IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

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Ex COMPONENT CERTIFICATE

Certificate No.: **IECEx ULD 14.0005U**

Status: **Current**

Issue No: 8

Date of Issue: 2024-09-13

Applicant: **Weidmüller Interface GmbH & Co. KG**
Klingenbergstrasse 26
Detmold 32758
Germany

Certificate history:
Issue 7 (2021-03-26)
Issue 6 (2020-04-20)
Issue 5 (2019-04-12)
Issue 4 (2018-12-17)
Issue 3 (2017-07-12)
Issue 2 (2016-11-22)
Issue 1 (2015-08-11)
Issue 0 (2014-10-16)

Ex Component: Feed through and protective conductor terminals with accessories - WDU*, WPE* and accessories ZQV*, WQV*, WAP*, WEW*, WTW*, LS 2.8

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection: **Increased Safety "eb"**

Marking: Ex eb IIC Gb

Approved for issue on behalf of the IECEx Certification Body: **Andreas Koehler**

Position: **Senior Certification Program Specialist**

Signature:
(for printed version)

Date:
(for printed version)

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Manufacturing locations: **Weidmüller Interface GmbH & Co. KG**
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This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The component and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the component listed has successfully met the examination and test requirements as recorded in:

Test Reports:

DK/ULD/ExTR14.0004/00
DK/ULD/ExTR14.0004/01
DK/ULD/ExTR14.0004/02
DK/ULD/ExTR14.0004/03
DK/ULD/ExTR14.0004/04
DK/ULD/ExTR14.0004/05
DK/ULD/ExTR14.0004/06
DK/ULD/ExTR14.0004/07
DK/ULD/ExTR14.0004/08

Quality Assessment Report:

NL/DEK/QAR12.0052/09

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Ex Component(s) covered by this certificate is described below:

Feed through terminal blocks type WDU and protective conductor terminal blocks type WPE are for the connection of copper conductors in enclosures. The type of protection is increased safety, “e”, insulating parts made of Polyamide PA 66, with optional accessories, type WQV screw in cross-connectors, type ZQV plug-in cross-connectors, type LS2.8 shield bus, type WEW end brackets, type WTW partitions, type WAP end plates for fixing on mounting rails.

Please see Annex for additional information.

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 60079-0 and IEC 60079-7. For combustible dust these enclosures must satisfy the requirements according to IEC 60079-31.
- The terminal blocks shall be placed inside a suitable IECEx certified IP54 enclosure for gas atmosphere. For dust atmosphere the terminal blocks shall be mounted inside a suitable IECEx certified ‘t’ enclosure (IEC 60079-31).
- 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 110% of the maximum 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 creepage distances according to table 2 of IEC 60079-7 must be observed. Regarding the use of covers, cross-connectors and end brackets the instructions of the manufacturer must be followed.
- For terminal jumper accessories current ratings and the resistances across the terminals please refer to the table under “types & electrical rating” above. Details on creepage and clearance values and the required torque values are in the respective “Notice to installers”.
- 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.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1: New models of WDU, WPE, ZQV and WQV added: Models WDU 1.5/R3.5, WDU 1.5/ZZ, WDU 2.5/1.5/ZR, WDU 2.5/TC TYP B, WDU 2.5/TC TYP E, WDU 2.5/TC TYP J, WDU 2.5/TC TYP K, WDU 2.5/TC TYP N, WDU 2.5/TC TYP SR, WDU 2.5/TC TYP T, WDU 2.5N, WDU 4 SL, WDU 4 SL/EN, WDU 4/ZR, WDU 4/ZZ, WDU 4N, WDU 6 SL, WDU 6 SL/EN, WDU 10 SL, WDU 10 SL/EN, WDU 70N/35, WDU 70N/95N, WDU 95N/120N, WDU 120/150, WPE 1.5/ZZ, WPE 2.5/1.5/ZR, WPE 2.5N, WPE 4/ZR, WPE 4/ZZ, WPE 4N, WPE 70/95, WPE 70N/35, WPE 95N/120N, WPE 120/150, ZQV 1.5/3.5/2, WQV 70N/2, WQV 95/120/2 and WQV 70/95/2WQV120/2. Voltage levels for WDU 6 and WDU 10 have been raised to 690V .

Issue 2: Alternate construction to multiple models.

Issue 3: NTI WDU-WPE 2.5 and NTI WDU-WPE 4 were updated.

Issue 4: Updated standards to latest editions, minor corrections to nomenclature.

Issue 5: New drawings of WPE type terminals added, New drawing for clamping yoke of WDU 35 added, revision of NTI´s for WDU/WPE2.5 and WDU/WPE4.

Issue 6: Alternate insulation materials added and technical documents updated.

Issue 7: Added alternate insulating materials for Models WPE 2.5/1.5/ZR, WDU 2.5 /1.5/ZR, WPE 2.5/1.5/ZR, WDU 2.5TC, WPE 2.5N, WDU 4N, WPE 4, WPE 4N, WPE 6 and WPE 10.

Issue 8: Alternate construction of terminal blocks WDU 50N and WDU 70N and jumpers WQV 50N/2 and WQV 70N/2. Drawings updated. Single drawings summarized and merged into new combined drawings.

Annex:

Annex to IECEX ULD 14.0005U Issue 8.pdf

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Annex to Certificate No.: IECEx ULD 14.0005U Issue No.: 8

TYPE DESIGNATION AND PARAMETERS RELATING TO THE SAFETY

TYPE	New (N) or original (O)	Rated (V)	Rated (A)	Resistance (uΩ)	Strip length	Solid wire size (mm^2)	Stranded wire size (mm^2)	Flexible wire size (mm^2)	2 wires in one terminal (mm^2)
WDU 1.5/R3.5	N	275	15	430	7	0,14-1,5	0,14-1,5	0,14-1,5	0,5-0,75
WDU 1.5/ZZ	N	550	17,5	740	7	0,14-2,5	0,14-2,5	0,13-1,5	0,5 -1,0
WDU 2.5N	N	440	24	430	10	0,14-4,0	0,14-4,0	0,5-2,5	0,5-1,5
WDU 2.5/1.5/ZR	O	550	20	720	10	See NTI	See NTI	See NTI	See NTI
WDU2.5**	N	690	24	369	10	0,14-4,0	0,14-4,0	0,14-4,0	0,5-1,5
WDU 2.5/TC B	O	55	8	3300	10	0,14-2,5	0,14-2,5	0,14-2,5	0,5-1,5
WDU 2.5/TC E	O	55	8	8650	10	0,14-2,5	0,14-2,5	0,14-2,5	0,5-1,5
WDU 2.5/TC J	O	55	8	5808	10	0,14-2,5	0,14-2,5	0,14-2,5	0,5-1,5
WDU 2.5/TC K	O	55	8	6705	10	0,14-2,5	0,14-2,5	0,14-2,5	0,5-1,5
WDU 2.5/TC N	O	55	8	9104	10	0,14-2,5	0,14-2,5	0,14-2,5	0,5-1,5
WDU 2.5/TC SR	O	55	8	2055	10	0,14-2,5	0,14-2,5	0,14-2,5	0,5-1,5
WDU 2.5/TC T	O	55	8	4611	10	0,14-2,5	0,14-2,5	0,14-2,5	0,5-1,5
WDU 4**	N	690	32	298	10	0,14-6,0	0,14-6,0	0,14-6,0	0,5-2,5
WDU 4 N	O	352	31	270	11	0,13-6,0	0,13-6,0	0,13-4,0	0,5-1,5
WDU 4/ZR	O	690	31	440	10	0,14-6,0	0,14-6,0	0,14-4,0	0,5-1,5
WDU 4/ZZ	O	690	29,5	560	10	0,14-6,0	0,14-6,0	0,14-4,0	0,5-1,5
WDU 4 SL	O	440	32,0	300	13	0,14-6,0	0,14-6,0	0,14-4,0	0,5-1,5
WDU 4 SL/EN	O	690	32,0	300	13	0,14-6,0	0,14-6,0	0,14-4,0	0,5-1,5
WDU 6	O	690	41	180	12	0,14-10,0	0,14-10,0	0,14-10,0	0,5-2,5
WDU 6 SL	O	275	40	360	16	0,14-10,0	0,14-10,0	0,14-6,0	0,5-2,5
WDU 6 SL/EN TS 32	O	440	40	360	16	0,14-10,0	0,14-10,0	0,14-6,0	0,5-2,5
WDU 6 SL/EN TS 35	O	690	40	360	16	0,14-10,0	0,14-10,0	0,14-6,0	0,5-2,5
WDU 10	O	690	57	152	12	1,31-16,0	1,31-16,0	1,31-16,0	0,5-6,0
WDU 10 SL /EN TS 32	O	550	55	280	17	1,5-16,0	1,5-16,0	0,5-10,0	1,5-4,0
WDU 10 SL /EN TS 35	O	690	55	280	17	1,5-16,0	1,5-16,0	0,5-10,0	1,5-4,0
WDU 10 SL	O	352	55	280	17	1,5-16,0	1,5-16,0	0,5-10,0	1,5-4,0
WDU 16	O	690	76	161	16	1,5-16,0	1,5-25,0	1,5-25,0	1,5-4,0
WDU 35	O	690	115	145	18	2,5-16,0	2,5-50,0	2,5-35,0	2,5-16,0
WDU 35N	O	352	110	122	18	2,5-16,0	2,5-50,0	2,5-35,0	2,5-6,0
WDU 50N	O	690	126	151	24	5,26-16,0	5,26-70,0	5,26-50,0	6,0-16,0

TYPE	New (N) or original (O)	Rated (V)	Rated (A)	Resistance (uΩ)	Strip length	Solid wire size (mm^2)	Stranded wire size (mm^2)	Flexible wire size (mm^2)	2 wires in one terminal (mm^2)
WDU 70N/35	O	690	184	142	22	10-16	10-95	10-70	10-25
WDU 70/95	O	1100	218	53	30	16	16-120	16-95	16-35
WDU 95N/120N	O	880	221	129	27	16	16-150	16-120	10-35
WDU 120/150	O	1100	265	44	35	16	35-150	35-150	35-70
WPE 1.5/R3.5	O	N/A	N/A	1150	7	0,14-1,5	0,14-1,5	0,14-1,5	0,5-0,75
WPE1.5/ZZ	O	N/A	N/A		7	0,14-2,5	0,14-2,5	0,13-1,5	0,5 -1,0
WPE 2.5/1.5/ZR	O	N/A	N/A	660	10	See NTI	See NTI	See NTI	See NTI
WPE 2.5	O	N/A	N/A	833	10	0,14-4,0	0,14-4,0	0,14-4,0	0,5-1,5
WPE 2.5N	O	N/A	N/A	380	10	0,14-4,0	0,14-4,0	0,5-4,0	0,5-1,5
WPE 4	O	N/A	N/A	643	10	0,14-6,0	0,14-6,0	0,14-6,0	0,5-2,5
WPE 4/ZZ	O	N/A	N/A	584	10	0,14-6,0	0,14-6,0	0,14-4,0	0,5-1,5
WPE 4/ZR	O	N/A	N/A	570	10	0,14-6,0	0,14-6,0	0,14-4,0	0,5-1,5
WPE 4N	O	N/A	N/A	740	11	0,13-6,0	0,13-6,0	0,13-4,0	0,13-1,5
WPE 6	O	N/A	N/A	256	12	0,14-10,0	0,14-10,0	0,14-10,0	0,5-2,5
WPE 10	O	N/A	N/A	221	12	1,31-16,0	1,31-16,0	1,31-16,0	0,5-6,0
WPE 16	O	N/A	N/A	178	16	1,5-16,0	1,5-25,0	1,5-25,0	1,5-4,0
WPE 35	O	N/A	N/A	173	18	2,5-16,0	2,5-50,0	2,5-35,0	2,5-16,0
WPE 35N	O	N/A	N/A	147	18	2,5-16,0	2,5-50,0	2,5-35,0	2,5-6,0
WPE 50N	O	N/A	N/A	189	24	5,26-16,0	5,26-70,0	5,26-50,0	6,0-16
WPE 70/95	O	N/A	N/A	76	30	16	16-120	16-120	16-35
WPE 70N/35	O	N/A	N/A	156	22	10-16	10-95	10-70	10-25
WPE 95N/120N	O	N/A	N/A	126	27	16	16-150	16-120	10-35
WPE 120/150	O	N/A	N/A	67	35	35	35-150	35-150	35-70
WAP 2.5-10	O	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
WAP 16+35WTW 2.5-10	O	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
WEW 35/1	O	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
WEW 35/2	O	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
WTW EN	O	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LS 2.8	O	See NTI	N/A	N/A	N/A	N/A	N/A	N/A	N/A

TYPE	New (N) or original (O)	Rated (V)	Rated (A)	Resistance (uΩ)	Strip length	Solid wire size (mm^2)	Stranded wire size (mm^2)	Flexible wire size (mm^2)	2 wires in one terminal (mm^2)
ZQV 1.5N/R3.5	O	See NTI	See NTI	N/A	N/A	N/A	N/A	N/A	N/A
ZQV 2.5N	O	See NTI	See NTI	N/A	N/A	N/A	N/A	N/A	N/A
ZQV 4N	O	See NTI	See NTI	N/A	N/A	N/A	N/A	N/A	N/A
WQV 2.5	O	See NTI	See NTI	N/A	N/A	N/A	N/A	N/A	N/A
WQV 4	O	See NTI	See NTI	N/A	N/A	N/A	N/A	N/A	N/A
WQV 6	O	See NTI	See NTI	N/A	N/A	N/A	N/A	N/A	N/A
WQV 10	O	See NTI	See NTI	N/A	N/A	N/A	N/A	N/A	N/A
WQV 16	O	See NTI	See NTI	N/A	N/A	N/A	N/A	N/A	N/A
WQV 35	O	See NTI	See NTI	N/A	N/A	N/A	N/A	N/A	N/A
WQV 35N	O	See NTI	See NTI	N/A	N/A	N/A	N/A	N/A	N/A
WQV 50N	O	See NTI	See NTI	N/A	N/A	N/A	N/A	N/A	N/A
WQV 70/95	O	See NTI	See NTI	N/A	N/A	N/A	N/A	N/A	N/A
WQV 70N	O	See NTI	See NTI	N/A	N/A	N/A	N/A	N/A	N/A
WQV 95/120	O	See NTI	See NTI	N/A	N/A	N/A	N/A	N/A	N/A
WQV 120	O	See NTI	See NTI	N/A	N/A	N/A	N/A	N/A	N/A

**Two alternate constructions under one Cat. No.

MARKING

This is an example of WDU 4/ZR. For the other types see the respective drawings.

ROUTINE EXAMINATIONS AND TESTS

According to IEC 60079-7 clause 7.1 in combination with clause 6.1 a dielectric strength test has to be carried out. The routine tests may be performed on a statistical basis according to ISO 2859-1 with an acceptance quality limit (AQL) of 0,04. Routine test is to be carried out according to Weidmuller procedure “High voltage test” Document -NR: A_10_54.