



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Ex COMPONENT CERTIFICATE

Certificate No.: **IECEx ULD 15.0004U**

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[Certificate history](#):
[Issue 0 \(2016-05-17\)](#)

Status: **Current**

Issue No: 1

Date of Issue: 2020-03-20

Applicant: **Weidmüller Interface GmbH & Co. KG**
Klingenbergrasse 16
32758 Detmold
Germany

Ex Component: Feed through stud conductor terminals WFF* and accessories WTW, WEW, WQL, WZAF

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:

Katy A. Holdredge

Position:

Senior Staff Engineer

Signature:
(for printed version)

Date:

2020-03-20

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
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DK-2750 Ballerup
Denmark





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Manufacturer: **Weidmüller Interface GmbH & Co. KG**
Klingenbergrasse 16
32758 Detmold
Germany

Additional
manufacturing
locations:

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 equipment 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 equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[DK/ULD/ExTR15.0005/00](#) [DK/ULD/ExTR15.0005/01](#)

Quality Assessment Report:

[NL/DEK/QAR12.0052/06](#)



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

Feed through terminal blocks type WFF. The wire is attached to the terminal stud using crimped cable lugs and each connection is secured by a hexagonal nut. The type of protection is increased safety, "eb", insulating parts made of Polyamide PA66, with optional accessories, type WAH hoods, type WQL cross-connectors, type WEW end brackets, type WTW partitions for fixing on mounting rails and type WZAF auxiliary/ control line connection.

Please see Annex for additional information.

SCHEDULE OF LIMITATIONS:

- The stud 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 EN/IEC 60079-0 and IEC 60079-7. For combustible dust these enclosures must satisfy the requirements according to IEC 60079-0 and IEC 60079-31. 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 certified IP54 enclosure in type of protection "e" for gas atmosphere. For dust atmosphere the terminal blocks shall be mounted inside a suitable certified IP6x enclosure (IEC 60079-31) in type of protection "t".
- Under normal operating conditions the temperature rise of the terminal blocks is maximum 40 K, measured at 110% of the maximum permitted rated current. Due to the above mentioned the terminal blocks may be used in apparatus of temperature classes T6, T1as long as the terminal block ambient temperature range is not exceeded. No part of terminal block must exceed 100°C under any condition.
 - T6 (- 60 °C....+40 °C)
 - T5 (- 60 °C....+55 °C)
 - T4 (- 60 °C....+60 °C)
- When using the type WFF especially 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, end brackets and control line connections, the instructions of the manufacturer must be followed.
- For cross connection accessories current rating, resistance across the terminal please refer to the table under "types & electrical rating" above. Details on creepages and clearance values and the required torque values please see 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: Standards updated to latest editions; New accessories of type WZAF added; Alternate insulating material added; Service temperature range adjusted to -60°C to + 100°C, permitting a 60°C ambient temperature based on a 40K heat rise.

Annex:

[Annex to IECEx ULD 15.0004U Issue 1.pdf](#)



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TYPE DESIGNATION AND PARAMETERS OF SAFETY

| TYPE | Rated voltage (V) | Rated current (A) | Resistance across terminals (uΩ) top/lower | cross section (mm ²) | Cable lug types | Conductor range 1 wire (mm ²) | Conductor range for 2 wires (mm ²) |
|-----------------|-------------------|-------------------|--|----------------------------------|------------------------|---|--|
| WFF 35 | 1100 | 125 | 43 | 35 | DIN 46234 DIN 46235 | 2,5-35 | 2,5-35 |
| WFF 35/AH | 1100 | 125 | 43 | 35 | DIN 46234 DIN 46235 | 2,5-35 | 2,5-35 |
| WFF 70 | 1100 | 192 | 32 | 70 | DIN 46234 DIN 46235 | 2,5-70 | 2,5-70 |
| WFF 70/AH | 1100 | 192 | 32 | 70 | DIN 46234 DIN 46235 | 2,5-70 | 2,5-70 |
| WFF 120 | 1100 | 269 | 28 | 120 | DIN 46234 DIN 46235 | 6-120 | 6-120 |
| WFF 120/AH | 1100 | 269 | 28 | 120 | DIN 46234 DIN 46235 | 6-120 | 6-120 |
| WFF185 | 1100 | 353 | 28 | 185 | DIN 46234 DIN 46235 | 10-185 | 10-185 |
| WFF185/AH | 1100 | 353 | 28 | 185 | DIN 46234 DIN 46235 | 10-185 | 10-185 |
| WFF 300 | 1100 | 520 | 20 | 300 | DIN 46234 DIN 46235 | 25-300 | 25-300 |
| WFF 300/AH | 1100 | 520 | 20 | 300 | DIN 46234 DIN 46235 | 25-300 | 25-300 |
| WAH 35 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| WAH 70 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| WAH 120 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| WAH 185/300 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| WTW WFF 35 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| WTW WFF 70 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| WTW WFF 120 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| WTW WFF 185 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| WTW WFF 185/300 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| WEW 35/1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| WQL 2 WFF35 | N/A | 125 | N/A | N/A | N/A | N/A | N/A |
| WQL 2 WFF70 | N/A | 192 | N/A | N/A | N/A | N/A | N/A |
| WQL 2 WFF120 | N/A | 269 | N/A | N/A | N/A | N/A | N/A |
| WQL 2 WFF185 | N/A | 353 | N/A | N/A | N/A | N/A | N/A |
| WQL 2 WFF300 | N/A | 520 | N/A | N/A | N/A | N/A | N/A |
| WZAF 35 | 690 | 10 | N/A | 2.5 | N/A | 1,5 - 2,5 | N/A |



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| TYPE | Rated voltage (V) | Rated current (A) | Resistance across terminals ($\mu\Omega$) top/lower | cross section (mm^2) | Cable lug types | Conductor range 1 wire (mm^2) | Conductor range for 2 wires (mm^2) |
|----------|-------------------|-------------------|---|---------------------------------|-----------------|--|---|
| WZAF 70 | 1100 | 16 | N/A | 6 | N/A | 1,5 - 6 | N/A |
| WZAF 120 | 1100 | 16 | N/A | 6 | N/A | 1,5 - 6 | N/A |
| WZAF 185 | 1100 | 16 | N/A | 6 | N/A | 1,5 - 6 | N/A |
| WZAF 300 | 1100 | 16 | N/A | 6 | N/A | 1,5 - 6 | N/A |

MARKING

Marking has to be readable and indelible; it has to include the following indications:

Example of WFF 35.



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.