

1 EU-TYPE EXAMINATION CERTIFICATE



2 **Equipment or Protective systems intended for use in Potentially
Explosive Atmospheres - Directive 2014/34/EU**

3 **EU-Type Examination Certificate No:** FM16ATEX0024X

4 **Equipment or protective system:
(Type Reference and Name)** PXLX ThePoint RF Line Power Level Transmitters

5 **Name of Applicant:** Ametek Drexelbrook

6 **Address of Applicant:** 205 Keith Valley Road,
Horsham, PA 19044
United States of America

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

8 FM Approvals Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

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

3057761 dated 11th May 2017

9 Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN 60079-0:2012 + A11:2013, EN 60079-1:2014, EN 60079-11:2012, EN 60079-31:2014 and
EN 60529:1992 + A1:2000 + A2:2013

10 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.

11 This EU-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

Digitally signed by
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Richard Zammitt
Certification Manager, FM Approvals Europe Ltd.

Issue date: 26th March 2019

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12 The marking of the equipment or protective system shall include:



I 2 G Ex db ia IIC T5 Gb $-30^{\circ}\text{C} < \text{Ta} < 70^{\circ}\text{C}$
II 2 D Ex tb ia IIIC T95°C Db $-30^{\circ}\text{C} < \text{Ta} < 70^{\circ}\text{C}$
II 2(1) G Ex db [ia Ga] IIC Gb T5 $-30^{\circ}\text{C} < \text{Ta} < 70^{\circ}\text{C}$
II 2(1) D Ex tb [ia Da] IIIC Db T95°C $-30^{\circ}\text{C} < \text{Ta} < 70^{\circ}\text{C}$
II 1 G Ex ia IIC T5...T2 Ga $-30^{\circ}\text{C} < \text{Ta} < 70^{\circ}\text{C}$
II 1 D Ex ia IIIC T95°C...T290°C Da $-30^{\circ}\text{C} < \text{Ta} < 70^{\circ}\text{C}$

13 **Description of Equipment or Protective System:**

The PXLX ThePoint Level Transmitters are designed for use with a 700 series level sensor and a 380 series connecting cable used for the remote version of the probe. The system converts a capacitive level measurement into a relay contact signal. The electronics are located in a single-compartment enclosure. The enclosure base and the cover are cast of aluminum alloy 360. The cover joint is sealed with a chloroprene O-ring. An M3 socket-head cap screw and an angle bracket are used to provide locking of the cover. The sensor connection and the two entries are either 3/4-14 NPT or M20.

The equipment enclosure has an ingress protection rating of IP66.

Operation Temperature Ranges:

The ambient operating temperature range of the PXLX ThePoint Level Transmitters is -30°C to 70°C .

Electrical data:

The PXLX ThePoint Level Transmitters have the following electrical ratings;

In type of protection intrinsic safety, Energy limitation parameters:

$U_i < 30\text{Vdc}$; $I_i < 140\text{mA}$; $P_i < 1\text{W}$; $C_i < 0\text{nF}$; $L_i = 159\mu\text{H}$

All other protection techniques, the electronic connection has the following values:

Input Voltage:

$U = 18...200\text{VDC}$; $U = 19...250\text{VAC}$

Relay Connections:

$U = 30\text{VDC}$; $U = 250\text{VAC}$; $I = 4...20\text{mA}$; $P < 0.6\text{W}$

PaLb20cd, ThePoint, Level Switch with Integral Sensor.

II 2 G Ex db ia IIC T5 Gb

II 2 D Ex tb ia IIIC T95°C Db

a = Mode N, L, T, V, H, P, G, or M.

b = Output 1 or 2.

cd = Enclosure / sensing element 00,01,02, 03, 04, 06, 07, 09, 22, 23, 24, 28 or ZZ.

PaLb2cde, ThePoint Level Switch Transmitter.

II 2(1) G Ex db [ia Ga] IIC T5 Gb

II 2(1) D Ex tb [ia Da] IIIC T95°C Db

a = Mode N, L, T, V, H, P, G, or M.

b = Output 1 or 2.

c = Cable options 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, G, H, J, or K.

de = Sensing element 00, 01, 02, 03, 04, 06, 07, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 26, 27, 28, 29, 31, 32, 33, 34, 35, 36, 37, 38, 39, 50, 51, 52, 53, 55, 60, 61, 62, 63 or ZZ.

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700-mnop-qrs-t, ThePoint Remote Sensor.

II 1 G Ex ia IIC T5... T2 Ga

II 1 D Ex ia IIIC T95°C... T290°C Da

Temperature Class	Process Temperature
T5, T95°C	≤ 95°C
T4, T130°C	≤ 130°C
T3, T190°C	≤ 190°C
T2, T290°C	≤ 290°C

m = Family 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, or blank.

n = Family 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, or blank.

o = Family 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, or blank.

p = Family 0, 1, 2, 3, 4, 5, 6, 7, 8, or 9.

q = Family 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, or blank.

r = Family 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, or blank.

s = Family 0, 1, 2, 3, 4, 5, 6, 7, 8, or 9.

t = Expanded number, does not affect explosion safety.

14 Specific Conditions of Use:

PaLb20cd, ThePoint, Level Switch with Integral Sensor, 700-mnop-qrs-t, ThePoint Remote Sensor

- 1) Care must be taken when installing the aluminium enclosure that even in the event of rare incidents, an ignition source due to impact or friction between the enclosure and iron I steel is excluded.
- 2) The partially insulated sensing element shall be installed and used in such a way that the danger of electrostatic charge is excluded.
- 3) The equipment shall be installed in such a way that the risk from electrostatic discharges and propagating brush discharges caused by rapid flow of dust is avoided.

PaLb2cde, ThePoint Level Switch Transmitter.

- 1) Consult the manufacturer if dimensional information on the flameproof joints is necessary.
- 2) The partially insulated sensing element shall be installed and used in such a way that the danger of electrostatic charge is excluded.
- 3) The equipment shall be installed in such a way that the risk from electrostatic discharges and propagating brush discharges caused by rapid flow of dust is avoided.

15 Essential Health and Safety Requirements:

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

16 Test and Assessment Procedure and Conditions:

This EU-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Europe Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Europe Ltd's ATEX Certification Scheme.

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17 Schedule Drawings

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

Note – The attached list references the original project ID 3040092. The examination and test result recorded in confidential report number 3057761 dated 11th May 2017 were carried out as a supplement to original project ID 3040092.

18 Certificate History

Details of the supplements to this certificate are described below:

Date	Description
25 th May 2017	Original Issue.
25 th September 2018	<u>Supplement 1:</u> Report Reference: – RR214288 dated 30 th July 2018 Description of the Change: Component replacement with equivalent part. Updated Specific Conditions of Use.
26 th March 2019	<u>Supplement 2:</u> Description of the Change: Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809.

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Blueprint Report

AMETEK Drexelbrook (1000001466)

Class No 3610

AMETEK Drexelbrook (1000001466)

Class No 3610

Original Project I.D. 3040092

Certificate I.D. FM16ATEX0024X

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>	<u>Electronic Drawing</u>
242-0001-099	5	Thread Adapter ¾ NPT-M20	3057761	Yes (pdf)
260-0002-521	11	M105 Housing Lid	3057761	Yes (pdf)
260-0002-547	7	Base, Cast, M20	3057761	Yes (pdf)
270-0002-168	7	UNMARKED PROBE LABEL	3057761	Yes (pdf)
270-0101-765	8	IECEX Label – The Point PXLX Remote	3057761	Yes (pdf)
270-0101-766	5	IECEX Label – The Point PXLX Integral	3057761	Yes (pdf)
270-0101-825	7	IECEX Label - ThePoint PXLX Sensor Enclosure	3057761	Yes (pdf)
285-0001-062	4	Condulet Assembly	3057761	Yes (pdf)
285-0001-063	4	Condulet Assembly	3057761	Yes (pdf)
285-0001-064	3	Condulet Assembly	3057761	Yes (pdf)
285-0001-065	3	Condulet Assembly	3057761	Yes (pdf)
285-0001-067	3	Condulet Assembly	3057761	Yes (pdf)
311-3001-020	4	Diode, SOT - 23, Ultra Fast Switch	3057761	Yes (pdf)
376-0001-040	3	Thermal Cut Off Axial Type	RR214288	Yes (pdf)
383-0065-001	7	FABRICATION NEW POINT TERMINAL BOARD	3057761	Yes (pdf)
383-0065-003	9	FABRICATION POINT MARK III RF BOARD	3057761	Yes (pdf)
383-0065-004	4	FABRICATION POINT MARK III PROBE BOARD	3057761	Yes (pdf)
385-0065-001	10	Terminal Board Assembly, Schematics, BOM	3057761	Yes (pdf)
385-0065-003	8	RF Board Assembly, Schematics, BOM	3057761	Yes (pdf)
385-0065-004	3	Probe Board Assembly, Schematics, BOM	3057761	Yes (pdf)
385-0065-005	3	RF Board w/ Gold Relay Assembly, Schematics, BOM	3057761	Yes (pdf)
388-0001-070	8	Electronics Housing Assembly	3057761	Yes (pdf)
420-0004-186-CD	5	ATEX/IECEX CONTROL DRAWING FOR "ThePoint" PXLX SERIES ZONE I	3057761	Yes (pdf)
440-1602-891	6	Terminal Board Layout	3057761	Yes (pdf)
440-1602-893	8	RF Board Layout	3057761	Yes (pdf)
440-1602-894	3	Probe Board Layout	3057761	Yes (pdf)
PML1-LM	15	ThePoint Series Level Switch Instructions & Operating Manual	3057761	Yes (pdf)
PXLX-X0XX-XXXX	10	ThePoint INTEGRAL SYSTEM ASSEMBLY, LINE POWERED	3057761	Yes (pdf)
PXLX-XXXX-XXXX	13	ThePoint REMOTE SYSTEM ASSEMBLY, LINE POWERED	3057761	Yes (pdf)