



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

Certificate No.: **IECEx EPS 19.0100X**

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Certificate history:

Status: **Current**

Issue No: 1

Issue 0 (2021-07-01)

Date of Issue: 2022-02-11

Applicant: **Endress+Hauser Wetzler GmbH + Co. KG**
Obere Wank 1
87484 Nesselwang
Germany

Equipment: **Active Barrier (associated apparatus)**

Optional accessory: RN22 and RN42

Type of Protection: **ia**

Marking: [Ex ia Ga] IIC

[Ex ia Da] IIIC

Approved for issue on behalf of the IECEx
Certification Body:

Ulrich Feike

Position:

Certification Manager

Signature:
(for printed version)

Date:



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.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Bureau Veritas Consumer Products Services Germany GmbH
Businesspark A96
86842 Türkheim
Germany





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Manufacturer: **Endress+Hauser Wetzer GmbH + Co. KG**
Obere Wank 1
87484 Nesselwang
Germany

Additional
manufacturing
locations:

**Endress+Hauser Wetzer (Suzhou)
Co. Ltd.**
Su-Hong-Zhong-Lu No. 465
215021 Suzhou-SIP (P.R. China)
China

Endress+Hauser Wetzer USA INC.
2413 Endress Place
Greenwood, IN 46143
United States of America

**Endress+Hauser Wetzer (India) Pvt.
Ltd.**
M-171/173, MIDC, Waluj
Aurangabad – 431 136
India

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 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

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 Report:

DE/EPS/ExTR19.0104/01

Quality Assessment Report:

DE/TUN/QAR06.0009/09



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The active barrier, type RN22, is used for the transmission and galvanic isolation of 0/4 to 20 mA signals.

The device has an active/passive current input to which an intrinsically 2- or 4-wire transmitter can be directly connected. HART communication signals are transmitted bidirectionally by the device.

A two-channel version of the barrier can optionally be provided.

With a signal doubler option, the active barrier is used for the galvanic isolation of a 0/4 to 20 mA signal, which is transmitted to two galvanically isolated outputs.

The active barrier, type RN42, is used for the transmission and galvanic isolation of 0/4 to 20 mA signals.

The device has an active/passive current input to which an intrinsically 2- or 4-wire transmitter can be directly connected. HART communication signals are transmitted bidirectionally by the device.

Ambient temperature range: $-40\text{ }^{\circ}\text{C} \leq T_a \leq +60\text{ }^{\circ}\text{C}$

SPECIFIC CONDITIONS OF USE: YES as shown below:

If several devices are installed side by side, it is important to ensure that the maximum side wall temperature of the individual device of 80°C (176°F) is not exceeded. If this cannot be guaranteed, the devices have to be mounted at a distance from one another or sufficient cooling must be ensured.



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Equipment (continued):

Electrical Data:

Supply RN22:

terminal 1.1 (+), 1.2 (-) U = 24 V Dc (-20 % / +25 %)
Um = 250 V

Supply RN42:

terminal 1.1 (L/+), 1.2 (N/-) U = 24 to 230 V DC (-20 % / +10 %) 50/60 Hz
Um = 250 V

Output circuit:

terminal 3.1 (+), 3.2 (-) U = 30 V DC
terminal 2.1 (+), 2.2 (-) I = 0/4-20 mA
Um = 30 V

Input circuit:

Connection 2-wire (active)

RN22: Uo ≤ 27.3 V DC
terminal 4.1 (+), 4.2 (-) Io ≤ 87.6 mA
terminal 6.1 (+), 6.2 (-) Po = 597 mW
RN42: Ci = negligibly small
terminal 4.1 (+), 4.2 (-) Li = negligibly small

Max. connection values:

Single values:

Ex ia IIC	Lo = 5.2 mH	Co = 0.088 µF
Ex ia IIB	Lo = 20.8 mH	Co = 0.683 µF
Ex ia IIA	Lo = 44.8 mH	Co = 2.28 µF

Combined values:

Ex ia IIC:	Lo/ Co	1.3 mH 0.047 µF	1 mH 0.052 µF	0.5 mH 0.065 µF		
Ex ia IIB:	Lo/ Co	26 mH 0.39 µF	2 mH 0.44 µF	1 mH 0.53 µF	0.5 mH 0.64 µF	0.2 mH 0.683 µF
Ex ia IIA:	Lo/ Co	49 mH 1.3 µF	20 mH 1.6 µF	1 mH 1.8 µF	0.5 mH 2.2 µF	0.2 mH 2.28 µF



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Input circuit:

Connection 4-wire (passive)

RN22: $U_o \leq 27.3 \text{ V DC}$
terminal 4.2 (+), 5.1 (-) $I_o \leq 10 \text{ mA}$
terminal 6.2 (+), 5.2 (-) $P_o = 68 \text{ mW}$
RN42: $C_i = \text{negligibly small}$
terminal 4.2 (+), 4.3 (-) $L_i = \text{negligibly small}$

Max. connection values (combined):

Ex ia IIC:	Lo/ Co	100 mH 0.065 μF	2 mH 0.072 μF	1 mH 0.081 μF	0.5 mH 0.088 μF
Ex ia IIB:	Lo/ Co	100 mH 0.48 μF	2 mH 0.52 μF	1 mH 0.59 μF	0.5 mH 0.683 μF
Ex ia IIA:	Lo/ Co	100 mH 1.7 μF		1 mH 1.9 μF	0.5 mH 2.28 μF

Connection 4-wire (passive):

RN22: $U_i \leq 30 \text{ V DC}$
terminal 4.2 (+), 5.1 (-) I_i not applicable when keeping U_i
terminal 6.2 (+), 5.2 (-) P_i not applicable when keeping U_i
RN42: $C_i = \text{negligibly small}$
terminal 4.2 (+), 4.3 (-) $L_i = \text{negligibly small}$



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Lo/Co values added, minor technical and editorial changes.