

1 EU-TYPE EXAMINATION CERTIFICATE



2 Component intended for use in Potentially
Explosive Atmospheres - Directive 2014/34/EU

3 EU-Type Examination Certificate No: FM15ATEX0007U

4 Component: Series #5 and #3 Connection Head Enclosure
(Type Reference and Name)

5 Name of Applicant: Burns Engineering Inc.

6 Address of Applicant: 10201 Bren Rd E
Minnetonka MN 55343
United States of America

7 This component 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 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:

3052763 dated 19th January 2016

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 60079-31:2014 and
EN 60529:1991+A1: 2000+A2: 2013

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:



II 2 G Ex db IIC Gb

II 2 D Ex tb IIIC Db

Richard Zammitt
Certification Manager, FM Approvals Europe Ltd.

Issue date: 24th April 2019

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

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SCHEDULE

to EU-Type Examination Certificate No. FM15ATEX0007U

13 Description of Component:

The Series #5 and #3 Connection Head Enclosure is for accommodating different electronic devices for working in hazardous areas with flammable gases, vapors and dusts.

The #5 Connection Head Enclosure is an aluminum alloy (A356.0-T6) housing, base and cover that incorporates a safety chain between the cover and base and a cover sealing gasket / O-ring to achieve the IP degree of protection.

The #3 Connection Head Enclosure is the #5 Connection Head Enclosure supplied with an internally applied sealing kit to protect any internal connections or electrical devices from moisture in high humidity/ high moisture environments. The supplied kit does not affect the type of protection.

The Alpha characters (5A, 5E, 3A, 3E) represent the following:

The "A" represents the Connection Head Enclosure as a non coated aluminum enclosure.

The "E" represents the aluminum Connection Head Enclosure with an epoxy coating.

The Series #5 and #3 Connection Head Enclosure with solid cover are made from aluminum die cast. The cover is fixed to the body by thread M104 x 2mm. Ingress protection is provided between the enclosure and thread-on cover via a Neoprene O-ring rated at 200 °C.

The cover is locked by screw with hex socket using hex spanner. An earth terminal is placed on the body of the enclosure. An earth terminal is also provided internally to the connection head enclosure. Rated ambient temperature and service temperature range of the enclosures is -40 °C to +100 °C.

Ingress Protection Rating: IP66

Series #5a and #3a Series Connection Head Enclosure

a = Model: A or E.

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 equipment.
2. Consult the manufacturer if dimensional information on the flameproof joints is necessary.
3. Consult the manufacturer's instructions for the specific information regarding wiring entry number, sizes, position and thread type.
4. The surfaces of the Series #5 and #3 Connection Head may store electrostatic charge and become a source of ignition in applications with a low relative humidity <-30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32 (in preparation). Cleaning of the painted/unpainted surface should only be done with a damp cloth.
5. 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.
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. Rotating machines, or other devices which create turbulence, shall not be incorporated.
8. The ambient temperature range and service temperature range for the Series #5 and #3 Connection Head enclosure is -40 °C to +100 °C.

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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 Europe 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 Europe 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
04 February 2016	Original Issue.
31 st May 2016	<u>Supplement 1:</u> Report Reference: – RR204826 dated 26th April 2016 Description of the Change: Minor drawing changes not affecting the safety of the product.
14 th June 2016	<u>Supplement 2:</u> Report Reference: - RR205225 dated 25th May 2016. Description of the Change: Minor drawing changes not affecting the safety of the product. Updated to EU certificate.
09 th March 2017	<u>Supplement 3:</u> Report Reference: - RR208631 dated 7th March 2017. Description of the Change: Minor drawing changes and update of standards.
01 st June 2017	<u>Supplement 4:</u> Report Reference: - RR209749 dated 30th May 2017. Description of the Change: Minor drawing updates.
20 th March 2018	<u>Supplement 5:</u> Report Reference: - RR212950 dated 23 rd February 2018. Description of the Change: Nameplate added to the connection head with Burns Engineering information and Class/Division markings not affecting the flameproof certification.
24 th April 2019	<u>Supplement 6:</u> Report Reference: - RR218304 dated 09 th April 2019. Description of the Change: Drawing revisions related to ATEX Notified Body transfer to Dublin, Ireland. 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

Burns Engineering Inc (1000001358)

Certificate I.D. *FM15ATEX0007U*

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>
23172	E	BASE CONNECTION HEAD, CASTING #5 ALUMINUM; EXPLOSIONPROOF	RR209749
23173	C	#5 ALUMINUM CONNECTION HEAD EXPLOSION PROOF BASE, MACHINED	RR208631
23174	D	CAP, CONNECTION HEAD, CASTING EX APPROVED	RR209749
23175	C	#5 ALUMINUM CONNECTION HEAD EXPLOSION PROOFCAP, MACHINED	RR208631
23176	A	CONNECTION HEAD EXPLOSION PROOF ASSEMBLY	3052763
23190	B	MOUNTING AND OUTLINE DRAWING CONNECTION HEAD EXPLOSION PRROF ASSEMBLY	RR208631
23195	D	Label, Explosionproof/Flameproof Connection Head	RR212950
23208	A	PURCHASED PART SET SCREW M3 X 6	3052763
23244	G	PURCHASED PART COMPONENT MARKING INTERNAL TAG	RR218304
23245	C	PURCHASED PART COMPONENT MARKING EXTERNAL TAG	RR209749
23384	A	PURCHASE PART, WHITE EPOXY COATED ALUMINUM CONNECTION HEAD, EX APPROVED BURNS #3 (3e) AND #5 (5E)	RR204826
APPLICATION MANUAL	11/18/2015	APPLICATION MANUALModel 5A, 5E, 3A AND 3E	3052763