

# 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:** FM13ATEX0060X

4 **Equipment or protective system:** DM330 Series, Magnetostrictive Liquid Level Probe  
(Type Reference and Name)

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:

3049815 dated 26<sup>th</sup> July 2013

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 and EN 60079-11:2012

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.

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



II 1 G Ex ia IIB T4, Tamb = -40 °C to +70 °C



Digitally signed by Damien Mc Ardle  
DN: cn=Damien Mc Ardle, o=FM Approvals, ou=FM Approvals Europe Ltd, email=damien.mcardle@fmapprovals.com, c=IE  
Date: 2019.09.13 10:48:02 +01'00'

**Damien Mc Ardle**  
Certification Manager, FM Approvals Ltd.

Issue date: 13<sup>th</sup> September 2019

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3	12-20-104	SGA	1-8-21

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to EU-Type Examination Certificate No. FM13ATEX0060X

### 13 Description of Equipment or Protective System:

**General** – The AMETEK Model DM330 Liquid Level Probe is an integral assembly that measures linear motion or liquid level using magnetostrictive technology. A single level output is provided with field configurable 4 mA and 20 mA points in an intrinsically safe, standard two wire loop-powered configuration.

The equipment is a three wire device, with connection facilities for power/signal (IN+) programming (SETIN) and common (IN-) and may be supplied from either 1 or 2 intrinsically safe barriers.

The DM330 offers unique diagnostic capabilities. The normal 4-20 mA output indicates the position of the float within the span. If the level is outside of the set span, the output is either 3.9 mA or 20.1 mA. If the float moves into the Null or Dead Zones or there is a sensing failure, then the output is 3.8 mA.

The sensor is an intrinsically safe device and therefore, when used in an intrinsically safe installation or application, must be connected to an apparatus that limits the power, voltage, and current to the sensor in accordance to the entity parameters specified. Reference the installation control drawing 420-0004-233-CD for more details.

**Construction** – The sensor is constructed from either a PVDF or 316 Stainless Steel housing and comes with a variety of connectors, including a mini connector for quick connect applications, a single 3/4 in. NPT that can be used with a compression fitting, a double 3/4 in. NPT for mounting with a flange or bushing, and a 1/2 in. right angle for use in low overhead applications.

For more specifics concerning construction and description details of the magnetostrictive liquid level probe, reference the manufacturer's sales literature and specification sheets.

**Ratings** – The equipment is certified to the following ratings.

The ambient operating temperature range is -40 °C to +70 °C in type of protection intrinsically safe apparatus, each when properly mounted and installed.

In type of protection intrinsically safe apparatus, the barrier protected magnetostrictive liquid level probe (DM330 Series) equipment is connected to a certified intrinsically safe linear circuit with the following maximum entity parameter values.

Terminals (VIN+, GND, DATA):

Ui = 30 VDC; Ii = 216 mA; Pi = 1 W; Ci = 0; Li = 0

**Model Codes** – The equipment is identified with the following model code structure.

In type of protection intrinsically safe apparatus, the barrier protected magnetostrictive liquid level probe (DM330 Series) equipment is designated with the following model code(s).

**DM33a-b-c-d-eee-F1-ggg-h-i-jj, Digital Level Probe.**

a = Output: 0

b = Style/Material: F, S, V or X

c = Style/Connector: D, M, R or S

d = Thread Type: E

e = Length: Any three figure number

f = Number of Floats: 1 or 2

g = Housing Option: H or X

h = Special Mounting: C, P, T or X

jj = Special Mounting: 20, 25, 30, 40 or XX

### 14 Specific Conditions of Use:

In type of protection intrinsically safe apparatus, the barrier protected magnetostrictive liquid level probe (DM330 Series) equipment is designated with the following specific conditions of use.

1. The equipment contains non-metallic enclosure parts, to prevent the risk of electrostatic sparking the non-metallic surface should only be cleaned with a damp cloth

### 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.

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to EU-Type Examination Certificate No. FM13ATEX0060X

### 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 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 Ltd's ATEX Certification Scheme.

### 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.

### 18 Certificate History

Details of the supplements to this certificate are described below:

Date	Description
02 <sup>nd</sup> October 2013	Original Issue.
01 <sup>st</sup> November 2016	Supplement 1: Report Reference: RR206829, dated 14 <sup>th</sup> October 2016. Description of the Change: Minor documentation changes to update to the latest standards
23 <sup>d</sup> April 2019	Supplement 2: Description of the Change: Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809. EN 60079-26 removed. This standard no longer applies as the equipment uses a single standardized type of protection.
13 <sup>th</sup> September 2019	Supplement 3: Description of the Change: Correction made to error with the NB number

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# **Blueprint Report**

**AMETEK Drexelbrook (1000001466)**

**Class No 3610**

**Original Project I.D. 3049815**

**Certificate I.D. FM13ATEX0060X**

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>
PL/TA	08/06/13	PL/TA Agreement Dated August 6, 2013

<u>Last Report</u>
3049815