UK Type Examination Certificate CML 21UKEX11008 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 **Field Temperature Transmitter iTEMP,**
Types TMT71, TMT72, TMT82, TMT84 and TMT85

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 60079-1:2014 EN 60079-11:2012

EN 60079-31:2014

10 The equipment shall be marked with the following:

Refer to attached certificate DEKRA 11ATEX0265, Issue 4 for specific marking of explosion protection symbols.

Refer to attached certificate DEKRA 11ATEX0265, Issue 4 for marked code and ambient temperature range.

Ben Trafford
Certification Officer

11 Description

For product description refer to attached certificate DEKRA 11ATEX0265, Issue 4

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	16 Nov 2021	R14537P/00	Issue of the prime certificate. DEKRA 11ATEX0265, Issue 4 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 DEKRA 11ATEX0265, Issue 4. 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 DEKRA 11ATEX0265, Issue 4.

Certificate Annex

Certificate Number	**CML 21UKEX11008**
Equipment	**Field Temperature Transmitter iTEMP, Types TMT71, TMT72, TMT82, TMT84 and TMT85**
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 DEKRA 11ATEX0265. In addition to the drawings listed on DEKRA 11ATEX0265, 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	-	16 Nov 2021	Nameplate UKCA Transmitter units for Category 1 or 2

CERTIFICATE

(1) EU-Type Examination

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

(3) EU-Type Examination Certificate Number: **DEKRA 11ATEX0265** Issue Number: **4**

(4) Product: **Field Temperature Transmitter iTEMP, Types TMT71, TMT72, TMT82, TMT84 and TMT85**

(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) DEKRA Certification B.V., Notified Body number 0344 in accordance with Article 17 of 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 confidential test report number NL/DEK/ExTR11.0112/03.

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

EN IEC 60079-0 : 2018 **EN 60079-1 : 2014** **EN 60079-11 : 2012**
EN 60079-31 : 2014

except in respect of those requirements listed at item 18 of the Schedule.

(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. 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 2 G	**Ex db IIC T6…T4 Gb**
II 2(1) G	**Ex ia [ia Ga] IIC T6…T4 Gb**
II 2 D	**Ex tb IIIC T85 °C...T110 °C Db**

Date of certification: 20 April 2021

DEKRA Certification B.V.

R. Schuller
Certification Manager

DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem The Netherlands
T +31 88 96 83000 F +31 88 96 83100 www.dekra-product-safety.com Registered Arnhem 09085396

(13) # SCHEDULE

(14) **to EU-Type Examination Certificate DEKRA 11ATEX0265** Issue No. **4**

(15) **Description**

The Field Temperature Transmitter iTEMP, Types TMT71, TMT72, TMT82, TMT84 and TMT85 consists of an enclosure, made of aluminium or stainless steel, containing electronic circuits and optionally a display. The transmitters are used to convert the measurement signal of an externally connected temperature sensor into an output signal.

Depending on the version, the transmitter provides a 4-20 mA current output signal with HART communication or is connected to a fieldbus (Profibus PA or Foundation Fieldbus) or has a Bluetooth (App), DTM or DTM/Bluetooth (App) configuration.

For details see the Annex to this certificate; Annex 1 to Report No. NL/DEK/ExTR11.0112/03.

Installation instructions

The instructions provided with the product shall be followed in detail to assure safe operation.

(16) **Report Number**

No. NL/DEK/ExTR11.0112/03.

(17) **Specific conditions of use**

None.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at item (9).

(19) **Test documentation**

As listed in Report No. NL/DEK/ExTR11.0112/03.

(20) **Certificate history**

Issue 1	214871000	Initial certificate
Issue 2	510008200	Upgrade to current editions of the standards EN 60079-26 removed IP grade changed from IP67 to IP68
Issue 3	222987600	Introduction of Field temperature Transmitter TMT71 and TMT72
Issue 4	510038400	Introduction of the type TMT82 assembled in a dual chamber field enclosure Adjusting the lower ambient temperatures Assessed per EN IEC 60079-0 : 2018

Description

The Field Temperature Transmitter iTEMP, Types TMT71, TMT72, TMT82, TMT84 and TMT85 consists of an enclosure made of aluminium (Al) or stainless steel, containing electronic circuits and optionally a display. The transmitters are used to convert the measurement signal of an externally connected temperature sensor into an output signal.
Depending on the version, the transmitter provides a 4-20 mA current output signal with HART communication or is connected to a fieldbus (Profibus PA or Foundation Fieldbus) or has a Bluetooth (App), DTM or DTM/Bluetooth (App) configuration.

The ambient temperature range, depending on transmitter version and temperature class/code, is listed in the following tables:

Transmitter version		Temperature class / code	Ambient temperature range
Ex db IIC / Ex tb IIIC	TMT71, TMT72, TMT82, TMT84 and TMT85 with or without display TID10, with field housing type T30H	T6 / T85 °C	-50 °C to +65 °C
		T5 / T100 °C	-50 °C to +80 °C
		T4 / T105 °C	-50 °C to +85 °C
Ex tb IIIC	TMT71, TMT72, TMT82, TMT84 and TMT85 with or without display TID10, With field housing type T30H, TA30A, TA30D	T105 °C	-50 °C to +85 °C

The enclosures provide a degree of protection of at least IP66/IP68 per IEC 60079-0 and IEC 60529.

Transmitter version with field mount housing (dual compartment)		Temperature class / code	Ambient temperature range
Ex db IIC / Ex tb IIIC	TMT82 with or without display TID10	T6 / T85 °C	-40 °C to +55 °C
		T5 / T100 °C	-40 °C to +70 °C
		T4 / T110 °C	-40 °C to +80 °C
Ex tb IIIC	TMT82 with or without display TID10	T110 °C	-40 °C to +80 °C
Ex ia IIC	TMT82 without display TID10	T6	-40 °C to +58°C
	TMT82 with display TID10	T6	-40 °C to +55 °C
	TMT82 without display TID10	T5	-40 °C to +75 °C
	TMT82 with display TID10	T5	-40 °C to +70 °C
	TMT82 with or without display TID10	T4	-40 °C to +85 °C

The enclosure provides a degree of protection of at least IP66/IP67 per IEC 60529.

Transmitter version with field housing, type T30H, TA30A, TA30D		Temperature class / code	Ambient temperature range
Ex ia IIC	TMT82 without display TID10	T6	-52 °C to +58 °C
		T5	-52 °C to +75 °C
		T4	-52 °C to +85 °C
Ex ia IIC	TMT84 and TMT85 without display TID10	T6	-40 °C to +55 °C
		T5	-40 °C to +70 °C
		T4	-40 °C to +85 °C
Ex ia IIC	TMT82, TMT84, TMT85 with display TID10	T6	-40 °C to +55 °C
		T5	-40 °C to +70 °C
		T4	-40 °C to +85 °C

The enclosures provide a degree of protection of at least IP66/IP68 per IEC 60079-0 and IEC 60529.

Electrical data
* '.' is used as a decimal separator.

Transmitters in type of protection Ex db IIC and Ex tb IIIC

Supply and output circuit: max. 42 Vdc, 23 mA (TMT82)
max. 35 Vdc, 12 mA (TMT84/TMT85)
max. 36 Vdc, 23 mA (TM71/TM72)

Transmitters in type of protection Ex ia IIC

TMT82
Supply and output circuit:
in type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:
U_i = 30 V; I_i = 130 mA; P_i = 800 mW, C_i = 0 nF; L_i = 0 µH;

Sensor circuit:
in type of protection intrinsic safety Ex ia IIC, with the following maximum values:
U_o = 7.6 V; I_o = 13 mA; P_o = 24.7 mW; C_i = 0 nF; L_i = 0 µH;

	Ex ia IIC	Ex ia IIB	Ex ia IIA
C_o =	1 µF	4.5 µF	6.7 µF
L_o =	10 mH	50 mH	50 mH

And instead, with field mount housing (dual compartment);

	Ex ia IIC	Ex ia IIB	Ex ia IIA
C_o =	0.7 µF	4.1 µF	5.0 µF
L_o =	0.5 mH	20 mH	50 mH

The sensor circuit is galvanically isolated from the supply and output circuit up to a peak voltage of 30 V.

TMT84/TMT85:
Supply and output circuit Profibus PA (TMT84) or Foundation Fieldbus (TMT85):
in type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:
U_i = 17.5 V; I_i = 380 mA; C_i = 5 nF; L_i = 2.75 µH;
or
U_i = 24 V; I_i = 250 mA; C_i = 5 nF; L_i = 2.75 µH;
or
as a FISCO field device

Sensor circuit:
in type of protection intrinsic safety Ex ia IIC, with the following maximum values:
U_o = 7.2 V; I_o = 25.9 mA; P_o = 46.7 mW; C_i = 5 nF; L_i = 0 µH;

	Ex ia IIC	Ex ia IIB	Ex ia IIA
C_o =	0.97 µF	4.6 µF	6 µF
L_o =	20 mH	50 mH	100 mH

The sensor circuit is galvanically isolated from the supply and output circuit up to a peak voltage of 30 V.

Type designation

* '.' is used as a decimal separator.

Type TMT71/TMT72

Series No Suffix Code

TMT71/TMT72- abcdefghijklmnopq

Designation	Explanation	Value	Explanation
a	Approval:	B6	ATEX II2G Ex db T6, II2D Ex tb IIIC
		I6	IECEx Ex db T6 Gb, Ex tb IIIC Db
		8F	ATEX IECEx II2D Ex tb IIIC Db
b	Communication; Output Signal:	A	HART; 4-20 mA; HART configuration (TMT72)
		P	HART; 4-20 mA; HART/Bluetooth (App) configuration (TMT72)
		A	4-20 mA; DTM configuration (TMT71)
		P	4-20 mA; DTM/Bluetooth (App) configuration (TMT71)
c	Housing shape	1	From B head transmitter, DIN EN 50446
d	Electrical Connection	A	Screw terminals
		B	Spring terminals
e	Field Housing	A1 *2	TA30A; Al, 2x M20x1.5; w/o display window
		A2 *2	TA30A; Al, 2x M20x1.5; glass display window
		A3 *2	TA30A; 2x 1/2NPT; w/o display window
		A4 *2	TA30A; 2x 1/2NPT; glass display window
		D1 *2	TA30D; 2x M20x1.5 universal housing
		D2 *2	TA30D; 2x 1/2NPT universal housing
		H1	TA30H, Al, 2x M20x1.5; w/o display window
		H2	TA30H, Al, 2x M20x1.5; glass display window
		H3	TA30H, Al, 2x 1/2NPT; w/o display window
		H4	TA30H, Al, 2x 1/2NPT; glass display window
		H5	TA30H, 316L, 2x M20x1.5, w/o display
		H6	TA30H, 316L, 2x M20x1.5, glass display
		H7	TA30H, 316L, 2x 1/2NPT, w/o display
		H8 *2	TA30H, 316L, 2x 1/2NPT, glass display
		Y	Special varnishing (non-conductive) in combination with digit A1 to H8
f	Device Model	n.s. *1	Not relevant for Explosion Safety
g *3	Universal Input	n.s. *1	Not relevant for Explosion Safety
h *3	Sensor Type	n.s. *1	Not relevant for Explosion Safety
i *3	Calibration	n.s. *1	Not relevant for Explosion Safety
j *3	Display; Operating	G1	Meas. display; DIP-switch, pluggable
k *3	Service	n.s. *1	Not relevant for Explosion Safety
l *3	Additional Approval	n.s. *1	Not relevant for Explosion Safety
m *3	Accessory Mounted	n.s. *1	Not relevant for Explosion Safety
n *3	Accessory Enclosed	n.s. *1	Not relevant for Explosion Safety
o *3	Cable glands; temp. range; Protect. type	n.s. *1	Not in the scope
p *3	Firmware Version	n.s. *1	Not relevant for Explosion Safety
q *3	Marking	n.s. *1	Not relevant for Explosion Safety

*1 n.s. means the value is neither related to Explosion Safety nor in the scope.
*2 only possible when designation a = BF
*3 designation g to q is optional, these codes could be blank depends on chosen additional options.

Type TMT82 Series No Suffix Code
TMT82- abcdefghijklmnopqrs

Designation	Explanation	Value	Explanation
a	Approval:	B6	ATEX II2G Ex db T6, II2D Ex tb IIIC
		I6	IECEx Ex db T6 Gb, Ex tb IIIC Db
		BF	ATEX II2D Ex tb IIIC Db
		IF	IECEx Ex tb IIIC Db
		BA	ATEX II2(1)G Ex ia [ia Ga] IIC T6 Gb
		IA	IECEx Ex ia [ia Ga] IIC T6 Gb
		8A	ATEX IECEx II2(1)G Ex ia [ia Ga] IIC T6 Gb
b	Communication; Output Signal:	A	HART 6; 4-20 mA, 2 channel
c	Electrical Connection:	1	Spring terminals, housing form B,DIN EN 50446
		2	Screw terminals, housing form B,DIN EN 50446
d	Field Housing	D	TA30H, Al, 2x M20x1.5; w/o display window
		E	TA30H, Al, 2x M20x1.5; glass display window
		F	TA30H, Al, 2x 1/2NPT; w/o display window
		G	TA30H, Al, 2x 1/2NPT; glass display window
		H *2	TA30A; 2x M20x1.5; w/o display window
		I *2	TA30A; 2x M20x1.5; glass display window
		J *2	TA30A; 2x 1/2NPT; w/o display window
		K *2	TA30A; 2x 1/2NPT; glass display window
		L *2	TA30D; 2x M20x1.5 universal housing
		M *2	TA30D; 2x 1/2NPT universal housing
		N	TA30H, 316L, 2x M20x1.5, w/o display
		O	TA30H, 316L, 2x M20x1.5, glass display
		P	TA30H, 316L, 2x 1/2NPT, w/o display
		Q	TA30H, 316L, 2x 1/2NPT, glass display
		R	Field mount housing (dual compartment), Al, 2x M20x1.5 incl. display, behind glass window
		S	Field mount housing (dual compartment), Al, 2x 1/2NPT incl. display, behind glass window
		Y	Special varnishing (non-conductive) in combination with digit D to S
e	Configuration Universal Input	n.s. *1	Not relevant for Explosion Safety
f	Sensor type Input 1	n.s. *1	Not relevant for Explosion Safety
g	Sensor type Input 2	n.s. *1	Not relevant for Explosion Safety
h	Input; Interconnection	n.s. *1	Not relevant for Explosion Safety
i *3	Display; Operating	E1	Meas. display; DIP-switch, pluggable
j *3	Calibration	n.s. *1	Not relevant for Explosion Safety
k *3	Service	n.s. *1	Not relevant for Explosion Safety
l *3	Test, Certificate, Declaration:	JM *4	Ambient temperature transmitter -50°C/-58°F
		JN *5	Ambient temperature transmitter -52°C/-62°F
m *3	Additional approval	n.s. *1	Not relevant for Explosion Safety
n *3	Additional option	n.s. *1	Not relevant for Explosion Safety
o *3	Accessories mounted	NA	Attachment hinge, Stainless steel (304)
p *3	Accessories enclosed	n.s. *1	Not relevant for Explosion Safety
q *3	Cable glands; temp. range;	n.s. *1	Not relevant for Explosion Safety
r *3	Firmware Version:	n.s. *1	Not relevant for Explosion Safety
s *3	Marking:	n.s. *1	Not relevant for Explosion Safety

*1 n.s. means the value is neither related to Explosion Safety nor in the scope.
*2 TA30H 2x G1/2 housing is only possible when designation a = BF, IF, BA, IA or 8A.
*3 designation i to s is optional, these codes could be blank depends on chosen additional options.
*4 only possible when designation d = D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S
*5 only possible when designation a = BA, IA or 8A.

Type TMT84/TMT85

Series No Suffix Code

TMT84/TMT85- abcdefghijklm

Designation	Explanation	Value	Explanation
a	Approval:	B6	ATEX II2G Ex db T6, II2D Ex tb IIIC
		I6	IECEx Ex db T6 Gb, Ex tb IIIC Db
		BF	ATEX II2D Ex tb IIIC Db
		IF	IECEx Ex tb IIIC Db
		B1	ATEX II2(1)G Ex ia [ia Ga] IIC T6 Gb
		E1	IECEx Ex ia [ia Ga] IIC T6 Gb
		8A	ATEX IECEx II2(1)G Ex ia [ia Ga] IIC T6 Gb
b	Communication; Output Signal:	A	Profibus PA (TMT84)
			Foundation Fieldbus (TMT85)
c	Electrical Connection:	1	Spring terminals, housing form B,DIN EN 50446
		2	Screw terminals, housing form B,DIN EN 50446
d	Field Housing	D	TA30H, Al, 2x M20x1.5; w/o display window
		E	TA30H, Al, 2x M20x1.5; glass display window
		F	TA30H, Al, 2x 1/2NPT; w/o display window
		G	TA30H, Al, 2x 1/2NPT; glass display window
		H *2	TA30A; 2x M20x1.5; w/o display window
		I *2	TA30A; 2x M20x1.5; glass display window
		J *2	TA30A; 2x 1/2NPT; w/o display window
		K *2	TA30A; 2x 1/2NPT; glass display window
		L *2	TA30D; 2x M20x1.5 universal housing
		M *2	TA30D; 2x 1/2NPT universal housing
		N	TA30H, 316L, 2x M20x1.5, w/o display
		O	TA30H, 316L, 2x M20x1.5, glass display
		P	TA30H, 316L, 2x 1/2NPT, w/o display
		Q	TA30H, 316L, 2x 1/2NPT, glass display
		R *2	TA30H; 2x G1/2; w/o display window
		S *2	TA30H; 2x G1/2; glass display window
		Y	Special varnishing (non-conductive) in combination with digit D to S
e	Configuration Input	n.s. *1	Not relevant for Explosion Safety
f *3	Display; Operating:	E1	Meas. display; DIP-switch, pluggable
g *3	Calibration, Test	n.s. *1	Not relevant for Explosion Safety
h *3	Certificate	n.s. *1	Not relevant for Explosion Safety
i *3	Additional option	n.s. *1	Not relevant for Explosion Safety
j *3	Accessories mounted	NA	Attachment hinge, Stainless steel (304)
k *3	Accessories enclosed	n.s. *1	Not relevant for Explosion Safety
l *3	Cable glands; temp. range;	n.s. *1	Not in the scope
m *3	Plug	n.s. *1	Not in the scope

*1 n.s. means the value is neither related to Explosion Safety nor in the scope.

*2 only possible when designation a = BF, IF, BA, IA or 8A.

*3 designation f to m is optional, these codes could be blank depends on chosen additional options.