INSTALLATION INSTRUCTIONS & CONDITIONS FOR SAFE USE

II 2 GD

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:		Order No
	WDU 6 SL*	9537460000
	WDU 6 SL/EN*	9537470000

in conjunction with:		Order No
	WPE 6*	1010200000

Accessories:	Type	Order No
End Plate	WAP 2.5-10*	1050000000
Partition Plate	WTW 2.5-10*	1050100000
End bracked	WEW 32/1 V0 GF...*	
	WEW 35/2 V0 GF...*	
Terminal rail	TS 35/…TS 32/...acc.to DIN EN 60715	

Cross-connection	Screwable*	Order No
	WQV 6/2	1052360000
	WQV 6/3	1054760000
	WQV 6/4	1054860000
	WQV 6/5	1062660000
	WQV 6/6	1062670000
	WQV 6/7	1062680000
	WQV 6/10	1052260000

Insulation material:

- Type	Wemid
- Tracking resistance (A) to IEC 60112	CTI ≥ 600
- Flamability 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 6 SL WDU 6 SL/EN	WPE 6
- Rated voltage, WDU 6 SL/EN on TS 35	690 V	
- Rated voltage, WDU 6 SL/EN on TS 32	440 V	
- Rated voltage, WDU 6 SL	275 V	
- Rated current	40 A / ΔT 40 K	
- Temperature rise with rated current	37,6 K / 40 A	
- Rated current with WQV	40 A / ΔT 40 K	
- Contact resistance with rated conductor, 6 mm²	0,36 mΩ	0,25 mΩ
- Rated conductor cross section	6 mm²	6 mm²
- Conductor cross section solid	0,14 - 10 mm²	0,14 - 10 mm²
- Conductor cross section stranded	0,14 - 10 mm²	0,14 - 10 mm²
- Conductor cross section flexible	0,14 - 6 mm²	0,14 - 6 mm²
- cross section, American Wire Gauge	26 - 8 AWG	26 - 8 AWG
- conductor cross section flexible with ferrule acc. to DIN 46228 part 1 + 4	0,5 - 6 mm²	0,5 - 6 mm²
- 2 conductors with same cross-section	0,5 - 2,5 mm²	--
- Tightening torque range, terminal screw	0,8 - 1,6 Nm	0,8 - 1,3 Nm
- Tightening torque range, fixing screw		0,5 - 1,0 Nm
- Tightening torque range for WQV…	0,5 - 1,0 Nm	
- Stripping length	16 mm	12 mm

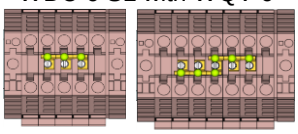
IECEx / ATEX / UKCA Terminal and Cross-Connector Arrangements:

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

WDU 6 SL with WQV 6



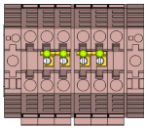
275 V

WDU 6 SL/EN with WQV 6

TS 35: 550 V
TS 32: 440 V

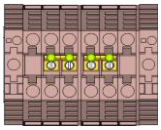
C Adjacent – separated by a partition plate

WDU 6 SL with WQV 6



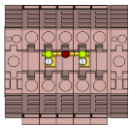
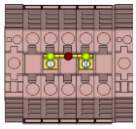
275 V

WDU 6 SL/EN with WQV 6

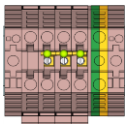
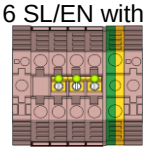


TS 35: 550 V
TS 32: 440 V

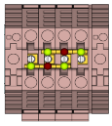
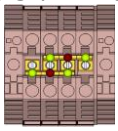
D **Intermediate - bridging one or more unconnected terminals**

WDU 6 SL with WQV 6	WDU 6 SL/EN with WQV 6
	
176 V	TS 35: 220 V TS 32: 220 V

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

WDU 6 SL with WQV 6	WDU 6 SL/EN with WQV 6
	
275 V	TS 35: 550 V TS 32: 440 V

H **Cross-connection with twin parallel**

WDU 6 SL with WQV 6	WDU 6 SL/EN with WQV 6
	
176 V	TS 35: 220 V TS 32: 220 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 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 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.

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.