INSTALLATION INSTRUCTIONS & CONDITIONS FOR SAFE USE

II 2 GD

Ex eb IIC Gb

Modular TERMINAL Blocks: AKZ- Series

TÜV 18 ATEX 8221 U
IECEx TUR 18.0024 U
TÜV21UKEX7053U

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

Modular Terminal Blocks: AKZ 1.5

		Order No
Version:	AKZ 1.5*	0340460000
in conjunction with:	AKE 2.5	1303360000
Accessories:	Type	
end plate	AP AKZ1.5*	0340560000
	TW AKZ*	1190330000
end bracket	EW 15*	0382860000
	EW 15/2*	1071900000
Terminal rail	TS 15/… acc.to IEC 60715	
Cross-connection	Q 2 AKZ1.5	0368200000
	Q 3 AKZ1.5	0368300000
	Q 4 AKZ1.5	0368400000
	Q 10 AKZ1.5	0368500000

Insulation material:

- Type	PA
- Tracking resistance (A) to IEC 60112	CTI ≥ 600
- Flammability class to UL 94	V0
- Operating temperature range for AKE 2.5	-60°C to +110°C (insulating material limit)
- Ambient temperature range for AKE 2.5	-60°C…+40°C (for T6 applications)
- Ambient temperature range for AKE 2.5	-60°C…+55°C (for T5 applications)
- Ambient temperature range for AKE 2.5	-60°C…+70°C (for T4 applications)

* in all colours

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

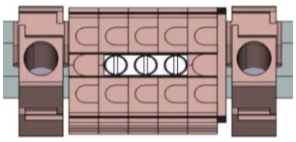
	AKZ 1.5	AKE 2.5
- Rated voltage	220 V	
- Rated current	17,5 A	
- Temperature rise with rated current	≤ 40 K / 17,5 A	
- Rated current with cross connection	17,5 A	
- Contact resistance with rated conductor	0,5 mΩ	0,3 mΩ
- Conductor cross section solid	0,5 - 2,5 mm²	0,5 - 4 mm²
- Conductor cross section stranded	1,5 mm²	0,5 - 2,5 mm²
- Conductor cross section flexible	0,5 - 1,5 mm²	0,5 - 2,5 mm²
- cross section, American Wire Gauge	24 - 14 AWG	26 - 12 AWG
- conductor cross section flexible with ferrule acc. to DIN 46228 part 1 + 4	0,5 - 1,5 mm²	0,5 - 2,5 mm²
- Tightening torque range, terminal screw	0,4 - 0,6 Nm	0,4 - 0,6 Nm
- Tightening torque range, fixing screw		0,4 - 0,8 Nm
- Tightening torque range for cross connection	0,4 - 0,8 Nm	
- Stripping length	7 mm	7 mm

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

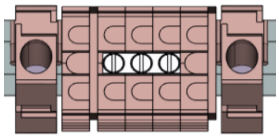
Max voltage data according to IEC/EN 60079-7 in conjunction with protective earth terminal blocks of the AKZ-Series, (increased safety "eb"):

Application Case - The open terminal block side is located on the right hand side.

A - Continuous

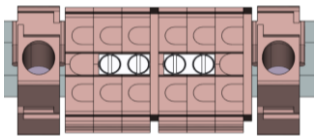


137 V



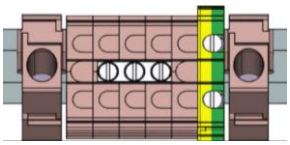
220 V

C - Adjacent – separated by an end plate

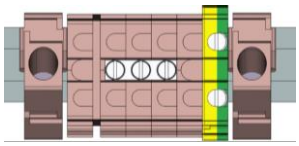


137 V

E - Next to a protective conductor terminal (earth)



137 V



220 V

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

Note:
If smaller cross sections than the rated cross section are used, the belonging lower current has to be laid down in the IECEx/EC-Type Examination Certificate / UKCA Certificate of the complete apparatus.

Mounting instructions:
The AKZ/AKE-series products is 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.

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

Schedule of Limitations:
The AKZ/AKE-series products 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/EN60079-0 and IEC/EN60079-7. For combustible dust the enclosure must satisfy the requirements according to IEC/EN 60079-0 and IEC/EN 60079-31.

The enclosure shall be constructed to block all sun and UV light from affecting the terminal blocks. The terminal blocks shall be placed inside a suitable certified IP54 enclosure in type of protection “eb” for gas atmosphere. For dust atmosphere the terminal blocks shall be mounted inside a suitable certified enclosure (IEC/EN 60079-31) in type of protection “t”.

Under normal operating conditions the temperature rise of the terminal blocks is maximum 40 K, measured at the maximum permitted rated current. Due to the above mentioned, the terminal blocks may be used in apparatus of temperature classes T6..T1 as long as the terminal block ambient temperature range is not exceeded. No part of terminal block must exceed 110 °C under any condition.

Ambient temperature:
T6 (- 60°C ... +40 °C)
T5 (- 60°C … +55 °C)
T4 (- 60°C ... +70 °C)

When using the AKZ/AKE-series products especially with other terminal blocks series or sizes or accessories the requirements for clearance and creepage distances according to IEC/EN60079-7 must 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.

If AKZ 1.5 is used with an other terminal of different typ or sizes other as described above, these constellations have to be investigated.
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. Due to the construction modification of the PE - terminal block AKE 2.5, the use as end bracket is not allowed anymore.

Unused terminals shall be tighted.

Essential Health and Safety Requirements:
Concerning ESRs this Schedule verifies compliance with the Annex II of ATEX / Schedule 1 of UKCA directive and Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016 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 / Schedule 1 of these Directives.