

UK Type Examination Certificate CML 21UKEX2997X 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 **Temperature transmitter iTEMP type TMT82-**A1/21*** and TMT82-**A3/4/5*****
- 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 17 ATEX 1 074 X, Revision 2 for specific marking of explosion protection symbols.

Refer to attached certificate EPS 17 ATEX 1 074 X, Revision 2 for marked code and ambient temperature range.



CML 21UKEX2997X
Issue 0

11 Description

For product description refer to attached certificate EPS 17 ATEX 1 074 X, Revision 2.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	24 Nov 2021	R14537F/00	Issue of the prime certificate. EPS 17 ATEX 1 074 X, Revision 2 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 17 ATEX 1 074 X, Revision 2. 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 17 ATEX 1 074 X, Revision 2.

Certificate Annex

Certificate Number CML 21UKEX2997X
Equipment Temperature transmitter iTEMP type TMT82-**A1/21***
and TMT82-**A3/4/5***
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 17 ATEX 1 074 X, Revision 2. In addition to the drawings listed on EPS 17 ATEX 1 074 X, Revision 2, the following drawings include the additional marking required for this UK Type Examination certification:

Drawing No	Sheets	Rev	Approved date	Title
10000012798	1 to 2	-	24 Nov 2021	Nameplate UKCA Transmitter units for Category 1 or 2

EU - Type Examination Certificate

- (1)
- (2) Equipment and protective systems intended for use in potentially explosive atmospheres – Directive 2014/34/EU
- (3) EU - Type Examination Certificate Number

EPS 17 ATEX 1 074 X

Revision 2

- (4) Equipment: Temperature transmitter iTEMP type TMT82-**A1/2/** and TMT82-**A3/4/5/**
- (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 17TH0239.
- (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 examination 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:

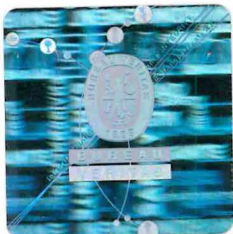


II 1G Ex ia IIC T6...T4 Ga (Head)

II 2G Ex ia IIC T6...T4 Gb (Head)



II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb (DIN Rail)



Certification department of explosion protection

Hamburg, 2020-09-11

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Certificates without signature and seal are void. This certificate is allowed to be distributed only if not modified. Extracts or modifications must be authorized by Bureau Veritas Consumer Products Services Germany GmbH. EPS 17 ATEX 1 074 X, Revision 2.

- (13) **Annex**
- (14) **EU - Type Examination Certificate EPS 17 ATEX 1 074 X**
- (15) Description of equipment:

Revision 2

The temperature transmitter iTEMP type TMT82*, is a two wire transmitter with analogue output. It has measuring input circuits for resistance thermometers (RTD) in 2-, 3- or 4-wire connection, thermocouples and voltage transmitters.

The equipment is intended for the application inside the explosion hazardous area.

The DIN Rail version is intended to be installed in control cabinets.

Description of modifications (Revision 1):

Inclusion (optional) of display module, type TID10
 Addition of electrical data for CDI Interface (to TID10)
 Addition of an alternative potting material
 Modification of ambient temperature range

Description of modifications (Revision 2):

Update to the latest standard EN IEC 60079-0:2018

Electrical data:

Head transmitter:

Power supply (terminals + and -)	$U_i \leq 30V$ DC
	$I_i \leq 130$ mA
	$P_i = 800$ mW
	$C_i =$ negligibly small
	$L_i =$ negligibly small

Sensor circuit
(terminal 3 to 7)

$U_o \leq 7.6V$ DC
$I_o \leq 13$ mA
$P_o \leq 24.7$ mW

Max. connection values

Ex ia IIC	$L_o = 10$ mH	$C_o = 1$ μ F
Ex ia IIB	$L_o = 50$ mH	$C_o = 4.5$ μ F
Ex ia IIA	$L_o = 50$ mH	$C_o = 6.7$ μ F



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Display interface
(CDI connection)

$U_o \leq 7.6V$ DC
 $I_o \leq 130$ mA
 $C_i =$ negligibly small
 $L_i =$ negligibly small

Max. connection values

Ex ia IIC	$L_o = 3.1$ mH	$C_o = 0.64$ μ F
Ex ia IIB	$L_o = 16$ mH	$C_o = 3.8$ μ F
Ex ia IIA	$L_o = 27$ mH	$C_o = 12$ μ F

DIN Rail transmitter:

Power supply
(terminals + and -)

$U_i \leq 30V$ DC
 $I_i \leq 130$ mA
 $P_i = 770$ mW
 $C_i =$ negligibly small
 $L_i =$ negligibly small

Sensor circuit
(terminal 3 to 8)

$U_o \leq 9V$ DC
 $I_o \leq 13$ mA
 $P_o \leq 29.3$ mW

Max. connection values

Ex ia IIC	$L_o = 5$ mH	$C_o = 0.93$ μ F
Ex ia IIB	$L_o = 20$ mH	$C_o = 3.8$ μ F
Ex ia IIA	$L_o = 50$ mH	$C_o = 4.8$ μ F



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Ambient temperature:

Type (order option)	Temperature class	Ambient temperature	Ambient temperature
		Zone 1/EPL Gb	Zone 0/ EPL Ga
TMT82-xxA1xxxxxxxxx	T6	-52°C ≤ Ta ≤ +58°C	-52°C ≤ Ta ≤ +46°C
TMT82-xxA2xxxxxxxxx	T5	-52°C ≤ Ta ≤ +75°C	-52°C ≤ Ta ≤ +60°C
Head transmitter without display	T4	-52°C ≤ Ta ≤ +85°C	-52°C ≤ Ta ≤ +60°C
TMT82-xxA1xxxxxxxxx	T6	-40°C ≤ Ta ≤ +55°C	
TMT82-xxA2xxxxxxxxx	T5	-40°C ≤ Ta ≤ +70°C	
Head transmitter with display (TID10)	T4	-40°C ≤ Ta ≤ +85°C	
TMT82-xxA3/4/5xxxxxxxxx (DIN rail transmitter)	T6	-40°C ≤ Ta ≤ +46°C	
	T5	-40°C ≤ Ta ≤ +61°C	
	T4	-40°C ≤ Ta ≤ +85°C	

(16) Reference number: 17TH0239

(17) Special conditions for safe use:

In hazardous areas it is not permitted to use the CDI interface of TMT82 for configuration.

(18) Essential health and safety requirements:

Met by compliance with standards.

Certification department of explosion protection

Hamburg, 2020-09-11



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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 17 ATEX 1 074 X

Revision 2

(4) Gerät: Temperaturtransmitter iTEMP Typ TMT82-**A1/2/** und TMT82-**A3/4/5**

(5) Hersteller: Endress+Hauser Wetzler 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 17TH0239 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:

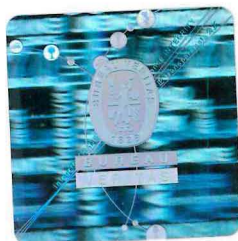


II 1G Ex ia IIC T6...T4 Ga (Kopf)

II 2G Ex ia IIC T6...T4 Gb (Kopf)



II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb (DIN Rail)



Zertifizierungsstelle Explosionsschutz

H. Schaffer



Hamburg, 11.09.2020

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Bescheinigungen ohne Unterschrift und Siegel haben keine Gültigkeit. Diese Bescheinigung darf nur unverändert weiterverbreitet werden. Auszüge oder Änderungen bedürfen der Genehmigung von Bureau Veritas Consumer Products Services Germany GmbH. EPS 17 ATEX 1 074 X, Revision 2.

(13)

Anlage

(14) **EU - Baumusterprüfbescheinigung EPS 17 ATEX 1 074 X**

Revision 2

(15) Beschreibung des Gerätes:

Der Temperaturtransmitter iTEMP Typ TMT82* ist ein Zweileiter-Transmitter mit analogem Ausgang. Er überträgt gewandelte Signale von Widerstandsthermometern in 2-, 3- oder 4-Leiter-Technik, Thermoelementen und Spannungsmessumformer.

Das Gerät ist für den Einsatz im explosionsgefährdeten Bereich vorgesehen.

Die DIN Rail Version ist zum Einbau in Schaltschränken vorgesehen.

Beschreibung der Änderung (Nachtrag 1):

Aufnahme (optional) des Displaymodules TID10
 Hinzufügen der elektrischen Daten zum CDI Interface (für TID10)
 Hinzufügen einer alternativen Vergussmasse
 Modifikation des Umgebungstemperaturbereiches

Beschreibung der Änderung (Nachtrag 2):

Aktualisierung der Norm auf EN IEC 60079-0:2018

Elektrische Daten:

Kopftransmitter:

Versorgungsstromkreis

(Klemmen + und -)

U_i	\leq	30V DC
I_i	\leq	130 mA
P_i	=	800 mW
C_i	=	vernachlässigbar klein
L_i	=	vernachlässigbar klein

Sensorstromkreis

(Klemmen 3 bis 7)

U_o	\leq	7,6V DC
I_o	\leq	13 mA
P_o	\leq	24,7 mW

Zulässige Anschlusswerte

Ex ia IIC	$L_o = 10$ mH	$C_o = 1$ μ F
Ex ia IIB	$L_o = 50$ mH	$C_o = 4,5$ μ F
Ex ia IIA	$L_o = 50$ mH	$C_o = 6,7$ μ F



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Displayschnittstelle

(CDI Anschluss)

U_o	\leq	7,6V DC
I_o	\leq	130 mA
C_i	=	vernachlässigbar klein
L_i	=	vernachlässigbar klein

Zulässige Anschlusswerte

Ex ia IIC	$L_o = 3,1$ mH	$C_o = 0,64$ μ F
Ex ia IIB	$L_o = 16$ mH	$C_o = 3,8$ μ F
Ex ia IIA	$L_o = 27$ mH	$C_o = 12$ μ F

DIN Rail Transmitter:

Versorgungsstromkreis

(Klemmen + und -)

U_i	\leq	30V DC
I_i	\leq	130 mA
P_i	=	770 mW
C_i	=	vernachlässigbar klein
L_i	=	vernachlässigbar klein

Sensorstromkreis

(Klemmen 3 bis 8)

U_o	\leq	9V DC
I_o	\leq	13 mA
P_o	\leq	29,3 mW

Max. Anschlusswerte

Ex ia IIC	$L_o = 5$ mH	$C_o = 0,93$ μ F
Ex ia IIB	$L_o = 20$ mH	$C_o = 3,8$ μ F
Ex ia IIA	$L_o = 50$ mH	$C_o = 4,8$ μ F



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Umgebungstemperatur:

Typ (Bestelloption)	Temperaturklasse	Umgebungstemperatur	
		Zone 1/EPL Gb	Zone 0/ EPL Ga
TMT82-xxA1xxxxxxxxx	T6	-52°C ≤ Ta ≤ +58°C	-52°C ≤ Ta ≤ +46°C
TMT82-xxA2xxxxxxxxx	T5	-52°C ≤ Ta ≤ +75°C	-52°C ≤ Ta ≤ +60°C
Kopftransmitter ohne Anzeige	T4	-52°C ≤ Ta ≤ +85°C	-52°C ≤ Ta ≤ +60°C
TMT82-xxA1xxxxxxxxx	T6	-40°C ≤ Ta ≤ +55°C	
TMT82-xxA2xxxxxxxxx	T5	-40°C ≤ Ta ≤ +70°C	
Kopftransmitter mit Anzeige (TID10)	T4	-40°C ≤ Ta ≤ +85°C	
TMT82-xxA3/4/5xxxxxxxxx	T6	-40°C ≤ Ta ≤ +46°C	
(DIN Rail Transmitter)	T5	-40°C ≤ Ta ≤ +61°C	
	T4	-40°C ≤ Ta ≤ +85°C	

(16) Referenznummer: 17TH0239

(17) Besondere Bedingungen:

In explosionsgefährdeter Umgebung darf das CDI Interface nicht genutzt werden.

(18) Grundlegende Sicherheits- und Gesundheitsanforderungen:

Durch Übereinstimmung mit Normen abgedeckt.

Zertifizierungsstelle Explosionsschutz

Hamburg, 11.09.2020

