INSTALLATION INSTRUCTIONS & CONDITIONS FOR SAFE USE

II 2 GD

Ex eb IIC Gb

Modular TERMINAL Blocks: SAK- Series

TÜV 18 ATEX 8209 U
IECEx TUR 18.0019 U
TÜV21UKEX7052U

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

Modular Terminal Blocks: MK6…

		Order No
Version:	MK 6/2/E	7906220000
	MK 6/3/E	7906230000
	MK 6/4/E	7906240000
	MK 6/5/E	7906250000
	MK 6/6/E	7906260000
Cross connection:	QB 2 MK6	3834100000

Insulation material:

- Type	Melamine (KrG)
- Tracking resistance (A) to IEC 60112	CTI ≥ 600
- Flammability class to UL 94	V0
- Operating temperature range	-60°C to +130°C (insulating material limit)
- Ambient temperature range	-60°C…+40°C (for T6 applications)
- Ambient temperature range	-60°C…+55°C (for T5 applications)
- Ambient temperature range	-60°C…+90°C (for T4 applications)

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

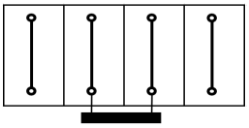
	MK 6…/E
- Rated voltage	440 V with fixing screw according to DIN 7984
- Rated voltage	352 V with fixing screw according to DIN EN ISO 4762
- Rated current	36 A / ΔT ≤ 40 K
- Rated current with QB 2 MK6	31 A / ΔT ≤ 40 K
- Temperature rise with rated current	≤ 40 K / 36 A
- Contact resistance with rated conductor	0,3 mΩ
- Conductor cross section solid	0,5 - 6 mm²
- Conductor cross section stranded	1,5 - 6 mm²
- Conductor cross section flexible	0,5 - 6 mm²
- cross section, American Wire Gauge	22 - 10 AWG
- conductor cross section flexible with ferrule acc. to DIN 46228 part 1 + 4	0,5 - 4 mm²
- Tightening torque range, terminal screw	1,2 - 2 Nm
- Stripping length	9 mm

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

Max voltage data according to IEC/EN 60079-7 of the MK-Series, (increased safety "eb"):

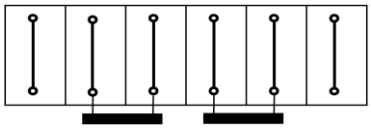
Application Case

A - Continuous no difference between one or two cross connections



352 V

B - Continuous with 2 cross-connections



275 V

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 of the complete apparatus.

Mounting instructions:
The MK-series products 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 MK-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 DIN/EN60079-0 and DIN/EN60079-7. For combustible dust the enclosure must satisfy the requirements according to DIN/EN60079-0 and DIN/EN60079-31.

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 (DIN/EN60079-31) 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 130°C under any condition.

Ambient temperature
T6 (- 50°C ... +40 °C)
T5 (- 50°C … +55 °C)
T4 (- 50°C ... +90 °C)

When using the MK-series products especially with other terminal blocks series or sizes or accessories the requirements for clearance and creepage distances according to DIN/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.

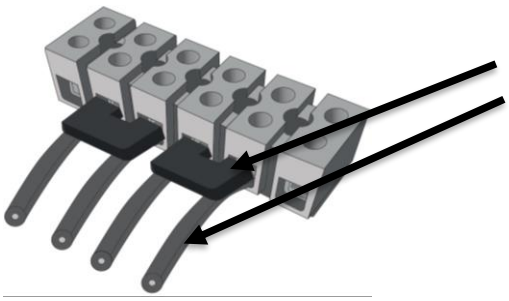
When using ferrules for flexible conductors, it must be ensured that the test requirements of DIN 46228-1 and DIN 46228-4 are complied with. Therefore we recommend the use of the appropriate Weidmüller crimping tools. The length of the copper ferrule must correspond to the specified stripping length.

No other wire sizes of MK 6/…E - range than specified in instructions must be used. The MK 6/…E - range must be mounted next to MK 6/…E - range, other constellations have to be investigated.

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.

Unused terminals shall be tighted.

Use cross of connection



Assembly of the external cross connections QB 2 MK6:
- QB 2 MK6
- wire

Please notice:
When using a cross connection in the clamping unit, the conductor shall be always be connected below the cross connection.

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.