UK Type Examination Certificate CML 21UKEX2995 Issue 0

United Kingdom Conformity Assessment

1 Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

2 Equipment **Process Indicator type RIA45 and Field Indicator type RIA46**

3 Manufacturer **Endress + Hauser Wetzer Gmbh + Co. KG**

4 Address **Obere Wank 1, 87484 Nesselwang, Germany**

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom, Approved Body Number 2503, in accordance with Regulation 43 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to specific conditions of use (affecting correct installation or safe use). These are specified in Section 14.

8 This UK Type Examination certificate relates only to the design and construction of the specified equipment. Further requirements of the Regulations apply to the manufacturing process and supply of the product. These are not covered by this certificate.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-11:2012

10 The equipment shall be marked with the following:

Refer to attached certificate PTB 08 ATEX 2036, Issue 1 for specific marking of explosion protection symbols.

Refer to attached certificate PTB 08 ATEX 2036, Issue 1 for marked code and ambient temperature range.

8175

A. M. Good
Certification Officer

11 Description

For product description refer to attached certificate PTB 08 ATEX 2036, Issue 1.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	31 March 2022	R14537D-00	Issue of the prime certificate. PTB 08 ATEX 2036, Issue 1 is attached and shall be referred to in conjunction with this certificate.

Note: Drawings that describe the equipment are listed or referred to in the Annex.

13 Conditions of Manufacture

For conditions of manufacture, refer to attached certificate PTB 08 ATEX 2036, Issue 1.

Any routine tests/verifications required by the ATEX certification shall be conducted.

14 Specific Conditions of Use

None.

Certificate Annex

Certificate Number	**CML 21UKEX2995**
Equipment	**Process Indicator type RIA45 and Field Indicator type RIA46**
Manufacturer	**Endress + Hauser Wetzer Gmbh + Co. KG**

The following documents describe the equipment defined in this certificate:

Issue 0

For drawings describing the equipment, refer to attached certificate PTB 08 ATEX 2036, Issue 1. In addition to the drawings listed on PTB 08 ATEX 2036, Issue 1, the following drawings include the additional marking required for this UK Type Examination certification:

Drawing No	Sheets	Rev	Approved date	Title
10000012823	1 of 1	-	31 March 2022	Nameplate Component units for Category 1 or 2

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

(1) EU-TYPE EXAMINATION CERTIFICATE

(Translation)

(2) Equipment or Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number:

PTB 08 ATEX 2036 **Issue: 1**

(4) Product: Process Indicator type RIA45 and Field Indicator type RIA46

(5) Manufacturer: Endress + Hauser Wetzer GmbH + Co. KG

(6) Address: Obere Wank 1, 87484 Nesselwang, Germany

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential Test Report PTB Ex 22-21093.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018+AC2020
EN 60079-11:2012

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

II (1) G [Ex ia Ga] IIC and II (1) D [Ex ia Da] IIIC

Konformitätsbewertungsstelle, Sektor Explosionsschutz Braunschweig, March 8, 2022
On behalf of PTB:

Dr.-Ing. M. Thedens
Regierungsdirektor

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(13) # SCHEDULE

(14) **EU-Type Examination Certificate Number PTB 08 ATEX 2036, Issue: 1**

(15) Description of Product

The process indicator type RIA45 and field indicator type RIA46 are used to supply power to transmitters and to process transmitter signals, evaluate and display them.

It is used outside of the explosion hazard area.

Electrical data

Supply circuit ..... (Terminals L / +, L / -, PE)	20 ... 253 V AC/DC 50/60 Hz
Output circuits, limit value relay (Terminals R12, R11, R13 resp. R22, R21, R23)	250V AC, approx. 3 A resp. 30V DC, approx. 3 A
Interface CDI (operational values)	U = 5 V U_m = 250 V
Puls outputs and current outputs ..... (Terminals O15, O16 resp. O25, O26)	I = 4 ...20 mA U_m = 250 V
Open Collector..... (Terminals D11, D12)	I = 200 mA U_m = 30 V
2-wire measuring transducer supply ..... (Terminals 11, 14, 12, 18 resp. 21, 24, 22, 28)	Type of protection Intrinsic Safety Ex ia IIC/IIIC Maximum values: U_o = 27,3 V I_o = 96,5 mA P_o = 659 mW Linear characteristic L_i = 75 µH C_i = 8 nF

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 08 ATEX 2036, Issue: 1

Permissible maximum values for the external inductances and capacitances according to EN 60079-11, figure A.4 und A.6 as well as Table A.2:

Ex ia	IIC	IIB/IIIC	IIA
L_o	4 mH	17 mH	34 mH
C_o	88 nF	683 nF	2,28 µF

resp.

Permissible maximum values for the external inductances and capacitances derived from the Software „ISPARK“:

Ex ia	IIC	IIB/IIIC	IIA
L_o	425 µH	4,9 mH	20 mH
C_o	62 nF	262 nF	1,6 µF

4-wire measuring transducer supply ..... Type of protection Intrinsic Safety Ex ia IIC/IIIC
(Terminals 11, 12 resp. 21, 22)

Maximum values:

U_o = 27,3 V
I_o = 91,1 mA
P_o = 622 mW

Linear characteristic

L_i = 75 µH
C_i = 8 nF

Permissible maximum values for the external inductances and capacitances derived from the Software „ISPARK“:

Ex ia	IIC	IIB/IIIC	IIA
L_o	500 µH	2 mH	20 mH
C_o	70 nF	310 nF	460 nF

4-wire measuring transducer supply ..... Type of protection Intrinsic Safety Ex ia IIC/IIIC

Current input
(Terminals 14, 18 resp. 24, 28)

resp. voltage input
(Terminals 13, 18 und 23, 28)

Maximum values:

U_o = 27,3 V
I_o = 5 mA
P_o = 34,2 mW

Linear characteristic

L_i = 75 µH
C_i = 8 nF

Permissible maximum values for the external inductances and capacitances derived from the Software „ISPARK“:

Ex ia	IIC	IIB/IIIC	IIA
L_o	500 µH	2 mH	100 mH
C_o	88 nF	380 nF	540 nF

resp.

Only for connection to a certified intrinsically safe circuit, type of protection Intrinsic Safety Ex ia IIC

Maximum values:

U_i = 28 V
I_i = 100 mA
P_i = 650 mW

L_i = 75 µH
C_i = 8 nF

Only one connection is possible.

RTD-Temperature inputs (Terminals 15/16/17/18 und 12/14 resp. 25/26/27/28 und 22/24) ..... Type of protection Intrinsic Safety Ex ia IIC/IIIC

Maximum values:

U_o = 27,3 V
I_o = 22,1 mA
P_o = 151 mW

Linear characteristic

L_i = 75 µH
C_i = 8 nF

Permissible maximum values for the external inductances and capacitances derived from the Software „ISPARK“:

Ex ia	IIC	IIB/IIIC	IIA
L_o	500 µH	2 mH	5 mH
C_o	85 nF	360 nF	530 nF

Thermal element-temperature inputs ..... Type of protection Intrinsic Safety Ex ia IIC/IIIC
resp. voltage inputs
(Terminals 17, 18 resp. 27, 28)

Maximum values:

U_o = 27,3 V
I_o = 15,5 mA
P_o = 105,8 mW

Linear characteristic

L_i = 75 µH
C_i = 8 nF

Permissible maximum values for the external inductances and capacitances derived from the Software „ISPARK“:

Ex ia	IIC	IIB/IIIC	IIA
L_o	1 mH	2 mH	100 mH
C_o	74 nF	370 nF	530 nF

resp.

Only for connection to a certified intrinsically safe circuit, type of protection Intrinsic Safety
Ex ia IIC/IIIC

Maximum values:

U_i = 28 V
I_i = 100 mA
P_i = 650 mW

L_i = 75 µH
C_i = 8 nF

Only one connection is possible.

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 08 ATEX 2036, Issue: 1

The intrinsically safe circuits are safely galvanically isolated from all other circuits up to a peak value the nominal voltage of 375 V.

The permissible ambient temperature range is
- for the Process Indicator type RIA45 -20 °C … +60 °C and
- for the Field Indicator type RIA46 -40 °C … +60 °C.

Changes with respect to previous editions

- Adaption to the state of the standards given above.
- Change of the drawing numbers

(16) Test Report PTB Ex 22-21093

(17) Specific conditions of use

none

(18) Essential health and safety requirements

Met by compliance with the standards.

According to Article 41 of Directive 2014/34/EU, EC-type examination certificates which have been issued according to Directive 94/9/EC prior to the date of coming into force of Directive 2014/34/EU (April 20, 2016) may be considered as if they were issued already in compliance with Directive 2014/34/EU. By permission of the European Commission supplements to such EC-type examination certificates and new issues of such certificates may continue to hold the original certificate number issued before April 20, 2016.

Konformitätsbewertungsstelle, Sektor Explosionsschutz — Braunschweig, March 8, 2022
On behalf of PTB:

Dr.-Ing. M. Thedens
Regierungsdirektor