

**INSTALLATION INSTRUCTIONS**  
**& CONDITIONS FOR SAFE USE****Modular TERMINAL Blocks: W- Series****DEMKO 14 ATEX1338 U**  
**IECEx ULD 14.0005U**  
**UL21UKEX2114U**

## 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: WDU/WPE**

Version:	WDU 4*	Order No	1020100000
in conjunction with:	WPE 4*	Order No	1010100000
Accessories:	Type	Order No	
End Plate	WAP 2.5-10*	1050000000	
Partition Plate	WTW 2.5-10*	1050100000	
End bracket	WEW 35/2 V0 GF...*		
Terminal rail	TS 35/... acc.to DIN EN 60715		
Screen bus bar	LS 2.8	1056400000	
Cross-connection	Pluggable*	Screwable*	Order No
	ZQV 4N/2	WQV 4/2	1051960000
	ZQV 4N/3	WQV 4/3	1054560000
	ZQV 4N/4	WQV 4/4	1054660000
	ZQV 4N/5	WQV 4/5	1057860000
	ZQV 4N/6	WQV 4/6	1057160000
	ZQV 4N/7	WQV 4/7	1057260000
	ZQV 4N/8	WQV 4/10	1052060000
	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)

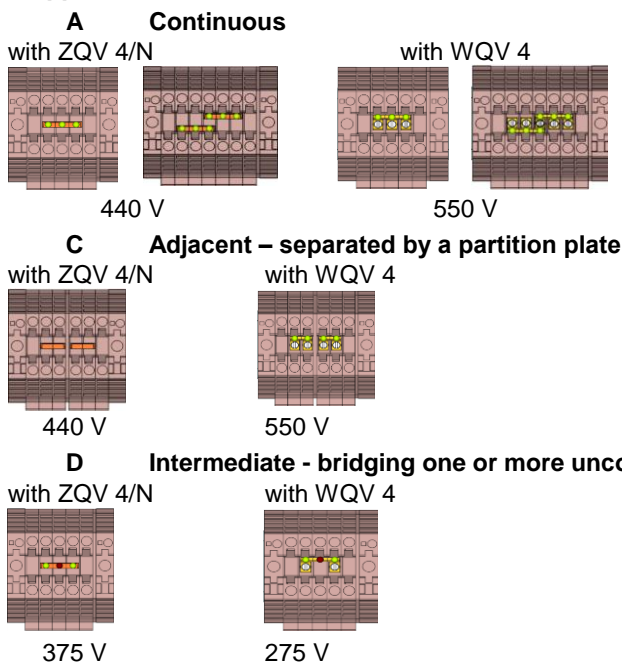
\* in all colours and optional with hexagon and six lobe drive

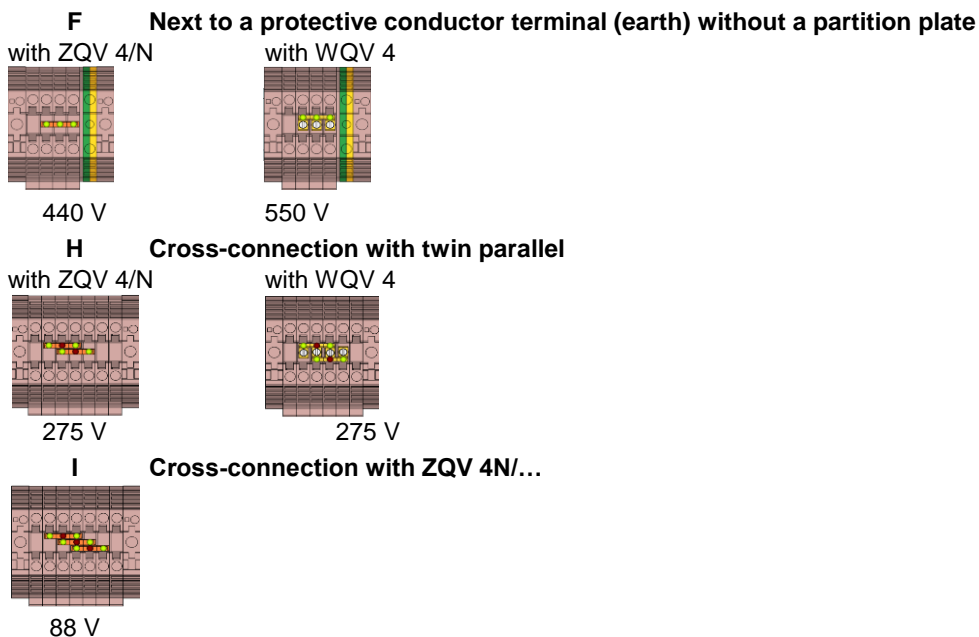
**Technical data according to IEC/EN 60079-7 (increased safety "eb"):**

	<b>WDU 4</b>	<b>WPE 4</b>
- Rated voltage	690 V	
- Rated voltage with LS 2.8	275 V	
- Rated current	32 A / $\Delta T$ 40 K	
- Temperature rise with rated current	38,1 K / 32 A	
- Rated current with WQV..	32 A / $\Delta T$ 40 K	
- Rated current with ZQV..	30 A / $\Delta T$ 40 K	
- Contact resistance with rated conductor, 4,0mm <sup>2</sup>	0,30 m $\Omega$	0,64 m $\Omega$
- Rated conductor cross section	4mm <sup>2</sup>	4mm <sup>2</sup>
- Conductor cross section solid	0,14 - 6,0 mm <sup>2</sup>	0,14 - 6,0 mm <sup>2</sup>
- Conductor cross section stranded	0,14 - 6,0 mm <sup>2</sup>	0,14 - 6,0 mm <sup>2</sup>
- Conductor cross section flexible	0,14 - 6,0 mm <sup>2</sup>	0,14 - 6,0 mm <sup>2</sup>
- 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 - 4,0 mm <sup>2</sup>	0,5 - 4,0 mm <sup>2</sup>
- 2 conductors with same cross-section	0,5 - 2,5 mm <sup>2</sup>	---
- Tightening torque range, terminal screw	0,5 - 1,0 Nm	0,5 - 1,0 Nm
- Tightening torque range, fixing screw		0,5 - 1,0 Nm
- Tightening torque range for WQV...	0,5 - 1,0 Nm	
- 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 conductor terminal blocks of the WPE-Series, (increased safety "eb"):

**Application Case**



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

Max voltage data with optional screen bus bar:

- WDU 4 with ZQV 4/N    88 V
- WDU 4 with WQV 4    275 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 WDU/WPE 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 WDU/WPE 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 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 WDU/WPE 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.

When assembling with other approved terminal blocks series, sizes and accessories the required creepage distances and clearances must be considered.

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.

**Notes for use of cut cross connections ZQV:**

When using cut cross connection ZQV an end plate (WAP 2.5-10 1050000000) or partition plate (WTW 2.5-10 1050100000) must be assembled between the blank ends of two cross connections in order to maintain the max. voltage of the corresponding cross connection case (see table application cases).

**Attention:** In no case it is allowed to remove the partition plate of the application case C.

If the end plate or partition plate are not used then the max. voltage will be reduced by one step (see table application cases).

