

INSTALLATION INSTRUCTIONS
& CONDITIONS FOR SAFE USE



Modular TERMINAL Blocks: SAK- Series

TÜV 18 ATEX 8207 U
IECEX TUR 18.0017 U
TÜV21UKEX7051U

Standards:
 EN IEC 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: SAK 16

		Order No
Version:	SAK 16/35 PA	0380660000
	SAK 16/35 PA/BL	0380680000
Accessories:	Type	
	end plate	AP SAK16* 0271160000
partion plate	AP SAK35/TW SAK16*	0303660000
end bracket	EW 35*	0383560000
	WEW 35/1*	1059000000
Terminal rail	TS 35/... acc.to IEC 60715	
Cross-connection	Q 2 SAK16	0457500000
	Q 3 SAK16	0457600000
	Q 4 SAK16	0457700000
	Q 10 SAK16	0457800000

Insulation material:

- | | |
|--|--|
| - Type | PA |
| - Tracking resistance (A) to IEC 60112 | CTI ≥ 600 |
| - Flammability class to UL 94 | V2 |
| - Operating temperature range | -50°C to +85°C (insulating material limit) |
| - Ambient temperature range | -50°C...+40°C (for T6 applications) |
| - Ambient temperature range | -50°C...+45°C (for T5 applications) |
| - Ambient temperature range | -50°C...+45°C (for T4 applications) |

* in all colours

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

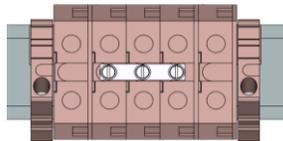
	SAK 16/35 PA
- Rated voltage	690 V
- Rated current	74,5 A
- Temperature rise with rated current	≤ 40 K / 74,5 A
- Rated current with cross connection	70 A
- Contact resistance with rated conductor	0,15 mΩ
- Conductor cross section solid	2,5 - 16 mm ²
- Conductor cross section stranded	4 - 16 mm ²
- Conductor cross section flexible	4 - 16 mm ²
- cross section, American Wire Gauge	12 - 6 AWG
- conductor cross section flexible with ferrule acc. to DIN 46228 part 1 + 4	4 - 16 mm ²
- Tightening torque range, terminal screw	2,0 - 2,4 Nm
- Tightening torque range for cross connection	0,5 - 1 Nm
- Stripping length	15 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 SAK-Series, (increased safety "eb"):

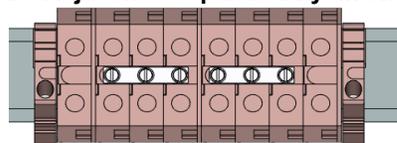
Application Case

A - Continuous



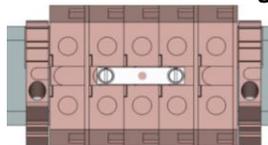
690 V

C - Adjacent – separated by an end plate



550 V

D - Intermediate - bridging one or more unconnected terminals



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 of the complete apparatus.

Mounting instructions:

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

Schedule of Limitations:

The SAK-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/EN60079-0 and IEC/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 (IEC/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 85°C under any condition.

Ambient temperature

T6 (- 50°C ... +40 °C)

T5 (- 50°C ... +45 °C)

T4 (- 50°C ... +45 °C)

When using the SAK-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.

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.

Unused terminals shall be tightened.

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.