EU Type Examination Certificate CML 19ATEX2490X Issue 0

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **M321 Magnetic Pickup**

3 Manufacturer **Barksdale, Inc.**

4 Address 3211 Fruitland Ave,
Los Angeles,
California 90058,
USA

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Hoogoorddreef 15, Amsterdam, 1101 BA, The Netherlands, Notified Body Number 2776, 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 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 the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-11:2012 EN 60079-18:2015+A1:2017

10 The equipment shall be marked with the following:

 II 1 G

Ex ia IIC T4 Ga

-40°C≤Ta≤+80°C

 II 2 G

Ex mb IIC T4 Gb

-40°C≤Ta≤+90°C

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11 Description

The M321 Magnetic Pickup is a magnetic pick up which is certified for use in areas requiring equipment protection level Gb or, when connected via an intrinsically safe barrier, areas requiring equipment protection level Ga.

The equipment comprises a coil mounted within a sealed stainless steel threaded housing. Electrical connections are provided via an integral cable or two-part two-pin connector (-P models are for use in intrinsically safe installations only).

The equipment is available with various thread sizes and lengths, and has the following electrical ratings:

Ex mb installations (not -P versions)	Ex ia installations
U = 28V	Ui = 28V Ii = 93mA Ci = 0* Li/Ri = 18µH/Ω*

* These values apply to the equipment supplied without a cable – refer to the conditions of use for parameters of integral cable.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	29 Jan 2020	R12620A/00	Issue of prime certificate

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components, the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.

ii. Each piece of equipment shall be visually inspected. No damage shall be evident, such as cracks in the compound, exposure of encapsulated parts, flaking, inadmissible shrinkage, swelling, decomposition, failure of adhesion, or softening.

iii. Each piece of equipment shall be subjected to an electric strength test in accordance with EN 60079-18 Clause 9.2, using a test voltage of 500Vac applied between the terminals and the body of the equipment, for a period of 1 second.

Alternatively:

- a d.c. test voltage of 700V may be applied
- a voltage of 20% higher may be applied for 0.1 second

No flashover or breakdown shall occur.

iv. The manufacturer shall ensure that the user is provided with sufficient details to enable the equipment to be installed such that the open circuit output voltage does not exceed 60Vpp.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. The user shall ensure that the equipment is installed such that the peak to peak open circuit output voltage does not exceed 60Vpp.

ii. Models supplied with an integral connector (-P suffix) shall be installed in intrinsically safe installations only. These models are supplied with a separate certification label and the user shall ensure that the label is attached to the installation, close to the equipment, after installation.

iii. The equipment may be supplied with an integral cable of variable length with a capacitance of 200pF/m and inductance of 1µH/m or 30µH/Ω. The user shall consider these parameters in conjunction with any additional cabling during the installation of the equipment in intrinsically safe installations.

iv. In intrinsically safe installations, the equipment shall only be connected via a resistively limited barrier.