

INSTALLATION INSTRUCTIONS
& CONDITIONS FOR SAFE USE

II 2 GD

Ex eb IIC Gb

Modular TERMINAL Blocks: A- Series**TÜV 16 ATEX 7909 U****IECEX TUR 16.0036 U****TÜV21UKEX7001U**

Standards:

EN 60079-0:2018 and EN 60079-7:2015 A1:2018

IEC 60079-0: 7th Edition and IEC 60079-7: 5.1th Edition

Supply Terminal Blocks: ALO 16

Version:	Type	Order No		
	ALO 16*	2502280000		
in conjunction with:	Type	Order No	Type	Order No
	A2C 1.5*	1552790000	A2C 4*	2051180000
	A3C 1.5*	1552740000	A3C 4*	2051240000
	A4C 1.5*	1552690000	A4C 4*	2051500000
	A2C 2.5*	1521850000	A2C 6*	1992110000
	A3C 2.5*	1521740000	A3C 6*	1991820000
	A4C 2.5*	1521690000		
Accessories:	Type	Order No	Type	Order No
end plate	AEP 2C 1.5*	1552600000	AEP 2C 4*	2051680000
	AEP 3C 1.5*	1552620000	AEP 3C 4*	2051720000
	AEP 4C 1.5*	1552640000	AEP 4C 4*	2051900000
	AEP 2C 2.5*	1514400000	AEP 2C 6*	1991970000
	AEP 3C 2.5*	1521510000	AEP 3C 6*	1991940000
	AEP 4C 2.5*	1521530000		
end bracket	AEB 35 SC/1*	1991920000		
Terminal rail	TS 35/... acc.to DIN EN 60715			
Cross-connection	Plugable	Order No	Plugable	Order No
	ZQV 2.5N/2*	1527540000	ZQV 4N/2*	1527930000
	ZQV 2.5N/3*	1527570000	ZQV 4N/3*	1527940000
	ZQV 2.5N/4*	1527590000	ZQV 4N/4*	1527970000
	ZQV 2.5N/5*	1527620000	ZQV 4N/5*	1527980000
	ZQV 2.5N/6*	1527630000	ZQV 4N/6*	1527990000
	ZQV 2.5N/7*	1527640000	ZQV 4N/7*	1528020000
	ZQV 2.5N/8*	1527670000	ZQV 4N/8*	1528030000
	ZQV 2.5N/9*	1527680000	ZQV 4N/9*	1528070000
	ZQV 2.5N/10*	1527690000	ZQV 4N/10*	1528090000
			ZQV 6N/2*	1985740000
			ZQV 6N/3*	1985760000
			ZQV 6N/4*	1985780000

* in all colours

Insulation material:

- Type	Wemid
- Tracking resistance (A) to IEC 60112	CTI \geq 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)

Technical data according to IEC/EN 60079-7 (increased safety "eb"):**Feed - In****ALO 16**

- Rated voltage	550 V
- Rated current with ZQV	
Distribution to 1,5 mm ² - terminal blocks	38 A / $\Delta T \leq 40$ K
Distribution to 2,5 mm ² - terminal blocks	52 A / $\Delta T \leq 40$ K
Distribution to 4 mm ² - terminal blocks	64 A / $\Delta T \leq 40$ K
Distribution to 6 mm ² - terminal blocks	69 A / $\Delta T \leq 40$ K
- Contact resistance	0,4 m Ω
- Rated conductor cross section	6 mm ²
- Conductor cross section solid	0,5 - 16 mm ²
- Conductor cross section stranded	10 - 16 mm ²
- Conductor cross section flexible	0,5- 16 mm ²
- cross section, American Wire Gauge	18 - 6 AWG
- conductor cross section flexible with ferrule acc. to DIN 46228 part 1 + 4	0,5- 16 mm ²
- Stripping length	18 mm

Distribution

A2C 1.5	A2C 2.5	A2C 4	A2C 6
A3C 1.5	A3C 2.5	A3C 4	A3C 6
A4C 1.5	A4C 2.5	A4C 4	

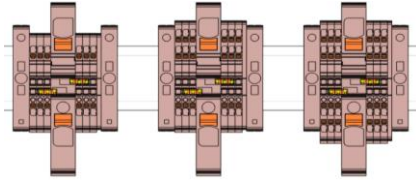
- Rated voltage	Please see the application cases below.			
- Rated current with ZQV	12,5 A / $\Delta T \leq$	18 A / $\Delta T \leq 40$ K	25 A / $\Delta T \leq 40$ K	33 A / $\Delta T \leq$
- Contact resistance	Please use the information of the product-NTI's.			
- Rated conductor cross section	1,5 mm ²	2,5 mm ²	4 mm ²	6 mm ²
- Conductor cross section solid	0,5 - 1,5 mm ²	0,5 - 2,5 mm ²	0,5 - 4 mm ²	0,5 - 6 mm ²
- Conductor cross section stranded	0,5 - 1,5 mm ²	0,5 - 2,5 mm ²	0,5 - 4 mm ²	0,5 - 6 mm ²
- Conductor cross section flexible	0,5 - 1,5 mm ²	0,5 - 2,5 mm ²	0,5 - 4 mm ²	0,5 - 6 mm ²
- cross section, American Wire Gauge	26 - 14 AWG	28 - 12 AWG	26 - 12 AWG	22 - 8 AWG
- conductor cross section flexible with ferrule acc. to DIN 46228 part 1	0,5- 1,5 mm ²	0,5- 4 mm ²	0,5- 6 mm ²	0,5- 10 mm ²
- conductor cross section flexible with ferrule acc. to DIN 46228 part 4	0,5- 1,0 mm ²	0,5- 2,5 mm ²	0,5- 4 mm ²	0,5- 6 mm ²
- Stripping length	8 mm	10 mm	12 mm	12 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 A-Series, (increased safety "eb"):

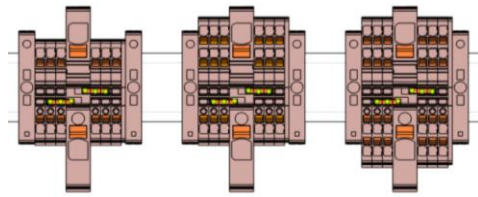
Application Case

A - Continuous no difference between one or two cross connections 1,5 mm²



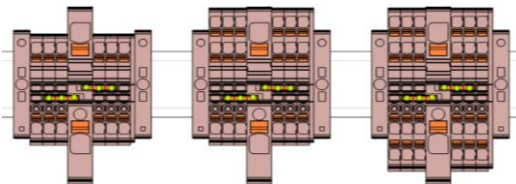
275 V

A - Continuous no difference between one or two cross connections 2,5 mm²



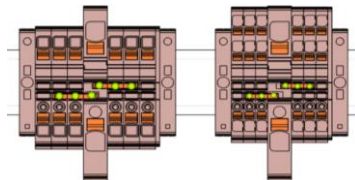
275 V

A - Continuous no difference between one or two cross connections 4 mm²



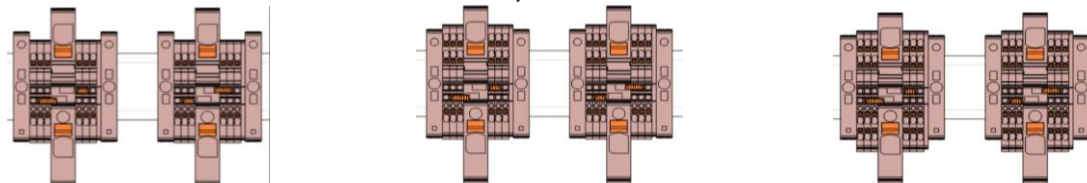
275 V

A - Continuous no difference between one or two cross connections 6 mm²



352 V

B - Continuous with 2 cross-connections 1,5 mm²

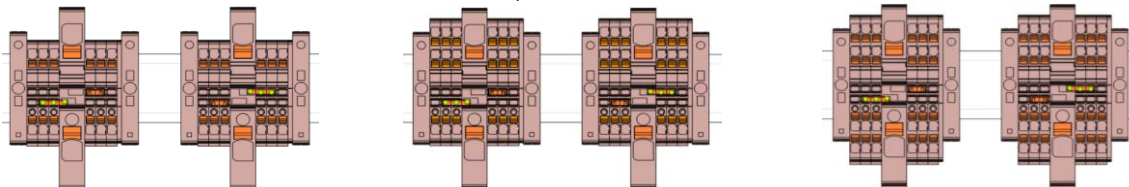


275 V

275 V

275 V

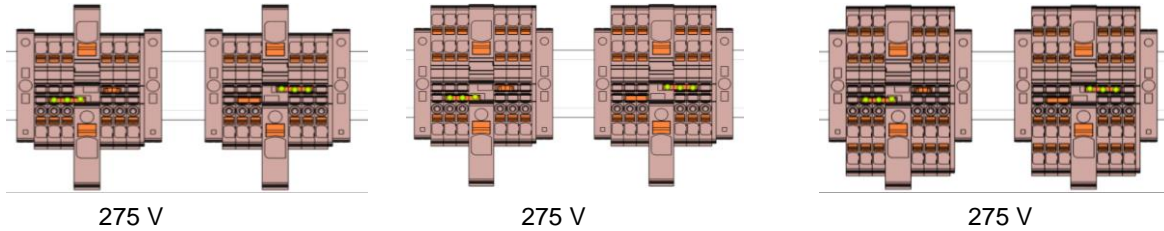
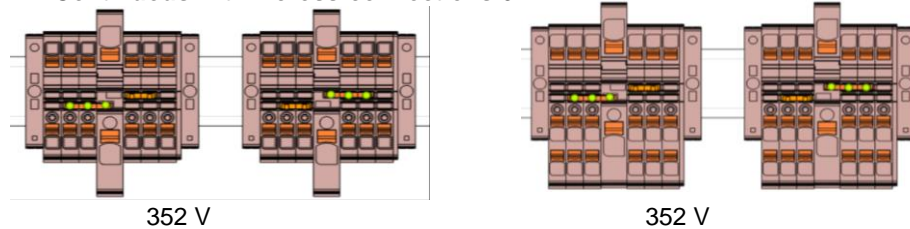
B - Continuous with 2 cross-connections 2,5 mm²



275 V

275 V

275 V

B - Continuous with 2 cross-connections 4 mm²**B - Continuous with 2 cross-connections 6 mm²**

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 Supply terminal 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 Supply terminal 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.

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 (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 110 °C under any condition.

T6 (- 60°C ... +40 °C)

T5 (- 60°C ... +55 °C)

T4 (- 60°C ... +70 °C)

When using the types ALO 16 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.



- Cross connections with blank ends shall not be used.
- Manually cut cross connections shall not be used.

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.