

INSTALLATION INSTRUCTIONS
& CONDITIONS FOR SAFE USE II 2 GD

Ex eb IIC Gb

Modular TERMINAL Blocks: W- Series

DEMKO 15 ATEX 1346U
IECEx ULD 15.0003U
UL21UKEX2116U

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: WDK/WDK DU-PE

Version:	WDK 2.5N V*	Order No
		1041610000

in conjunction with:	WDK 2.5N DU-PE*	Order No
		1041650000

Accessories:	Type	Order No
End Plate	WAP WDK 2.5N/4N*	1084000000
Partition Plate	WTW EN	1058800000
End bracket	WEW 35/2*	1061200000
Terminal rail	TS 35/... acc.to DIN EN 60715	
Screen bus bar	LS 2.8	1056400000

Cross-connection	Pluggable*
	ZQV 2.5N/2
	ZQV 2.5N/3
	ZQV 2.5N/4
	ZQV 2.5N/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)

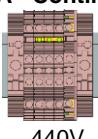
* in all colours and optional with hexagon and six lobe drive

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

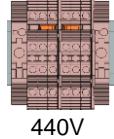
	WDK 2.5N V	WDK 2.5N DU-PE
- Rated voltage	550 V	550 V
- Rated voltage with LS 2.8	176 V	
- Rated current	24 A / ΔT 40 K	24 A / ΔT 40 K
- Temperature rise with rated current	37,1K / 24 A	39,3 K / 24 A
- Rated current with ZQV	24 A / ΔT 40 K	22 A / ΔT 40 K
- Contact resistance top level with rated conductor, 2,5 mm ²	0,6 mΩ	0,3 mΩ
- Contact resistance top to lower with rated conductor, 2,5 mm ²	0,5 mΩ	1,0 mΩ
- Contact resistance lower level with rated conductor, 2,5 mm ²	0,5 mΩ	
- Rated conductor cross section	2,5 mm ²	2,5 mm ²
- Conductor cross section solid	0,13 - 4 mm ²	0,13 - 4 mm ²
- Conductor cross section stranded	0,13 - 4 mm ²	0,13 - 4 mm ²
- Conductor cross section flexible	0,13 - 4 mm ²	0,13 - 4 mm ²
- cross section, American Wire Gauge	26 - 10 AWG	26 - 10 AWG
- conductor cross section flexible with ferrule acc. to DIN 46228 part 1 + 4	0,5 - 2,5 mm ²	0,5 - 2,5 mm ²
- 2 conductors with same cross-section	0,13 - 1,5 mm ²	--
- Tightening torque range, terminal screw	0,4 - 0,6 Nm	0,4 - 0,6 Nm
- Stripping length	8 mm	8 mm

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

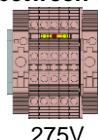
Max voltage data with ZQV 2.5N/... according to IEC/EN 60079-7 in conjunction with
protective earth terminal blocks of the WDK PE-Series, (increased safety "eb"):

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

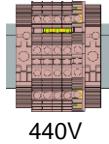
440V

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

440V

**D - Intermediate - bridging one or more unconnected terminals (e.g. every 3rd terminal) no difference
between one or two cross connections**

275V

E - Next to a protective conductor terminal (earth)

440V

Information for further cross-connector arrangements will be provided on request.

Max. voltage data with optional screen bus bar LS2,8: 176 V

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 WDK/WDK PE 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 WDK/WDK PE terminals 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 IECEx/ATEX/UKCA certified IP54 enclosure for gas atmosphere. For dust atmosphere the terminal blocks shall be mounted inside a suitable IECEx/ATEX/UKCA certified 't' enclosure (IEC/EN60079-31).

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 type WDK/WDK 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 and torque values 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.

The terminal can be used with either one or two wires into either side of the terminal. When two wires are used they must be of the same type, and of equal sizes. 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.



- 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.