UK Type Examination Certificate CML 21UKEX2998X 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 **active barrier, type RN22 and RN42**

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 EPS 19 ATEX 1 231 X, Issue 0 for specific marking of explosion protection symbols.

Refer to attached certificate EPS 19 ATEX 1 231 X, Issue 0 for marked code and ambient temperature range.

A. M. Good
Certification Officer

11 Description

For product description refer to attached certificate EPS 19 ATEX 1 231 X, Issue 0.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	21 Oct 2021	R14537G/00	Issue of the prime certificate. EPS 19 ATEX 1 231 X, Issue 0. 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 EPS 19 ATEX 1 231 X, Issue 0. Any routine tests/verifications required by the ATEX certification shall be conducted.

14 Specific Conditions of Use

For specific conditions of use, refer to attached certificate EPS 19 ATEX 1 231 X, Issue 0.

Certificate Annex

Certificate Number	**CML 21UKEX2998X**
Equipment	**active barrier, type RN22 and RN42**
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 EPS 19 ATEX 1 231 X. In addition to the drawings listed on EPS 19 ATEX 1 231 X, 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	-	21 Oct 2021	Nameplate Component units for Category 1 or 2

(1) # EU - Type Examination Certificate

(2) Equipment and protective systems intended for use in potentially explosive atmospheres – **Directive 2014/34/EU**

(3) EU - Type Examination Certificate Number

EPS 19 ATEX 1 231 X **Revision 0**

(4) Equipment: active barrier, type RN22 and RN42

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

(6) Address: Obere Wank 1
87484 Nesselwang
Germany

(7) This equipment and any acceptable variation thereto are specified in the annex to this certificate and the documentation therein referred to.

(8) Bureau Veritas Consumer Products Services Germany GmbH, notified body No. 2004 in accordance with Article 21 given in the Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014, certifies that this equipment has been found to comply with the essential health and safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II of the Directive. The examination and test results are recorded in the confidential documentation under the reference number 19TH0372.

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

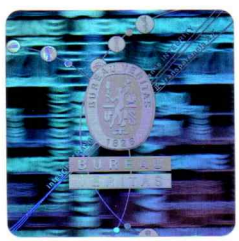
EN IEC 60079-0:2018 **EN 60079-11:2012**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the annex to this certificate.

(11) This EU - Type Examination Certificate relates only to the design and construction of the specified equipment in accordance with Directive 2014/34/EU. Further requirements of this Directive apply to the manufacture of this equipment and its placing on the market. Those requirements are not covered by this certificate.

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

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



Certification department of explosion protection

H. Schaffer

Hamburg, 2021-07-01

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(13) # Annex

(14) **EU - Type Examination Certificate EPS 19 ATEX 1 231 X** **Revision 0**

(15) Description of equipment:

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 doppler 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.

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 % / +25 %)	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	=	250 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	=	0.5 mH	Co	=	0.065 µF
Ex ia IIB	Lo	=	2 mH	Co	=	0.440 µF
Ex ia IIA	Lo	=	20 mH	Co	=	1.6 µF

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EU - Type Examination Certificate EPS 19 ATEX 1 231 X **Revision 0**

Connection 4-wire (passive)						
RN22:	Uo	≤	27.3 V DC			
terminal 4.2 (+), 5.1 (-)	Io	≤	10 mA			
terminal 6.2 (+), 5.2 (-)	Po	=	68 mW			
RN42:	Ci	=	negligibly small			
terminal 4.1 (+), 4.3 (-)	Li	=	negligibly small			
Max. connection values (combined)						
Ex ia IIC	Lo	=	0.5 mH	Co	=	0.088 µF
Ex ia IIB	Lo	=	100 mH	Co	=	0.048 µF
Ex ia IIA	Lo	=	100 mH	Co	=	1.7 µF
Connection 4-wire (passive)						
RN22:	Ui	≤	30 V DC			
terminal 4.2 (+), 5.1 (-)	Ii		not applicable when keeping Ui			
terminal 6.2 (+), 5.2 (-)	Pi		not applicable when keeping Ui			
RN42:	Ci	=	negligibly small			
terminal 4.1 (+), 4.3 (-)	Li	=	negligibly small			

Maximum ambient temperature range: -40 °C ≤ Ta ≤ +60 °C

(16) Reference number: 19TH0372

(17) Special conditions for safe use:

If several devices are installed side by side, it is important to ensure that the maximum side wall temperature of 85°C (185°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.

(18) Essential health and safety requirements:

Met by compliance with standards.

ZERTIFIZIERUNGSSTELLE BUREAU VERITAS Bureau Veritas CPS Germany GmbH 1828

Certification department of explosion protection

H. Schaffer

Hamburg, 2021-07-01

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(1) # EU - Baumusterprüfbescheinigung

(2) Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen – **Richtlinie 2014/34/EU**

(3) EU - Baumusterprüfbescheinigungsnummer

EPS 19 ATEX 1 231 X **Revision 0**

(4) Gerät: Aktive Barriere, Typ RN22 und RN42

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

(6) Anschrift: Obere Wank 1
87484 Nesselwang
Deutschland

(7) Die Bauart dieses Gerätes sowie die verschiedenen zulässigen Ausführungen sind in der Anlage zu dieser EU - Baumusterprüfbescheinigung festgelegt.

(8) Bureau Veritas Consumer Products Services Germany GmbH bescheinigt als benannte Stelle Nr. 2004 nach Artikel 21 der Richtlinie 2014/34/EU des Europäischen Parlaments und des Rates vom 26. Februar 2014 die Erfüllung der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie. Die Ergebnisse der Prüfung sind in der vertraulichen Dokumentation unter der Referenznummer 19TH0372 festgelegt.

(9) Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit:

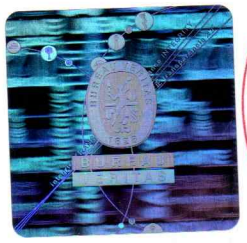
EN IEC 60079-0:2018 **EN 60079-11:2012**

(10) Falls das Zeichen „X" hinter der Bescheinigungsnummer steht, wird auf besondere Bedingungen für die sichere Anwendung des Gerätes in der Anlage zu dieser Bescheinigung hingewiesen.

(11) Diese EU - Baumusterprüfbescheinigung bezieht sich nur auf Konzeption und Prüfung des festgelegten Gerätes gemäß Richtlinie 2014/34/EU. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und das Inverkehrbringen dieses Gerätes. Diese Anforderungen werden nicht durch diese Bescheinigung abgedeckt.

(12) Die Kennzeichnung des Gerätes muss die folgenden Angaben enthalten:

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



Zertifizierungsstelle Explosionsschutz

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Hamburg, 01.07.2021

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(13) **Anlage**

(14) **EU - Baumusterprüfbescheinigung EPS 19 ATEX 1 231 X** **Revision 0**

(15) Beschreibung des Gerätes:

Der Speisetrenner, Typ RN22, dient zur Übertragung und galvanischen Trennung von 0/4 ... 20 mA Signalen.
Das Gerät besitzt einen aktiven / passiven Stromeingang, an den ein 2- oder 4-Leiter Messumformer direkt angeschlossen werden kann.
HART-Kommunikationssignale werden vom Gerät bidirektional übertragen.
Eine zwei-kanalige Version ist optional erhältlich.
In der Option Signaldoppler dient der Speisetrenner zur galvanischen Trennung von einem 0/4...20 mA Signal, welches an zwei galvanisch getrennte Ausgänge übertragen wird.

Der Speisetrenner, Typ RN42, dient zur Übertragung und galvanischen Trennung von 0/4...20 mA Signalen.
Das Gerät besitzt einen aktiven / passiven Stromeingang, an den ein 2- oder 4-Leiter Messumformer direkt angeschlossen werden kann.
HART-Kommunikationssignale werden vom Gerät bidirektional übertragen.

Elektrische Daten:

Versorgung RN22:					
Klemme 1.1 (+), 1.2 (-)	U	=	24 V DC	(-20 % / +25 %)	
	Um	=	250 V		
Versorgung RN42:					
Klemme 1.1 (L/+), 1.2 (N/-)	U	=	24 bis 230 V DC	(-20 % / +25 %)	50/60 Hz
	Um	=	250 V		
Ausgang:					
Klemme 3.1 (+), 3.2 (-)	U	=	30 V DC		
Klemme 2.1 (+), 2.2 (-)	I	=	0/4-20 mA		
	Um	=	250 V		

Eingang:

2-Leiter Anschluss (aktiv)						
RN22:	Uo	≤	27,3 V DC			
Klemme 4.1 (+), 4.2 (-)	Io	≤	87,6 mA			
Klemme 6.1 (+), 6.2 (-)	Po	=	597 mW			
RN42:	Ci	=	vernachlässigbar			
Klemme 4.1 (+), 4.2 (-)	Li	=	vernachlässigbar			
Max. Anschlusswerte						
Einzelwerte:						
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
Kombinierte Werte:						
Ex ia IIC	Lo	=	0,5 mH	Co	=	0,065 µF
Ex ia IIB	Lo	=	2 mH	Co	=	0,440 µF
Ex ia IIA	Lo	=	20 mH	Co	=	1,6 µF

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EU - Baumusterprüfbescheinigung EPS 19 ATEX 1 231 X **Revision 0**

4-Leiter Anschluss (passiv)						
RN22:	Uo	≤	27,3 V DC			
Klemme 4.2 (+), 5.1 (-)	Io	≤	10 mA			
Klemme 6.2 (+), 5.2 (-)	Po	=	68 mW			
RN42:	Ci	=	vernachlässigbar			
Klemme 4.1 (+), 4.3 (-)	Li	=	vernachlässigbar			
Max. Anschlusswerte (kombiniert)						
Ex ia IIC	Lo	=	0,5 mH	Co	=	0,088 µF
Ex ia IIB	Lo	=	100 mH	Co	=	0,048 µF
Ex ia IIA	Lo	=	100 mH	Co	=	1,7 µF
4-Leiter Anschluss (passiv)						
RN22:	Ui	≤	30 V DC			
Klemme 4.2 (+), 5.1 (-)	Ii		nicht anwendbar bei Einhaltung von Ui			
Klemme 6.2 (+), 5.2 (-)	Pi		nicht anwendbar bei Einhaltung von Ui			
RN42:	Ci	=	vernachlässigbar			
Klemme 4.1 (+), 4.3 (-)	Li	=	vernachlässigbar			
Maximaler Umgebungstemperaturbereich:			-40 °C ≤ Ta ≤ +60 °C			

(16) Referenznummer: 19TH0372

(17) Besondere Bedingungen:

Wenn mehrere Geräte nebeneinander montiert werden, ist darauf zu achten, dass die maximale Seitenwandtemperatur von 85 °C nicht überschritten wird. Wenn dies nicht gewährleistet werden kann, müssen die Geräte mit hinreichendem Abstand montiert werden oder es ist auf andere Weise für eine hinreichende Kühlung zu sorgen.

(18) Grundlegende Sicherheits- und Gesundheitsanforderungen:

Durch Übereinstimmung mit Normen abgedeckt.

Zertifizierungsstelle Explosionsschutz

H. Schaffer

Hamburg, 01.07.2021

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