

INSTALLATION INSTRUCTIONS
& CONDITIONS FOR SAFE USE



Ex eb IIC Gb

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 35N*	Order No 1040400000
in conjunction with:	WPE 35N*	Order No 1717740000
Accessories:	Type	Order No
Partition Plate	WTW EN*	1058800000
End bracket	WEW 35/2 V0 GF...*	
Terminal rail	TS 35/... acc.to DIN EN 60715	
Cross-connection	Screwable*	Order No
	WQV 35N/2	1079200000
	WQV 35N/3	1079300000
	WQV 35N/4	1079400000

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"):

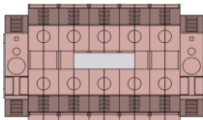
	WDU 35N	WPE 35N
- Rated voltage	352 V	
- Rated current	110 A / ΔT 40 K	
- Temperature rise with rated current	31,7 K / 110 A	
- Rated current with WQV...	110 A / ΔT 40 K	
- Contact resistance with rated conductor, 35 mm ²	0,12 m Ω	0,15 m Ω
- Rated conductor cross section	35 mm ²	35 mm ²
- Conductor cross section solid	2,5 - 16 mm ²	2,5 - 16 mm ²
- Conductor cross section stranded	2,5 - 50 mm ²	2,5 - 50 mm ²
- Conductor cross section flexible	2,5 - 35 mm ²	2,5 - 35 mm ²
- cross section, American Wire Gauge	12 - 2 AWG	12 - 2 AWG
- conductor cross section flexible with ferrule acc. to DIN 46228 part 1 + 4	2,5 - 35 mm ²	2,5 - 35 mm ²
- 2 conductors with same cross-section	2,5 - 6 mm ²	---
- Tightening torque range, terminal screw	4,0 - 5,0 Nm	1,8 - 2,4 Nm
- Tightening torque range, fixing screw		1,2 - 2,4 Nm
- Tightening torque range for WQV...	1,2 - 2,4 Nm	
- Stripping length	18 mm	18 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"):

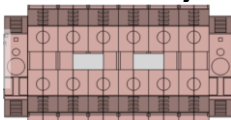
Application Case

A Continuous



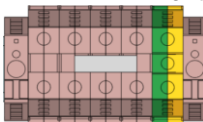
352 V

B Adjacent



352 V

E Next to a protective conductor terminal (earth) without a partition plate



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 WDU/WPE series is suitable for application in enclosures in atmospheres with flammable gases and 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 conductor terminal blocks are suitable for use in enclosures in atmospheres with flammable gases and 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/EN 60079-31.

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).

The enclosure shall be constructed to block all sun and UV light from affecting the terminal blocks.

Under normal operating conditions the temperature rise of the terminal blocks is max 40 K, measured with the max 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 as shown below. No part of terminal block must exceed 110 °C under any condition.

T6 (- 60°C ≤ Tamb ≤ +40 °C)

T5 (- 60°C ≤ Tamb ≤ +55 °C)

T4 (- 60°C ≤ Tamb ≤ +70 °C)

When using the types WDU and WPE with other terminal blocks series or sizes or accessories, the requirements for clearance and creepages 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.

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.