

UK-TYPE EXAMINATION CERTIFICATE

Product or Protective Systems Intended for Use in Potentially Explosive Atmospheres

UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

- UK-Type Examination Certificate Number:** ITS21UKEX0049X **Issue 00**
- Product:** Types CB, CF, CK, CQ, CQM, CY, PD-E4, PD-U, PH-E, PA-D/PA-U, PB-U/PB-D Stopping Plugs
- Manufacturer:** Eaton Electrical Systems Ltd – trading as Eaton, Raxton, Redapt and Capri
- Address:** Unit 1, 1 Kingsway South, Westgate, Aldridge, West Midlands, WS9 8FS, United Kingdom
- This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- Intertek Testing and Certification Limited, Approved Body number 0359, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential report G102174344A Issue 1 dated December 2016, Nr. G103326724 Issue 1 dated April 2018, Nr. 103717291LHD-001d dated June 2019 and Nr. 104039337LHD-001a dated September 2019.
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2012+A11:2013, EN 60079-1:2014, EN 60079-7:2015/A1:2018 and EN 60079-31:2014 except in respect of those requirements referred to within item 14 of the Schedule.
- If the sign “X” is placed after the certificate number, it indicates that the product is subject to the special conditions of use specified in the Schedule to this certificate.
- This UK-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- The marking of the product shall include the following:



I M2 Ex db I Mb

II 2 G Ex db IIC Gb

II 2 D Ex tb IIIC Db IP66

I M2 Ex eb I Mb

II 2 G Ex eb IIC Gb

Group I marking does not apply to CY or PD-E4 Stopping Plugs. Ex db marking does not apply to CQM or PD-E4 or PH-E.

Certification Officer: _____

P Moss

Date: _____

22 June 2021

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. This Certificate is accredited under UKAS schedule 0010

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11. Description of Product or Protective System

The stopping plugs are threaded and are used to fill unused entries in associated apparatus. They have thread forms between M12 and M120 (M16 to M75 for Nylon CQM type plugs; M16 to M110 for Nylon PD-E-4 type plugs) and are briefly described as follows:

Type CF: Round/hexagon socket/internal mounting

Type CB: Round/hexagon socket/external mounting

Type CK: Hexagon head

Type CQ: 'Mushroom' head

Type CQM: 'Mushroom' head made from Glass Filled Nylon

Type CY: Similar to Type CK with a hollow threaded section

The PD-U series stopping plugs comprise of metallic round bodies with a dome head having a hexagonal key-way recess for tightening. They may optionally be machined with a groove to fit an 'o' ring seal. Coded: Ex db I/IIC Mb/Gb, Ex eb I/IIC Mb/Gb, Ex tb IIIC Db IP6X.

The PA-D /PA-U, PB-D/PB-U Series stopping plugs comprise of metallic round bodies with a thread run out to shoulder having a hexagonal key-way recess for internal or external tightening. Coded: Ex db I/IIC Mb/Gb, Ex eb I/IIC Mb/ Gb Ex tb IIIC Db IP6X.

The PH-E Series are ranges of 'Ex eb' threaded stopping plugs each comprising a threaded body with either a hexagonal head or socket for tightening.

PD-E4 Stopping Plugs: these are a range of threaded stopping plugs that are used to fill unused entries in the associated apparatus.

PD-E4 has a 'mushroom' head, there is also a version made from 30% Glass Filled Nylon which are intended for Ex eb and tb only.

Material Options:

- Brass BS 2872 (CZ121)
- Mild Steel to BS970 (EN1A)
- Stainless Steel to BS970 (316)
- Aluminium BS1474, 6082T6
- 30% Glass Filled Nylon
- 40% Glass Filled Nylon

Surface Coating: Nickel, Zinc, Electroless Nickel

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Entry threads options:

- Metric to BS3463
- ET Conduit to BS 31
- PG to DIN 40430
- BSP to BS 2779
- BSPT to BS 21
- NPT to ANSI/ASME B1.20.1

Or Any thread forms conforming with Table 3 of EN 60079-1

At their point of mounting, these devices are suitable for use at the following temperatures dependent on the type of 'o'-ring.

O-ring Service temperature:

- None fitted -60°C to 200°C *
- EPDM -50°C to +100°C
- Nitrile -30°C to +80°C
- Neoprene -40°C to +80°C
- Viton -20°C to +180°C *
- Silicone -60°C to +180°C *
- Fluorosilicone -60°C to +130°C

Note: The limiting temperatures specified above are de-rated by 20K according to Clause 7.2.2 'Material Selection' of EN 60079-0:2012+A11:2013.

Note: The maximum temperature is limited to 150°C in Group I application (Coal dust, Mining) O-ring materials affect marked with '*' above.

12. Report Number

Intertek Report: G102174344A Issue 1 dated December 2016, Nr. G103326724 Issue 1 dated April 2018, Nr. 103717291LHD-001d dated June 2019 and Nr. 104039337LHD-001a dated September 2019.

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13. Special Conditions of Certification

(a). Special Conditions of Use

- If a stopping plug is machined with an undercut and is used for an Ex db application, then the wall of the enclosure into which it is fitted shall be such as to maintain five full threads engagement.
- When used for increased safety or Ex eb or protection by enclosure Ex tb applications, a suitable method of sealing to the associated enclosure shall be fitted
- The interfaces between these devices and the associated enclosure cannot be defined; therefore, it is the user's responsibility to ensure that the appropriate ingress protection level is maintained at these interfaces.
- The stopping plugs, when manufactured from non-metallic material, are only suitable for installation in areas considered to be a low risk from mechanical impact
- The stopping plugs, when manufactured from non-metallic material 40% Glass Filled Nylon, shall be adequately protected from direct exposure to sunlight
- The stopping plugs, when construction from non-metallic material, shall only be cleaned with a damp cloth.
- When manufactured in 30% Glass Filled Nylon material, the entry devices are suitable for a service temperature range of -30°C to +90°C.
- When manufactured in 40% Glass Filled Nylon material, the entry devices are suitable for a service temperature range of -20°C to +45°C; Items made from this material are marked with '40% Glass Filled Nylon'.
- The clearance holes for metric male threaded products, suitable for clearance hole applications of increased safety enclosures are to have a diameter of 0.3 to 0.5mm larger than the major diameter of the male thread.
- 'Ex db' stopping plugs employing parallel threads without seals shall have at least 5 full threads of engagement, with a minimum tolerance according to ISO 965-1 and ISO 965-3.
- 'Ex db' Stopping plugs are not to be used with any form of adaptors or reducers.
- At their point of mounting, these devices are suitable for use at -60°C to +200°C for Group II applications and -50°C to +150°C for Group I applications.

(b). Conditions of Manufacture - Routine Tests

- None.

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14. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report: 104601581CHE-002 Dated: 24 March 2021.

15. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
Stopping Plugs (CB& CF Tapered)	CB-CF	1	05/04/16
Stopping Plugs (CQ, CK & CY)	CQ-CK-CY	1	18/04/11
Exe Glass Filled Nylon Stopping Plugs	CQ-M	2	08/07/18
Ex d / Exe I & IIC Certified Tapered Stopping Plugs	PA-U, PB-U	1	08/03/16
Exd/ Exe I&IIC Certified Parallel Stopping Plugs	PA-U, PB-U	1	08/03/16
EExe II Dome Head Stopping Plugs	PD-E	2	09/07/19
Exd I&IIC & Exe IIC Domehead Stopping Plugs	PD-U	1	28/03/16
Exe II Hex Head Stopping Plugs	PH-E	1	04/04/16
Accessories marking specification CB, CF, CK, CQ, CY, PD-E-4, PD-U, PH-E, PA-U or PB-U	DF 2210032 A	A	19/03/21
Ex accessories Regulatory Instruction	CAP184267	-	As stamped