

CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**

2. **Certificate No:** FM16US0125X

3. **Equipment:** TTF300-W Wireless Temperature Transmitter
(Type Reference and Name)

4. **Name of Listing Company:** ABB Automation Products GmbH

5. **Address of Listing Company:** Schillerstrasse 72
Minden
D32425
Germany

6. The examination and test results are recorded in confidential report number:

3056299 dated 16th June 2016

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3600:2011, FM Class 3610:2015, FM Class 3810:2005, ANSI/IEC 60529:2004

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

9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

10. Equipment Ratings:

Intrinsically Safe for Class I, Division 1, Groups A, B, C and D, T4; Intrinsically Safe for Class I, Zone 0, AEx ia IIC T4 Ga hazardous (classified) locations, indoors and outdoors (IP67) with an ambient temperature rating of -50°C to +70°C.

Certificate issued by:

J. E. Marquedant
Manager, Electrical Systems

16 June 2016

Date

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmapprovals.com www.fmapprovals.com

SCHEDULE

US Certificate Of Conformity No: FM16US0125X

11. The marking of the equipment shall include:

Intrinsically Safe, Class I Division 1, Groups A, B, C, D; T4 Ta = -50°C to +70°C; IP67

Class I, Zone 0, AEx ia IIC T4 Ga Ta = -50°C to +70°C; IP67

12. **Description of Equipment:**

General - The TTF300-W wireless temperature transmitters are designed for the measurement of temperature. The maximum temperature of the measurement is dependent on the sensor used. All signal outputs wireless communications. A HART service port is available for use during set up and maintenance. The TTF300-W is available with or without an HMI.

Construction - The TTF300-W wireless temperature transmitter consists of a single compartment enclosure is made of aluminum or stainless steel with a thread-on window or blind cover.

Ratings - The TTF300-W wireless temperature transmitters are battery powered. The transmitters are rated for use in an ambient temperature range of -50°C to +70°C. The transmitter probes are rated for use in a process temperature range which is dependent on the sensor used, but the maximum service temperature of the TTF300-W shall not exceed 70°C.

TTF300-WL9bcWe-fghijklm Wireless Temperature Transmitter

b = Housing / Display; A, B, C or D

c = Cable entry; 5, 6, 7, or 8

e = Configuration: Two characters not relevant to explosion safety

f = Certificates: Blank or two characters not relevant to explosion safety

g = Calibration certificates: Blank or two characters not relevant to explosion safety

h = Mounting bracket: Blank or two characters not relevant to explosion safety

i = Extended ambient temperature range: Blank or SE

j = Device identification plate: Blank or T0

k = Additional Tag plate; Blank or I1

l = Customer specific versions: Not relevant to explosion safety

m = Documentation language; Two characters not relevant to explosion safety

13. **Specific Conditions of Use:**

1. *The apparatus enclosure TTF300-W when option b = A or C contain aluminum and are considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.*
2. *The maximum operating ambient temperature shall not exceed 70°C when option i = SE*

14. **Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

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15. **Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

16. **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
16 th June 2016	Original Issue.

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TTF300-W...

FM Approved – US Intrinsically safe

Class I, DIV 1, Groups ABCD T4 Ta = 70°C; Type IP67
Class I, Zone 0, AEx ia IIC T4 Ta = 70°C; Type IP67

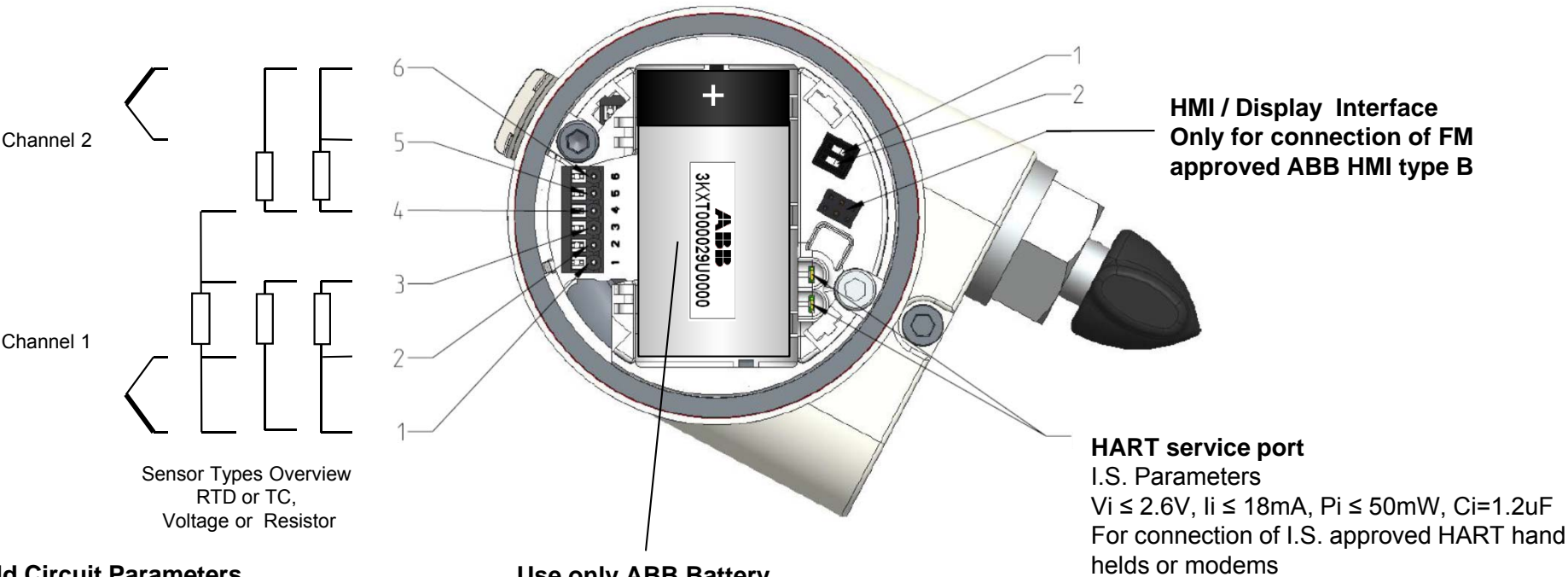
FM Approved - Canada Intrinsically safe

Class I, DIV 1, Groups ABCD T4 Ta = 70°C; Type IP67
Class I, Zone 0, Ex ia IIC T4 Ta = 70°C; Type IP67

Hazardous Location

WARNING !

„The apparatus enclosure TTF300-W..A and TTF300-W..C contain aluminum and are considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction“.



I.S. Sensor Field Circuit Parameters

Terminals: 1,2,3,4,5,6
Voc = 5.4 V; Isc = 25.0 mA; Po = 34 mW
Groups A,B Ca = 2.25 µF; La = 5.0 mH
Groups C,D Ca = 12.95 µF; La = 5.0 mH

Sensors must be FM approved or be a simple apparatus. Simple apparatus is a device which will neither generate or store more than 1.5 V; 0.1 A; 25 mW or 20 µJ such as switches; RTD's, TC

Use only ABB Battery
3KXT000029U0000

							Title: TTF300-W Intrinsically safe Wireless Temperature Transmitter Control Drawing	Scale: -----
				Approv.	11.03.15	Overhoff		
					Date	Name		
				ABB Automation Products			Drawing / Part No.: 3KXT221300B0001	Page : of 1 / 1
1	Release	10.03.15	Lehnert					
Rev.	Desc.	Date	Name				Replacement of: -----	