

INSTALLATION INSTRUCTIONS
& CONDITIONS FOR SAFE USE

II 2 GD

Ex eb IIC Gb

Modular TERMINAL Blocks: MK- Series**TÜV 18 ATEX 8209 U****IECEX TUR 18.0019 U****Notified Body No. of Ex - QA: 0344****Label print on package unit: 0344****TÜV21UKEX7052U****Approved Body No. of UK Ex - QA: xxxx****(see product marking)**

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: MK3...**

| | Type | Order No |
|--|---|------------|
| Version: | MK 3/12/E | 7906210000 |
| | MK 3/2/E | 7906110000 |
| | MK 3/3/E | 7906120000 |
| | MK 3/4/E | 7906130000 |
| | MK 3/6/E | 7906150000 |
| | MK 3/8/E | 7906170000 |
| Cross connection: | QB 2 MK3 | 3833700000 |
| | QB 4 MK3 | 3833800000 |
| Insulation material: | | |
| - Type | Melamine (KrG) | |
| - Tracking resistance (A) to IEC 60112 | CTI ≥ 600 | |
| - 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"):

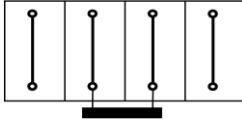
| | |
|---|--|
| | MK 3.../E |
| - Rated voltage | 275 V with fixing screw according to DIN 7984 |
| - Rated voltage | 220 V with fixing screw according to DIN EN ISO 4762 |
| - Rated current | 24 A / $\Delta T \leq 40$ K |
| - Rated current with QB... | 22,5 A / $\Delta T \leq 40$ K |
| - Temperature rise with rated current | ≤ 40 K / 24 A |
| - Contact resistance with rated conductor | 0,4 mΩ |
| - Conductor cross section solid | 0,5 - 4 mm ² |
| - Conductor cross section stranded | 1,5 - 2,5 mm ² |
| - Conductor cross section flexible | 0,5 - 2,5 mm ² |
| - cross section, American Wire Gauge | 22 - 12 AWG |
| - Tightening torque range, terminal screw | 0,4 - 0,45 Nm |
| - Stripping length | 5 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"):

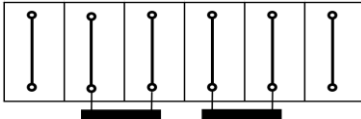
Application Case

A - Continuous no difference between one or two cross connections



220 V

B - Continuous with 2 cross-connections



220 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:

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

The multipin terminal strips should be mounted with cylinder head screws according to ISO 4762.

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.

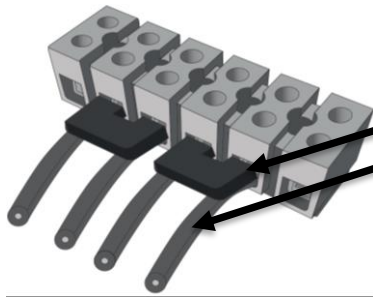
For cross connection accessories current rating, resistance across the terminal please refer to the table under "technical data" above.

If MK3/.../E- range is used with an other adjacent MK3/.../E- type, no other wire sizes than specified in instructions shall be used. 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 tightened.

Use cross of connection



Assembly of the external cross connections QB
2 MK3 or QB 4MK 3:

- QB 2 MK 3
- 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.