



Certificate of Compliance

Certificate: 1406494

Master Contract: 200600

Project: 70182308

Date Issued: July 05, 2018

Issued to: Endress + Hauser Wetzer GmbH Co. KG
Obere Wank 1
Nesselwang,
87484
GERMANY

Attention: Mr. Michael Pfanzelt

The products listed below are eligible to bear the CSA Mark shown



Issued by:


Oong Lee

PRODUCT

CLASS 2258 02 - Process Control equipment for Hazardous Locations

Class I, Zone 1, Ex d IIC:

Class I, Div. 1, Groups A, B, C & D; Class II, Div. 1 Groups E, F & G; Class III:

- Temperature Transmitter, Type iTEMP TMT 162, powered by a voltage of 11 ... 40 Vdc. The power dissipated is maximum 3 Watt. It converts a measurement input signal of external temperature sensors into a 4-20 mA and digital output signal. Installation per Control Drawing 14 12 00 114.
Temperature codes T6, Ta = - 40 °C to +55 °C; T5, Ta = - 40 °C to +70 °C; and T4, Ta = - 40 °C to +85 °C.
Enclosure Type 4X.

Class I, Div. 1, Groups A, B, C and D; Class II, Div. 1 Groups E, F, G; Class III:

- 4-20mA Temperature Transmitter, Type iTEMP TMT142, rated 11 - 40 Vdc max, 3W. Installation per dwg 14 25 00 114. Temp. Codes T6, Ta = - 40 °C to +55 °C; T5, Ta = - 40 °C to +70 °C; T4, Ta = - 40 °C to +85 °C.
Enclosure Type 4X. Seal conduits within 18".
- Temperature Transmitter, Type iTEMP TMT 162, rated 9... 35 Vdc, 3W. Connect to Profibus PA / Foundation Fieldbus system per Installation Drawing 14 12 00 214. Temperature codes T6, Ta = - 40 °C to +55 °C; T5, Ta = - 40 °C to +70 °C; and T4, Ta = - 40 °C to +85 °C. Enclosure Type 4X.

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CLASS 2252 05 - Process Control Equipment

- Temperature Transmitter Type iTEMP TMT 162, SELV or Class 2 supply rated 11 ... 40 Vdc, 4-20 mA output signal or rated 9...35Vdc, 12mA for PA/FF option. Ambient temperature = - 40°C to + 85°C (w/o optional LCD) or -40°C to +70°C (w/ optional LCD). Enclosure Type 4X.
- 4-20mA Temperature Transmitter, Type iTEMP TMT142, SELV or Class 2 supply rated 11 ... 40 Vdc, 4-20 mA output signal. Ambient temperature = - 40°C to + 85°C (w/o optional LCD) or - 40°C to + 70°C (w/ optional LCD). Enclosure Type 4X. IP67.
- Temperature Transmitter Type iTEMP TMT 162 with HART7, SELV or Class 2 supply rated 11.5 ... 42 V, 4 – 20 mA. Ambient temperature = - 40 °C to + 85 °C. Enclosure Type 4X. IP67.

CLASS 2258 04 - PROCESS CONTROL - Intrinsically Safe, Entity - For Hazardous Locations

Ex ia IIC:

Class I, Div. 1, Groups A, B, C & D, Class II, Div. 1, Groups E, F & G, Class III, Div. 1:

- Temperature Transmitter iTEMP Type TMT 162, input rated 8 - 30V, 4 - 20mA; with entity parameters: $U_i = 30V$, $I_i = 300mA$, $P_i = 1W$, $C_i = 5.3nF$, $L_i = 0\mu H$. Intrinsically Safe when connected according to Installation Drawing No. 14 12 00 112; Temperature code for Transmitter without Display: T6, $T_a = -40\text{ }^{\circ}C$ to $+55\text{ }^{\circ}C$, T5, $T_a = -40\text{ }^{\circ}C$ to $+70\text{ }^{\circ}C$ and T4, $T_a = -40\text{ }^{\circ}C$ to $+85\text{ }^{\circ}C$; Temperature code for Transmitter with Display: T4, $T_a = -40\text{ }^{\circ}C$ to $+70\text{ }^{\circ}C$.

Output parameters for connection of a temperature sensor: $U_o = 7.6V$, $I_o = 29.3mA$, $P_o = 55.6mW$, $C_o = 10.4\mu F$ (Groups A and B, respectively IIC), $160\mu F$ (Group C, respectively IIB), $1000\mu F$ (Group D, respectively IIA), $L_o = 40mH$ (Groups A and B, respectively IIC), $150mH$ (Group C, respectively IIB), $300mH$ (Group D, respectively IIA).

- Temperature Transmitter iTEMP Type TMT 142, input rated 8 - 30V, 4 - 20mA; with entity parameters: $U_i = 30V$, $I_i = 300mA$, $P_i = 1W$, $C_i = 5.3nF$, $L_i = 0\mu H$. Intrinsically Safe when connected according to Installation Drawing No. 14 25 00 112. Temperature code for Transmitter without Display: T6, $T_a = -40\text{ }^{\circ}C$ to $+55\text{ }^{\circ}C$, T5, $T_a = -40\text{ }^{\circ}C$ to $+70\text{ }^{\circ}C$ and T4, $T_a = -40\text{ }^{\circ}C$ to $+85\text{ }^{\circ}C$; Temperature code for Transmitter with Display: T4, $T_a = -40\text{ }^{\circ}C$ to $+70\text{ }^{\circ}C$.

Output parameters for connection of a temperature sensor: $U_o = 7.6V$, $I_o = 29.3mA$, $P_o = 55.6mW$, $C_o = 10.4\mu F$ (Groups A and B, respectively IIC), $160\mu F$ (Group C, respectively IIB), $1000\mu F$ (Group D, respectively IIA), $L_o = 40mH$ (Groups A and B, respectively IIC), $150mH$ (Group C, respectively IIB), $300mH$ (Group D, respectively IIA).

- Temperature Transmitter iTEMP Types TMT 142 and TMT 162, input rated 9 - 35V, 12mA, suitable for connection to a Profibus PA/ Foundation Fieldbus system according to Entity of $U_i/V_{max} = 24Vdc$, $I_i/I_{max} = 250mA$, $P_i/P_{max} = 1.2W$, $C_i = 5nF$, $L_i = 10\mu H$ or FISCO Concept $U_i/V_{max} = 17.5Vdc$, $I_i/I_{max} = 500mA$, $P_i/P_{max} = 5.5W$, $C_i = 5nF$, $L_i = 0\mu H$ with a sensor output $U_o/V_{oc} = 8.6Vdc$, $I_o/I_{sc} = 26.9mA$, $P_o = 57.6mW$, $C_o = 6.2\mu F$, $L_o = 48mH$ (IIC, Groups A & B); $C_o = 55\mu F$, $L_o = 180mH$ (IIB, Group C); $C_o = 1000\mu F$, $L_o = 380mH$ (IIA, Group D). Intrinsically Safe when connected according to Installation Drawing No. 14 12 00 212.



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Temperature codes T6, Ta = - 40°C to + 55°C; T5, Ta = - 40°C to + 70°C; and T4, Ta = - 40°C to + 85°C.
Enclosure Type 4X.

- Temperature Transmitter iTEMP Type TMT 162 with HART7, input rated 8 - 30V, 4 - 20mA; with entity parameters: $U_i = 30V$, $I_i = 300mA$, $P_i = 1W$, $C_i = 5.3nF$, $L_i = 0\mu H$. Intrinsically Safe when connected according to Installation Drawing No. 10000009437; Temperature code: T6, Ta = -50 °C to +55 °C, T5, Ta = -50 °C to +70 °C and T4, Ta = -50 °C to +85 °C

Output parameters for connection of a temperature sensor: $U_o = 7.6V$, $I_o = 29.3mA$, $P_o = 55.6mW$, $C_o = 10.4\mu F$ (Groups A and B, respectively IIC), 160 μF (Group C, respectively IIB), 1000 μF (Group D, respectively IIA), $L_o = 40mH$ (Groups A and B, respectively IIC), 150mH (Group C, respectively IIB), 300mH (Group D, respectively IIA).

CLASS 2258 03 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems – For Hazardous Locations

Ex nA IIC:

Class I, Div. 2, Groups A, B, C & D; Class II, Div. 2, Groups E, F, G; Class III, Div. 2:

- Temperature Transmitter iTEMP Type TMT 162, input rated 40Vdc max., 4-20mA, Non-Incendive when installed with certified non-incendive associated apparatus meeting entity $U_i/V_{max} = 40Vdc$, $C_i = 5.3nF$, $L_i = 0\mu H$ per Dwg 14 12 00 112. Temperature codes: T6, Ta = - 40°C to + 55°C, T5, Ta = - 40°C to + 70°C and T4, Ta = - 40°C to + 85°C. Enclosure Type 4X.
- Temperature Transmitter iTEMP Type TMT 142, input rated 40 Vdc, 4-20mA, Non-Incendive when installed with certified non-incendive associated apparatus meeting entity $U_i/V_{max} = 40Vdc$, $C_i = 5.3nF$, $L_i = 0\mu H$ per Dwg 14 25 00 112. Temperature code: T6, Ta = - 40°C to + 55°C, T5, Ta = - 40°C to + 70°C and T4, Ta = - 40°C to 85°C. Enclosure Type 4X.
- Temperature Transmitter iTEMP Types TMT 162 and TMT 142, input rated 35Vdc max., 12mA, Non-Incendive when installed with certified non-incendive associated apparatus meeting entity $U_i/V_{max} = 35Vdc$, $C_i = 5nF$, $L_i = 10\mu H$ per Dwg 14 12 00 212. Temperature codes: T6, Ta = - 40°C to + 55°C, T5, Ta = - 40°C to + 70°C and T4, Ta = - 40°C to + 85°C. Enclosure Type 4X.
- Temperature Transmitter iTEMP Type TMT 162 with HART7, input rated 42 Vdc max., 4-20 mA, Non-Incendive when installed with certified non-incendive associated apparatus meeting entity $U_i/V_{max} = 30Vdc$, $C_i = 5.3nF$, $L_i = 0\mu H$ per Dwg 10000009437. Temperature code: T6, Ta = -50 °C to +55 °C, T5, Ta = -50 °C to +70 °C and T4, Ta = -50 °C to +85 °C. Enclosure Type 4X.

Conditions of Acceptability

For intrinsically safe applications, the equipment shall be installed in accordance with Control Drawing Nos. 14 12 00 112 (iTEMP Type TMT 162), 14 25 00 112 (iTEMP Type TMT 142), 14 12 00 212 (iTEMP Type TMT 142 FF/PA and TMT 162 FF/PA) and 10000009437 (iTEMP Type TMT 162 with HART7) respectively.

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APPLICABLE REQUIREMENTS

CAN/CSA-C22-2 No. 0-M91 (R2001)	- General Requirements - Canadian Electrical Code, Part II
CAN/CSA-C22.2 No. 25-1966 (R2004)	- Enclosures for use in Class II, Groups E, F, G Hazardous Locations.
CSA Std C22.2 No. 30-M1986 (R1992)	- Explosion-Proof Enclosure for use in Class I Hazardous Locations
CAN/CSA-C22.2 No. 94-M91 (R2006)	- Special Purpose Enclosures
CAN/CSA-C22.2 No. 142-M1987 (R2004)	- Process Control Equipment (Industrial Products)
CAN/CSA-C22.2 No. 157-92 (R2006)	- Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations
CSA Std. C22.2 No. 213-M1987 (R1999)	- Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
CAN/CSA-C22.2 No. 61010-1-04	- Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory use – Part 1 : General Requirements
CAN/CSA-E60079-0-02	- Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements CAN/CSA-E79-0-02
	- Electrical apparatus for explosive gas atmospheres – General Requirements
CAN/CSA-E79-1-02	- Electrical apparatus for explosive gas atmospheres – Construction and Verification test of flameproof enclosures of electrical apparatus
CAN/CSA-E60079-11-02	- Electrical Apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety "i"
CAN/CSA-E60079-15-02	- Electrical Apparatus for Explosive Gas Atmospheres - Part 15: Type of Protection "n"
CAN/CSA-C22.2 No. 60529:05	- Degrees of protection provided by enclosure (IP Code)



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MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown without an indicator for Canada only (indicating that products have been manufactured to the requirements of Canadian Standards).

Explosion-proof:

The following information appears on a nameplate:

- Submitter's name, trademark or the CSA file number adjacent to the CSA mark:
Endress + Hauser - Catalogue, Model, or series designation;
- Month and year of manufacturer, date code or serial number;
- Permissible ambient temperatures;
- Temperature codes;
- Hazardous Location designations;
- Rated Electrical Parameters;
- The statement, DO NOT REMOVE COVER WHEN CIRCUITS ARE ALIVE, appears on the display cover;
- The statement, SEAL ALL CONDUITS WITHIN 18 INCH.

Intrinsically Safe:

Refer to Descriptive Documents nameplate Drawings No. 14 12 00 102, 14 12 00 115 (iTEMP TMT 162); 14 25 00 102 (iTEMP TMT 142); 14 12 00 202 / 34 04 00 102 and 14 12 00 215 / 34 04 00 115 (TMT 142 FF/PA and TMT 162 FF/PA) and 10000009437 (iTEMP Type TMT 162 with HART7) respectively.

Method of marking: SS 304 or AlMg1 (Mg < 0,6 %) plate, with laser printing. Label is screwed on at the side of the transmitter enclosure.



Supplement to Certificate of Compliance

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*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
70182308	2018-06-05	Update to report 1406494 to add an surge protect option to Type iTEMP TMT162 with HART7
70130467	2018-01-19	Update to report 1406494 to add Type iTEMP TMT162 with HART7; drawing changes.
2112862	2009-03-12	Update to TMT142 & 162 Series to include alt. main board circuit and upgrade to CAN/CSA C22.2 No. 61010-1-04
2081937	2008-11-24	Update to cover report corrections and drawings revisions
1787904	2006-05-12	Update to consolidate/transfer report 1701691 (I.S) into 1406494
1681341	2005-06-20	CSA Certification of Temperature Transmitter for Explosion-proof Hazardous Locations
1575087	2004-10-29	Update to include C22.2 No. 1010.1-92 for installation in ordinary locations, iTEMP Type TMT162
1516274	2004-01-28	Update to cover drawings revisions per letter of Nov. 14, 2003.
1406494	2003-08-13	Original Certification.