

**INSTALLATION INSTRUCTIONS
& CONDITIONS FOR SAFE USE****Modular TERMINAL Blocks: A- Series****TÜV 24 ATEX 9181 U
IECEx TUR 24.0066 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: ALFS 4 2C**

Version:	Type	Order No
	ALFS 4 2C BK*	2898780000
	ALFS 4 2C 10-36V BK*	2898790000
	ALFS 4 2C 30-70V BK*	2898800000
	ALFS 4 2C 60-150V BK*	2898810000
	ALFS 4 2C 100-250V BK*	2898820000
in conjunction with:	AL2C 4 PE	2847740000
Accessories:	Type	Order No
Endplate	ALEP DT 4 2C	2898890000
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)

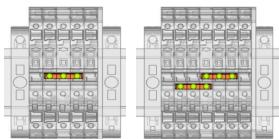
* in all colours

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

	Rated Voltage	
	Separate arrangement	Compound arrangement
ALFS 4 2C BK	550 V Basicmodule 250 V with fuse link	
ALFS 4 2C 10-36V BK	10-36 V	
ALFS 4 2C 30-70V BK	30-70 V	The operating voltage is limited by the used fuse link or the LED (fuse blown indication).
ALFS 4 2C 60-150V BK	60-150 V	
ALFS 4 2C 100-250V BK	100-250 V	
- Rated current	6,3 A / $\Delta T < 40$ K	
- 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 - 6,0 mm ²	
- Conductor cross section flexible	0,5 - 6,0 mm ²	
- Conductor cross section flexible with ferrule	0,5 - 4,0 mm ²	
- Cross section, American Wire Gauge	24 - 10 AWG	
- Stripping length	10 mm	

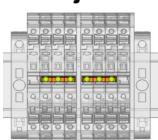
IECEx / ATEX Terminal and Cross-Connection Arrangements:

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

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

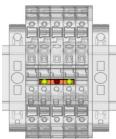
550 V

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

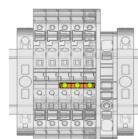
550 V

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

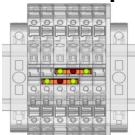
550 V

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

550 V

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

H - Twin parallel

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

550 V

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) ****

** only permissible for sandfilled fuse link

**EN 60127-2
Spec. Sheet**

1	50 mA ... 10 A	1,5 kA
2	32 mA ... 10 A	35 A resp. $10 \times I_N$
3	32 mA ... 10 A	35 A resp. $10 \times I_N$
5	100 mA ... 10 A	1,5 kA
6	32 mA ... 10 A	150 A

Table 2:

ALFS 4 2C:
Short-circuit protection

Temperature class:

	Cartridge fuse-link	T4 (130 °C) max. ambient temperature (°C)	T5 (100 °C) max. ambient temperature (°C)	T6 (85 °C) max. ambient temperature (°C)
Separate arrangement:	4 W/ 6,3A	88	53	38
Compound arrangement:	Cartridge fuse-link 2,5 W/ 6,3A	85	50	35

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 ALFS 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.

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.