INSTALLATION INSTRUCTIONS & CONDITIONS FOR SAFE USE

II 3 G Ex ec IIC Gc

Modular TERMINAL Blocks: S- Series

TÜV 24 ATEX 9191 U
IECEx TUR 24.0071 U

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

Fuse Terminal Blocks: SFS 4 2C

Version:	Type	Order No
	SFS 4 2C BK*	2941480000
	SFS 4 2C 10-36V BK*	2941490000
	SFS 4 2C 30-70V BK*	2941500000
	SFS 4 2C 60-150V BK*	2941510000
	SFS 4 2C 100-250V BK*	2941520000
in conjunction with:	S3C 4 PE	2874890000

Accessories:	Type	Order No
Endplate	SEP 3C 4	2874800000
End bracket	AEB 35 SC/1*	1991920000
Terminal rail	TS 35/… acc.to DIN EN 60715	

Cross-connection	Pluggable	Order No
	ZQV 4N/2*	1527930000
	ZQV 4N/3*	1527940000
	ZQV 4N/4*	1527970000
	ZQV 4N/5*	1527980000
	ZQV 4N/6*	1527990000
	ZQV 4N/7*	1528020000
	ZQV 4N/8*	1528030000
	ZQV 4N/9*	1528070000
	ZQV 4N/10*	1528090000

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	Compound arrangement	
SFS 4 2C BK	440 V Basicmodule 250 V with fuse link		
SFS 4 2C 10-36V BK	10-36 V		The operating voltage is limited by the used fuse link or the LED (fuse blown indication).
SFS 4 2C 30-70V BK	30-70 V		
SFS 4 2C 60-150V BK	60-150 V		
SFS 4 2C 100-250V BK	100-250 V		

- Rated current	6,3 A / ΔT < 40 K
- Rated power dissipation Pvk Separate arrangement Compound arrangement	 4 W (6,3 A) 2,5 W (6,3 A)
- Rated conductor cross section	4 mm²
- Conductor cross section solid	0,75 - 6 mm²
- Conductor cross section flexible	0,75 - 6 mm²
- Conductor cross section flexible with ferrule	0,75 - 4 mm²
- Cross section, American Wire Gauge	20 - 10 AWG
- Stripping length	12 mm

IECEx / ATEX Terminal and Cross-Connection Arrangements:

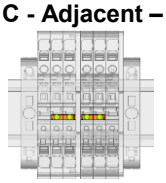
Max voltage data according to IEC/EN 60079-7 :
Application Case

A - Continuous no difference between one or two cross connections

440 V

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

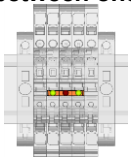
C - Adjacent – separated by an end plate no difference between one or two cross-connections



440 V

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

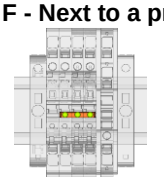
D - Intermediate - bridging one or more unconnected terminals (e.g. every 3rd terminal) no difference between one or two cross connections



440 V

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

F - Next to a protective conductor terminal (earth) with end plate



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.

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 replaced in the presence of a hazardous area and 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 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) **	**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:

SFS 4 2C:
Short-circuit protection

		Temperature class:		
		T4 (130 °C)	T5 (100 °C)	T6 (85 °C)
	Cartridge fuse-link	max. ambient temperature (°C)		
Separate arrangement:	4 W/ 6,3A	76	41	26
	Cartridge fuse-link	max. ambient temperature (°C)		
Compound arrangement:	2,5 W/ 6,3A	32	-	-

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.

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.

Schedule of Limitations:

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 switch when energized!

When using the SFS 4 2C terminal blocks with other terminal blocks series or sizes or accessories, the requirements for clearance and creepages distances according to IEC/EN60079-7 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.

When using ferrules for flexible conductors, it must be ensured that the test requirements of DIN 46228-1 and DIN 46228-4 are complied with. Therefore we recommend the use of the appropriate Weidmüller crimping tools. The length of the copper ferrule must correspond to the specified stripping length.

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.

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 manufacturer declares compliance with other relevant Directives,
and all other safety related requirements including those of Annex II of this Directive.