

1 EU - TYPE EXAMINATION CERTIFICATE

2 **Product or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 2014/34/EU – Annex III**

3 EU - Type Examination Certificate No.: **EMT17ATEX0021X**

4 Product: **TTE series of temperature transmitters TTE-2bb-W-c-d**

5 Manufacturer: **Dwyer Instruments Inc.,**
6 Address: **102 Indiana Hwy. 212, Michigan City, Indiana, 46360,
United States of America**

7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Element Materials Technology, Notified Body number 0891, 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 the confidential report **TRA-032839-33-00A**.

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012/A11:2013 EN 60079-1:2015 EN 60079-31:2014

Except in respect of those requirements listed at section 18 of the schedule.

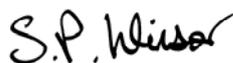
10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to specific conditions of use specified in the schedule to this certificate.

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 this product shall include the following:

 **II 2 G Ex db IIC T6...T4 Gb -20 °C ≤ Tamb ≤ +70 °C**
II 1 D Ex ta IIIC T₂₀₀ 111 °C Da -20 °C ≤ Tamb ≤ +70 °C
T_{process} = -34.4 °C to +120 °C (-30 °F to +250 °F)

This certificate and its schedules may only be reproduced in its entirety and without change. This certificate is issued in accordance with the Element Materials Technology Ex Certification Scheme.



S P Winsor, Certification Manager

Issue date: 2017-08-23

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13 SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

14 EMT17ATEX0021X

15 Description of Product

The TTE series of temperature transmitter are employed in gas and dust environments for process temperatures of -34.4 °C to +120 °C (-30 °F to +250 °F) and ambient temperatures of -20 °C to +70 °C. The equipment consists of a probe assembly mounted to a main enclosure which house the electronics. The enclosure can be fitted with a solid cover or a cover with a window fitted to provide visibility of the optional fit LCD (temperature) display.

The main enclosure is constructed from aluminium and is of a mainly cylindrical design with a central threaded entry for fitment of the temperature probe, and two threaded side entries for cable / conduit connections. There are two threaded covers to the top and bottom of the enclosure. Approximate overall dimensions 100 mm x 90 mm.

The probe tips, which house the temperature sensing elements, are constructed from stainless steel and can be supplied in lengths of 2 to 18 inches (51 to 457 mm). The probe tip tube is welded to a threaded fitting to facilitate its fitment to the main enclosure.

Note that on installation the temperature class of the equipment will depend upon the process temperatures that the temperature sensors are subjected to:

T _{process} Temperature	Temperature Class
≤ 80 °C	T6
> 81 °C ≤ 95 °C	T5
> 96 °C ≤ 120 °C	T4

This information is marked on the equipment's nameplate.

Electrical rating 0–10 V, 4–20 mA, max 700 mW.

Model number breakdown:

TTE-2bb-W-c-d

bb = 02 to 18 (probe length in inches)

W = Well probe

c = BLANK (No display) or LCD,

d = C5 (C5M Paint) or (standard paint), BSPT (process connection) or M20 (electrical connection).

16 Test report No. (associated with this certificate issue): TRA-032839-33-00A.

17 Specific Conditions of Use

1. When employed in a Zone 20, EPL Da (ta) application the equipment is to be used with a power source rated for a prospective short circuit current of 10 kA. If the power source is rated for a prospective short circuit current of less than 10 kA the end user / installer must mark the equipment with the prospective short circuit current rating of the power supply it is used in conjunction with.
2. Repairs to the flameproof joints are not permitted.

CONTINUATION OF SCHEDULE TO CERTIFICATE EMT17ATEX0021X

18 Essential Health and Safety Requirements (Directive Annex II)

In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

<u>Clause</u>	<u>Subject</u>
None	None

19 Drawings and Documents

The list of controlled technical documentation is given in Appendix A to this schedule.

20 Routine Tests

1. The probe tip assemblies shall be subjected to routine overpressure testing at a pressure of 10.3 bar (150 psi) for at least 10 seconds. There shall be no leakage or permanent deformation or damage to the assembly as a result of the test.

21 Specific Conditions for Manufacture

None.

22 Photographs

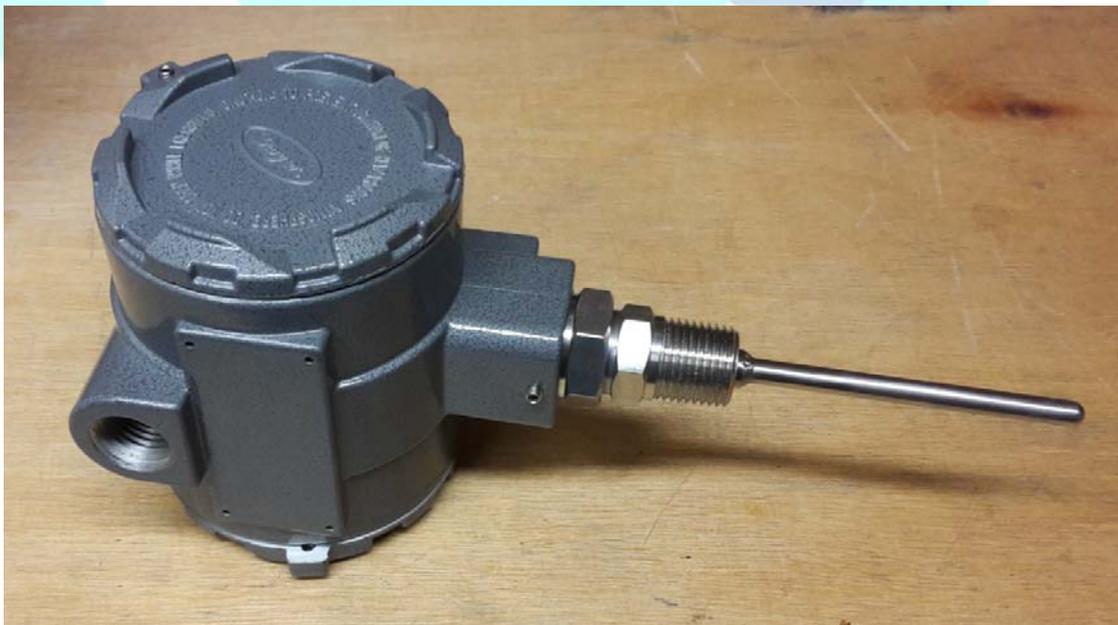
CONTINUATION OF SCHEDULE TO CERTIFICATE EMT17ATEX0021X



TTE series temperature transmitter with 3 inch probe and window cover with LCD display

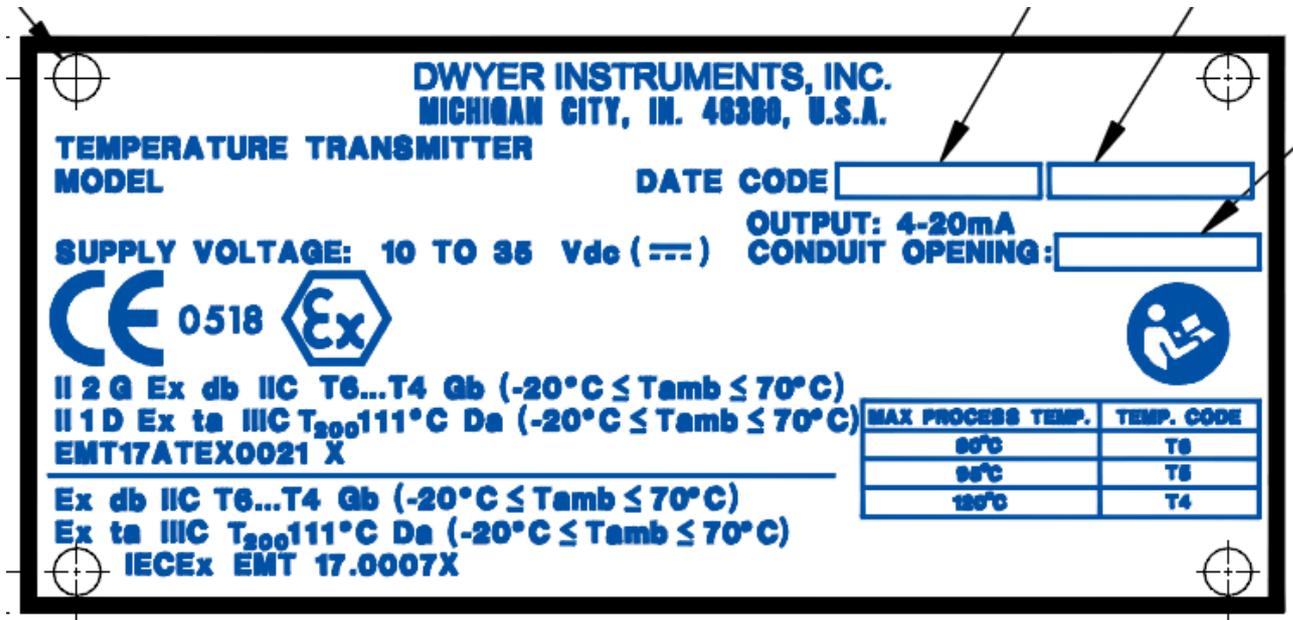


TTE series temperature transmitter with 18 inch probe and window cover with LCD display



TTE series temperature transmitter with 3 inch probe and blank cover.

23 Details of Markings



24 Details of Variations to this Certificate

- None

25 Notes to CE marking

In respect of CE Marking, Element Materials Technology accepts no responsibility for the compliance of the product against all applicable Directives in all applications.

26 Notes to this certificate

Element Materials Technology certification reference: TRA-032839-32-00.

Throughout this certificate, the date format yyyy-mm-dd (year-month-day) is used.

Notified Body 0891 is the designation for Element Materials Technology Warwick Ltd (formerly known as TRaC Global Ltd).

27 Conditions for the validity of this certificate

This certificate remains valid for so long as:

- (i) The equipment listed in section 4 is manufactured in accordance with the documents listed in Appendix A of this certificate.
- (ii) The standards listed in section 9 of this certificate continue to satisfy the Essential Health and Safety Requirements of Annex II of Directive 2014/34/EU and the generally acknowledged state of the art (e.g. as determined by the publishers of those standards).

CONTINUATION OF SCHEDULE TO CERTIFICATE EMT17ATEX0021X

APPENDIX A - TECHNICAL DOCUMENTS

Title:	Drawing No.:	Rev. Level:	Date:
Reducer TTE RTD Temperature Transmitter ATEX & IECEx Approval	001458-01	-	2015-12-04
LCD Glass Window TTE RTD Temperature Transmitter ATEX & IECEx Approval	001458-02	-	2016-02-12
Probe Body TTE RTD Temperature Transmitter ATEX & IECEx Approval	001458-03	-	2015-12-04
Electrical Enclosure TTE RTD Temperature Transmitter ATEX & IECEx Approval	001458-04	-	2015-12-22
Blank Cover TTE RTD Temperature Transmitter ATEX & IECEx Approval	001458-05	-	2015-12-07
LCD Option Cover TTE RTD Temperature Transmitter ATEX & IECEx Approval	001458-06	-	2015-12-16
RTD Transmitter Engineering Schematic	001458-07	-	2016-01-25
Retainer TTE RTD Temperature Transmitter ATEX & IECEx Approval	001458-08	-	2016-02-12
Assembly Detail Blank Cover TTE RTD Temperature Transmitter ATEX & IECEx Approval (3 pages)	001458-09/10	-	2016-01-26
Assembly Detail Series TTE ATEX / IECEx Approval (2 pages)	001458-18	-	2017-05-18
TTE Nameplate ATEX / IECEx	001812-00	-	2016-07-12
Series TTE Explosion-Proof RTD Temperature Transmitter Specifications – Installation and Operating Instructions (4 pages)	008121-00	-	2017-07

*‘-‘ denotes initial issue drawing, no rev level. ‘**’ denotes no information provided.*