

INSTALLATION INSTRUCTIONS
& CONDITIONS FOR SAFE USE



II 2 GD

Ex eb IIC Gb

Modular TERMINAL Blocks: AL- Series

TÜV 22 ATEX 8826 U
IECEx TUR 22.0019U

Standards:

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

Modular Terminal Blocks: AL4C 4

| | | |
|----------|---------|------------------------|
| Version: | AL4C 4* | Order No 2847730000 |
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| | | |
|----------------------|------------|------------------------|
| in conjunction with: | AL4C 4 PE* | Order No 2847770000 |
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| | | |
|--------------|--------------|------------|
| Accessories: | Type | Order No |
| end plate | ALEP 4C 4* | 2871850000 |
| End bracket | AEB 35 SC/1* | 1991920000 |

| | |
|---------------|-------------------------------|
| Terminal rail | TS 35/... acc.to IEC/EN 60715 |
|---------------|-------------------------------|

| | |
|------------------|---|
| Cross-connection | Pluggable ZQV 4N/2* ZQV 4N/3* ZQV 4N/4* ZQV 4N/5* ZQV 4N/6* ZQV 4N/7* ZQV 4N/8* ZQV 4N/9* ZQV 4N/10* |
|------------------|---|

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) |

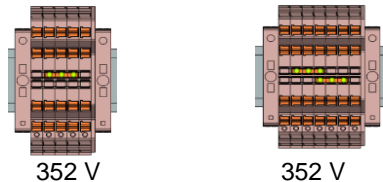
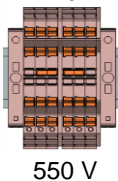
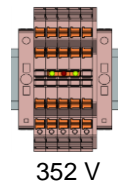
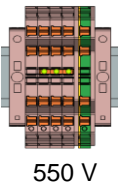
* in all colours

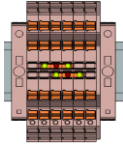
Technical data according to IEC/EN 60079-7 (increased safety "eb"):

| | AL4C 4 | AL4C 4 PE |
|---|-----------------------------|-------------------------|
| - Rated voltage | 550 V | |
| - Rated current | 28 A / $\Delta T \leq 40$ K | |
| - Rated current with ZQV | 28 A / $\Delta T \leq 40$ K | |
| - Contact resistance with rated conductor, 4 mm ² | 0,7 mΩ | 0,9 mΩ |
| - Rated conductor cross section | 4 mm ² | 4 mm ² |
| - Conductor cross section solid | 0,5 - 6 mm ² | 0,5 - 6 mm ² |
| - Conductor cross section flexible | 0,5 - 6 mm ² | 0,5 - 6 mm ² |
| - cross section, American Wire Gauge | 24 - 10 AWG | 24 - 10 AWG |
| - conductor cross section flexible with ferrule acc. to DIN 46228 part 1 + 4 | 0,5 - 4 mm ² | 0,5 - 4 mm ² |
| - Stripping length | 10 mm | 10 mm |

IECEx / ATEX Terminal and Cross-Connection Arrangements:

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

Application Case**A - Continuous no difference between one or two cross connections****C - Adjacent – separated by an end plate no difference between one or two cross-connections****D - Intermediate - bridging one or more unconnected terminals (e.g. every 3rd terminal) no difference between one or two cross connections****F - Next to a protective conductor terminal (earth) with end plate**

H - Cross-connection with twin parallel

352 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 Feed-through terminals and PE terminals 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 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 AL4C 4 and AL4C 4 PE 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.

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.

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.



- 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 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.

