



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 17.0077X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 3	Issue 2 (2020-04-21)
Date of Issue:	2024-05-17		Issue 1 (2018-01-19)
Applicant:	Endress+Hauser Wetzer GmbH + Co. KG Obere Wank 1 87484 Nesselwang Germany		Issue 0 (2017-11-29)
Equipment:	Temperature Field Transmitter iTEMP, type TMT142 and type TMT162		
Optional accessory:			
Type of Protection:	Intrinsic safety "ia"		
Marking:	Ex ia IIC T6...T4 Ga Ex ia IIIC T85°C...T110°C Db		

Approved for issue on behalf of the IECEx
Certification Body:

Position:

Signature:
(for printed version)

Date:
(for printed version)



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2. This certificate is not transferable and remains the property of the issuing body.
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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

Manufacturing locations: **Endress+Hauser Wetzer (India) Pvt. Ltd.** **Endress+Hauser Wetzer (Suzhou) Co. Ltd.** **Endress+Hauser Wetzer USA INC**
M-171/173, MIDC, Waluj
Aurangabad – 431 136
India
Jiang-Tian-Li-lu No.31, 215021
Suzhou-SIP (P.R. China)
China
2375 Endress Place
Greenwood IN 46143
United States of America

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/ExTR17.0071/03](#)

Quality Assessment Report:

[DE/TUN/QAR06.0009/12](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Temperature Transmitters iTEMP Type TMT142 and TMT162 consist of an enclosure, made of aluminium or stainless steel, containing electronic circuits, terminals and optionally a display. The transmitter is used to convert the measurement signal of an external or an integral assembled temperature sensor into an output signal.

The transmitter provides a 4-20 mA current output signal with HART communication.

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

Electrical data and ambient temperature range:

Refer to Annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:

When the enclosure of the Temperature transmitter iTEMP Type TMT162 or TMT142 is made of aluminum, if it is mounted in an area where the use of EPL Ga apparatus is required, it must be installed such, that, even in the event of rare incidents, ignition sources due to impact and friction sparks are excluded.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Change in type code, editorial adjustments.

Annex:

[IECEX EPS 17.0077X_3 - Annex.pdf](#)



Annex to IECEx Certificate of Conformity
IECEX EPS 17.0077X
Issue 3



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

Electrical Apparatus: Temperature Field Transmitter iTEMP,
type TMT142 and type TMT162

Description:

Electrical data:

Type TMT162:

Power supply
(Terminals: + and -)

$U_i \leq 30V$ DC
 $I_i \leq 300$ mA
 $P_i = 1000$ mW
 $C_i = 5$ nF
 $L_i =$ negligibly small

Sensor circuit
(Terminals: 1 to 6)

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

Max. connection values
Single values:

Ex ia IIC	$L_o = 40$ mH	$C_o = 10.4$ μ F
Ex ia IIB/IIIC	$L_o = 150$ mH	$C_o = 160$ μ F
Ex ia IIA	$L_o = 300$ mH	$C_o = 1000$ μ F

Combined values:

Ex ia IIC	$L_o = 10$ mH and	$C_o = 1.1$ μ F
Ex ia IIB/IIIC	$L_o = 50$ mH and	$C_o = 6.1$ μ F
Ex ia IIA	$L_o = 100$ mH and	$C_o = 15$ μ F



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Type TMT142:

Power supply
(Terminals: + and -)

$U_i \leq 30V$ DC
 $I_i \leq 300$ mA
 $P_i = 1000$ mW
 $C_i = 5$ nF
 $L_i =$ negligibly small

Sensor circuit
(Terminals: 3 to 6)

$U_o \leq 4.3$ V DC
 $I_o \leq 4.8$ mA
 $P_o \leq 5.2$ mW

Max. connection values
Single values:

Ex ia IIC	$L_o = 40$ mH	$C_o = 10.4$ μ F
Ex ia IIB/IIIC	$L_o = 150$ mH	$C_o = 160$ μ F
Ex ia IIA	$L_o = 300$ mH	$C_o = 1000$ μ F

Combined values:

Ex ia IIC	$L_o = 50$ mH and	$C_o = 3.0$ μ F
Ex ia IIB/IIIC	$L_o = 100$ mH and	$C_o = 18$ μ F
Ex ia IIA	$L_o = 100$ mH and	$C_o = 48$ μ F



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Ambient temperature range:

The temperature class and the maximum surface temperature of the enclosure, applicable to a maximum dust layer thickness of 5 mm, are depending on the ambient temperature range, as listed in the following tables:

Type (order option)	Temperature class	Ambient temperature EPL Gb	Ambient temperature EPL Ga
TMT142 and TMT162	T6	$-50\text{ °C} \leq Ta \leq +55\text{ °C}$	$-50\text{ °C} \leq Ta \leq +40\text{ °C}$
	T5	$-50\text{ °C} \leq Ta \leq +70\text{ °C}$	$-50\text{ °C} \leq Ta \leq +50\text{ °C}$
	T4	$-50\text{ °C} \leq Ta \leq +85\text{ °C}$	$-50\text{ °C} \leq Ta \leq +60\text{ °C}$

Type (order option)	Maximum surface temperature	Ambient temperature EPL Db
TMT142 and TMT162	T85°C	$-40\text{ °C} \leq Ta \leq +55\text{ °C}$
	T100°C	$-40\text{ °C} \leq Ta \leq +70\text{ °C}$
	T110°C	$-40\text{ °C} \leq Ta \leq +85\text{ °C}$