

INSTALLATION INSTRUCTIONS
& CONDITIONS FOR SAFE USE



Ex eb IIC Gb

Modular TERMINAL Blocks: Z- Series

IECEX ULD 16.0036U
DEMKO 16 ATEX 1808U
UL21UKEX2119U

Standards:

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

Modular Terminal Blocks: ZDK/ZDK PE

Version:	ZDK 2.5-2 V*	Order No 1791030000
in conjunction with:	ZDK 2.5-2 PE	Order No 1791010000
Accessories:	Type	Order No
end plate	ZAP/TW ZDK2.5-2*	1791050000
end bracket	ZEW 35*	9540000000
Terminal rail	TS 35/... acc.to DIN EN 60715	
Cross-connection	Plugable*	Order No
	ZQV 2.5/2	1608860000
	ZQV 2.5/3	1608870000
	ZQV 2.5/4	1608880000
	ZQV 2.5/5	1608890000
	ZQV 2.5/6	1608900000
	ZQV 2.5/7	1608910000
	ZQV 2.5/8	1608920000
	ZQV 2.5/9	1608930000
	ZQV 2.5/10	1608940000

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"):

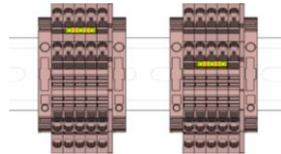
	ZDK 2.5-2V	ZDK 2.5-2 PE
- Rated voltage	550 V	
- Rated current	21 A / $\Delta T \leq 40$ K	
- Rated current with ZQV	20 A / $\Delta T \leq 40$ K	
- Contact resistance with rated conductor, 2.5 mm ²	1,3 m Ω	
- Rated conductor cross section	2,5 mm ²	2,5 mm ²
- Conductor cross section solid	0,5 - 4 mm ²	0,5 - 4 mm ²
- Conductor cross section stranded	0,5 - 2,5 mm ²	0,5 - 2,5 mm ²
- Conductor cross section flexible	0,5 - 2,5 mm ²	0,5 - 2,5 mm ²
- cross section, American Wire Gauge	30 - 12 AWG	30 - 12 AWG
- conductor cross section flexible with ferrule acc. to DIN 46228 part 1	0,5 - 2,5 mm ²	0,5 - 2,5 mm ²
- conductor cross section flexible with ferrule acc. to DIN 46228 part 4	0,5 - 1,5 mm ²	0,5 - 1,5 mm ²
- Stripping length	10 mm	10 mm

IECEX / ATEX / UKCA Terminal and Cross-Connector Arrangements:

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

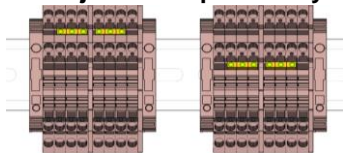
Application Case

A - Continuous



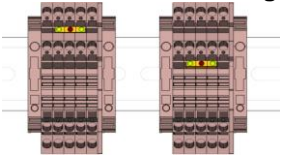
440 V

C - Adjacent - separated by an end plate



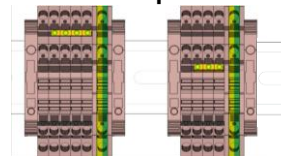
440 V

D - Intermediate - bridging one or more unconnected terminals (e.g. every 3rd terminal)



275 V

F - Next to a protective conductor terminal (earth) with a partition plate



440 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 ZDK/ZPE series is 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 feed through and protective earth terminal blocks 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 these enclosures must satisfy the requirements according to 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 ZDK and ZPE with other terminal blocks series or sizes or accessories, the requirements for clearance and creepages distances according to IEC/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 the current ratings and the resistances across the terminals 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.