

1 EU-TYPE EXAMINATION CERTIFICATE



2 Component intended for use in Potentially

Explosive Atmospheres - Directive 2014/34/EU

3 EU-Type Examination Certificate No: FM08ATEX0010U

4 Component:
(Type Reference and Name) 1010, 1014 and 1016 Series Housings

5 Name of Applicant: Pushna International Inc.

6 Address of Applicant: 6222 Richmond Avenue, Suite 783
Houston, TX 77057
USA

7 This component and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

8 FM Approvals Ltd, notified body number 1725 in accordance with Article 17 of Directive 2014/34/EU of 26 February, 2014, certifies that this component 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:

3031933EC dated 23 June 2008

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 60079-0:2009, EN 60079-1:2007, EN 60079-31:2009, EN 60529:1991 + A1:2000

10 The sign 'U' placed after the certificate number indicates that this certificate must not be mistaken for a certificate for equipment or a protective system. This certificate may only be used as the basis for the certification of equipment or a protective system.

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

12 The marking of the component shall include:



1010 PWE Series:

II 2 G Ex d IIC Gb Ta = -20°C to +80°C IP68

II 2 D Ex tb IIIC Db Ta = -20°C to +80°C IP68



1010PAE, 1014PSE & 1016PSE Series:

II 2 G Ex d IIC Gb Ta = -20°C to +125°C IP68

II 2 D Ex tb IIIC Db Ta = -20°C to +125°C IP68



Digitally signed by Nicholas Ludlam

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Nicholas Ludlam

Deputy Certification Manager, FM Approvals Ltd.

Issue date: 3rd June 2016

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F ATEX 027 (Apr/16)

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13 Description of Component:

The 1010, 1014 and 1016 Series Housings consist of an assembly of a threaded blank cover and base. The base contains two openings that are available as either ½ inch-14 NPT, ¾ inch-14 NPT or M20 x 1.5 mm (M20 on side entry only). One opening is located in the side of the body while the other is located in the bottom of the body. The 1010 Series Housings are constructed of ADC-12 Aluminum Alloy that is either silver painted or blue epoxy-painted. The 1014 Series Housings are constructed of 304 Stainless Steel while the 1016 Series Housings are constructed of 316 Stainless Steel. The housing is provided with internal and external grounding facilities. An o-ring is provided between the cover and base for environmental protection. The housings have an approximate free internal volume of 140 cm³. As the dimensional construction of the aluminum and stainless steel versions of the 1010, 1014 and 1016 Series Housings are identical, aluminum versions of the housings and blank covers were tested as part of this program and considered acceptable for the stainless steel versions.

1010PAEa-b Housing.

a = Certifications M or T.

b = Threaded entries 01, 02, 03, 08, 09 or 10.

1010PWEa-b Housing.

a = Certifications M or T.

b = Threaded entries 01, 02, 03, 08, 09 or 10.

101aPSEb-c Housing.

a = Material grade 4 or 6.

b = Certifications M or T.

c = Threaded entries 01, 02, 03, 08, 09 or 10.

14 Schedule of Limitations:

1. Where necessary for safety, the contents of the enclosure shall comply with the appropriate requirements of relevant standards for electrical apparatus.
2. Rotating machines, or other devices which create turbulence, shall not be incorporated.
3. Primary and secondary cells and batteries shall only be used in accordance with Annex E of EN 60079-1.
4. Enclosures which can be opened more quickly than the time necessary for the discharge of incorporated capacitors or the cooling of hot components shall be labeled in accordance with the requirements of EN 60079-0.
5. Oil-filled circuit-breakers and contactors shall not be used.
6. All entry or closure devices when fitted shall satisfy the requirements of Clause 5 of EN 60079-1, or be specifically evaluated with the apparatus and be suitable for the conditions of use. Threads interrupted by the set screw shall not be counted in satisfying the requirements of Clause 5 of EN 60079-1. A thread of engagement of ≥ 5 threads is required and depth of engagement ≥ 8 mm is required.
7. For Group IIA and IIB enclosures, the content of the enclosure apparatus may be placed in any arrangement, provided that an area of at least 20 % of each cross-sectional area remains free to permit an unimpeded gas flow and, therefore, unrestricted development of an explosion.

For Group IIC enclosures, the content of the enclosure apparatus may be placed in any arrangement provided that an area of at least 40 % of each cross-sectional area remains free to permit unimpeded gas flow and, therefore, unrestricted development of an explosion.

For the purpose of both of the above, separate relief areas may be aggregated provided that each area has a minimum dimension in any direction of 12.5 mm.

8. Consult the manufacturer if dimensional information on the flameproof joints is necessary.
9. Follow the manufacturer's instructions to reduce the potential of an electrostatic charging hazard.

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10. Care should be taken when assembling the cover to the housing such that the o-ring, when properly seated and installed, is protected from exposure to UV light.

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, FM Approvals Ltd accepts no responsibility for the compliance of the component 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
12 th August 2008	Original Issue.
21 st April 2012	<u>Supplement 1:</u> Report Reference: Supplement 1 to Report No. 3031933EC dated 26 March 2012 Description of the Change: Added alternate housing cover. Updated examination against EN 60079-0:2009. Added examination against EN 60079-31. Added IPx8 ingress protection rating. Minor model code and schedule of limitations revisions.
03 rd June 2016	<u>Supplement 2:</u> Report Reference: 3058534 dated 11 th May 2016 Description of the Change: An updated examination against EN 60079-0:2012 + A11:2013, EN 60079-1:2014 and EN 60079-31:2014 was performed. The products were found to comply with the latest versions of these standards. The examination includes an updated EHSR questionnaire. As the manufacturer chooses to leave their markings unchanged, the standards listed on this certificate are also unchanged.

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