30-70V BK		
W2C 4 FS 30-70V BK STB		
W2C 4 FS-PE 30-70V BK STB		
W2C 4 FS 60-150V BK	60-150 V	
W2C 4 FS-PE 60-150V BK		
W2C 4 FS 60-150V BK STB		
W2C 4 FS-PE 60-150V BK STB		
W2C 4 FS 100-250V BK	100-250 V	
W2C 4 FS-PE 100-250V BK		
W2C 4 FS 100-250V BK STB		
W2C 4 FS-PE 100-250V BK STB		

- Rated current	6,3 A
- Rated power dissipation P _{vk}	
Separate arrangement	4 W (6,3 A)
Compound arrangement	2,5 W (6,3 A)
- Rated conductor cross section	4 mm ²
- Conductor cross section solid	0,5 - 4,0 mm ²
- Conductor cross section flexible	0,5 - 4,0 mm ²
- Conductor cross section flexible with ferrule	0,5 - 4,0 mm ²
- 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 90647-7-3.

The fuse terminal blocks maybe used only for short circuit protecting applications 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) ****

** only permissible for sandfilled fuse link

EN 60127-2 Spec. Sheet	Rated current	Breaking capacity
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:

W2C 4 FS BK / W2C 4 FS-PE BK

W2C 4 FS BK STB / W2C 4 FS-PE BK STB

1. Short-circuit

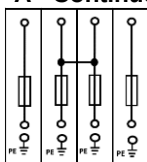
		Temperature class:		
		T4 (120 °C)	T5 (100 °C)	T6 (85 °C)
		max. ambient temperature (°C)		
Separate arrangement:	Cartridge fuse-link 4 W/ 6,3A	82	57	42
Compound arrangement:	Cartridge fuse-link 2,5 W/ 6,3A	36	11	-

2. Short-circuit and overload protection

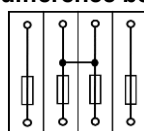
		Temperature class:		
		T4 (120 °C)	T5 (100 °C)	T6 (85 °C)
		max. ambient temperature (°C)		
Separate arrangement:	Cartridge fuse-link 1,6 W/ 6,3A	62	37	22
Compound arrangement:	Cartridge fuse-link 1,6 W/ 6,3A	30	5	-

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

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

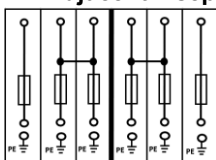
Application Case**A - Continuous no difference between one or two cross connections**

550 V

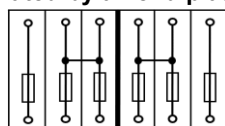


550 V

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

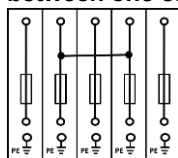
C - Adjacent – separated by an end plate no difference between one or two cross-connections

550 V

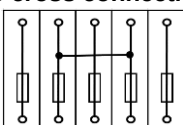


550 V

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

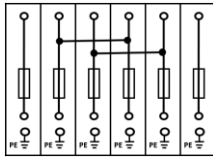
D - Intermediate - bridging one or more unconnected terminals (e.g. every 3rd terminal) no difference between one or two cross connections

550 V

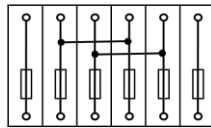


550 V

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

H - Twin parallel

550 V



550 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 W2C 4 FS... 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.

