

CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** FM19US0062X
3. **Equipment:** Model LXT-380 Universal Transmitter and B3X Barrier and SP3X Sensor
(Type Reference and Name)
4. **Name of Listing Company:** Teledyne Analytical Instruments
5. **Address of Listing Company:** 16380 Chestnut Street
City of Industry, CA 91748
United States of America
6. The examination and test results are recorded in confidential report number:

PR453475 dated 29th July 2019
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3600:2018, FM Class 3610:2018, FM Class 3615:2018, FM Class 3810:20185,
ANSI/NEMA 250:2003, 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:**

LXT-380: Explosionproof for Class I, Division 1, Groups B, C and D; Dust-ignitionproof for Class II, Division 1, Groups E, F and G; Class III, Division 1; Flameproof for Class I, Zone 1, IIB+H₂ T4 hazardous (classified) locations, indoors and outdoors (Type 4X, IP66) with an ambient temperature rating of -40°C to +85°C.

B3X: Explosionproof with Intrinsically Safe connections for Class I, Division 1, Groups B, C and D; Flameproof

Certificate issued by:



J. E. Marquedant
VP, Manager - Electrical Systems

4 October 2019

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

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

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
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for Class I, Zone 1, IIB+H₂ T5 hazardous (classified) locations, with an ambient temperature rating of -40°C to +80°C.

SP3X: Intrinsically Safe for Class I, Division 1, Groups B, C and D; Class I, Zone 0, IIB+H₂ T5 hazardous (classified) locations, with an ambient temperature rating of -40°C to +80°C.

11. The marking of the equipment shall include:

LXT-380:

Class I Division 1, Groups B, C, D; T4 Ta = -40°C to +85°C; Type 4X, IP66

Class II, Division 1, Groups E, F, G, Class III, Division 1; T4 Ta = -40°C to +85°C; Type 4X, IP66

Class I, Zone 1, IIB+H₂ T4 Ta = -40°C to +85°C; Type 4X, IP66

B3X:

Class I Division 1, Groups B, C, D; T5 Ta = -40°C to +80°C;

Class I, Zone 1, IIB+H₂ T5 Ta = -40°C to +80°C;

SP3X:

Intrinsically Safe for Class I Division 1, Groups B, C, D; T5 Ta = -40°C to +80°C

Class I, Zone 0, IIB+H₂ T5 Ta = -40°C to +80°C;

12. **Description of Equipment:**

The Model LXT-380 transmitter is a single or dual channel, intelligent, multi-parameter transmitter designed for the online continuous measurement of pH, ORP, pION, dissolved oxygen, free chlorine, total chlorine, conductivity, resistivity and turbidity. The Model LXT-380 transmitter digitally communicates with the SP3X digital sensor, automatically configuring the transmitter's menus and display screens to the measured parameter. The Model LXT-380 transmitter can be loop powered or 24 VDC powered. The standard configuration has a 4-20 mA output and a RS485 serial communication port with MODBUS®RTU output. A HART® communication version (single channel version only) is also available. Alarm relays are optionally available on either line powered transmitter.

The LXT-380 Transmitter and B3X Barrier are each housed in explosion-proof/flame-proof enclosures. The B3X Barrier contains a triple redundant Zener-Shunt barrier which connects the SP3X intrinsically safe probe using a threaded explosion-proof feed-thru and connector assembly. The other conduit entry is for connection to the LXT-380 transmitter. The B3X barrier is permanently potted into the housing and contains NO serviceable parts. The SP3X Sensor consists of three basic types of sensors which include millivolt, conductivity and resistivity. Within each sensor is a sensing element or cartridge located at the sensor tip. The sensor is fitted with a cable and mating connector for connection to the B3X Barrier. The sensor is available in varying lengths and configurations to accommodate differing insertion lengths required by each installation.

Ratings - The LXT-380 Transmitter operates at 24VDC, 4W. The LXT-380 Transmitters are rated for use in an ambient temperature range of -40°C to +85°C. The B3X Barrier and SP3X Sensor are powered by the LXT-380 Transmitter and are rated for use in an ambient temperature range of -40°C to +80°C.

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LXT-380-1a-bcd-01. LXT-380 Universal Transmitter.

- a = Sensor Type: – Channel 2: 0 or 1
- b = Power: 0 or 1
- c = Relays: 0 or 1
- d = Outputs: 0, 1, 2 or 3
- e = Housing Material: 01

B3X. B3X Barrier.

SP3X-ab-cde-fghi-j. Sensor.

- a = Sensor Type: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, G, H or I
- b = Sensor Style: 0 or 1.
- c = Housing Material: 0, 1, 2, 3, 4, 5, 6, 7 or 8
- d = Housing Length: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, E or X
- e = Fittings, Valve or Flange: 00 through 99
- f = Barrier & Connector: 3 or 4
- g = Cable length: 1, 2, 3, 4, 5, 6, 7, 8, 9, A through Z
- h = "T" Handle: 0, 1, 2, 3 or 4
- i = Valve/Fitting: O-Ring 0, 1, 2, 3, 4, 5, 6, 7, 8 or 9
- j = Electrode Cartridge: 000, 000-401

13. Specific Conditions of Use:

1. *The flamepaths of the equipment are not intended to be repaired. Consult the manufacturer if repair of the flamepath joints is necessary.*
2. *Part of the probe enclosure is constructed from plastic. To prevent the risk of electrostatic sparking the plastic surface should only be cleaned only with a damp cloth.*

14. Test and Assessment Procedure and Conditions:

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

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
29 th July 2019	Original Issue.
4 th October 2019	Supplement 1: Report Reference: – RR219988 dated 4 th October 2019. Description of the Change: Correct typing error, was LTX should be LXT.

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Member of the FM Global Group

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