

**INSTALLATION INSTRUCTIONS**  
**& CONDITIONS FOR SAFE USE**

II 2 GD

Ex eb IIC Gb

**Modular TERMINAL Blocks: A- Series****TÜV 17 ATEX 8031 U****IECEX TUR 17.0016 U****Notified Body No. of Ex - QA: 0344****Label print on package unit: 0344**

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: AIO22 1.5 SI-PE**

Version:	AIO22 1.5 SI-PE*	Order No 1992230000
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in conjunction with:

Accessories:	Type	Order No
end plate	AEP IO22*	1993590000
end bracket	AEB 35 SC/1*	1991920000

Terminal rail	TS 35/... acc.to DIN EN 60715
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Cross-connection	Plugable	Order No
	ZQV 1.5N/2*	1985410000
	ZQV 1.5N/3*	1985480000
	ZQV 1.5N/4*	1985490000
	ZQV 1.5N/5*	1985500000
	ZQV 1.5N/6*	1985510000
	ZQV 1.5N/7*	1985520000
	ZQV 1.5N/8*	1985540000
	ZQV 1.5N/9*	1985560000
	ZQV 1.5N/10*	1985580000

**Insulation material:**

- Type	Wemid
- Tracking resistance (A) to IEC 60112	CTI ≥ 600
- Flammability class to UL 94	V0
- Operating temperature range	-60°C...+110°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...+70°C (for T4 applications)

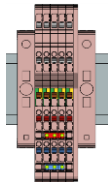
\* in all colours

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

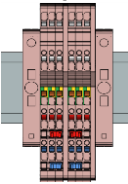
	<b>AIO22 1.5 SI-PE</b>
- Rated voltage	220 V
- Rated current with ZQV	12 A / $\Delta T$ 40 K
- Contact resistance signal level	1,12 m $\Omega$
- Contact resistance feed-in level	1,52 m $\Omega$
- Rated conductor cross section	1,5 mm <sup>2</sup>
- Conductor cross section solid	0,5 - 1,5 mm <sup>2</sup>
- Conductor cross section stranded	0,5 - 1,5 mm <sup>2</sup>
- Conductor cross section flexible	0,5 - 1,5 mm <sup>2</sup>
- cross section, American Wire Gauge	26 - 14 AWG
- conductor cross section flexible with ferrule acc. to DIN 46228 part 1	0,5 - 1,5 mm <sup>2</sup>
- conductor cross section flexible with ferrule acc. to DIN 46228 part 4	0,5 - 1,0 mm <sup>2</sup>
- Stripping length	8 mm

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

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

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

220 V

**C - Adjacent – separated by an end plate no difference between one or two cross connections**

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:**

The initiator/actuator terminal blocks of the A-series 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.

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

**Schedule of Limitations:**

The initiator/actuator terminal blocks of the A-series 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 EN 60079-0 and EN 60079-7. For combustible dust the enclosure must satisfy the requirements according to EN 60079-0 and 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 "e" for gas atmosphere. For dust atmosphere the terminal blocks shall be mounted inside a suitable certified enclosure (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 110 °C under any condition.

T6 (- 60°C ... +40 °C)

T5 (- 60°C ... +55 °C)

T4 (- 60°C ... +70 °C)

When using the initiator/actuator terminal blocks of the A-series especially with other terminal blocks series or sizes or accessories the requirements for clearance and creepage distances according to table 1 of EN 60079-7 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.



Manually cut cross connections and cross connections with blank ends (ZQV's ≥ 20 poles) 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.