# **EU-Type Examination Certificate**





# 1 EU-TYPE EXAMINATION CERTIFICATE

- 2. Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 3. EU-Type Examination Certificate Number: ITS13ATEX27734X Issue 2
- 4. Product: BDI Burst Disc Indicator
- 5. Manufacturer: Continental Disc Corporation
- 6. Address: 3160 West Heartland Drive Liberty, MO 64068 USA
- 7. This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- 8. Intertek Testing and Certification Limited, Notified Body number 0359 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council dated 26 February 2014, certifies that the 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 Annex II to the Directive.

The examination and test results are recorded in confidential Intertek Report 101585709LHD-002A Issue 1 dated August 2015 and 102872137DAL-001 dated March 2017.

- 9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2012, EN 60079-11:2012 and EN 50303:2000 except in respect of those requirements referred to at item 16 of the Schedule.
- **10.** If the sign "X" is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Safe Use specified in the Schedule to this certificate.
- **11.** This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- **12.** The marking of the product shall include the following:

II 1 G Ex ia IIC Tx Ga II 1 D Ex ia IIIC Tx Da IM1ExiaIMa

Ambient temperature range of the BDI comprise of a Kapton film membrane: -40°C  $\leq$  Ta  $\leq$  +204°C

Ambient temperature range of the BDI comprise of Tantalum:

-40°C ≤ Ta ≤ +288°C

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#### EU-TYPE EXAMINATION CERTIFICATE NUMBER ITS13ATEX27734X Issue 2

### 13. Description of Equipment or Protective System

The Continental Disc Corporation BDI BURST DISC INDICATOR consists essentially of two parallel flexible copper or tantalum strips located between layers of Kapton film. The strips are linked at the end remote from the electrical connections. The centre section of each strip is reduced in width.

The copper or tantalum strip assembly may be mounted on a Teflon membrane and installed between pipeline flanges. The assembly may be integral with a bursting disc or mounted separately from, but adjacent to, a bursting disc.

The maximum intrinsically safe input parameters are as follows:

Ui = 24V dc li = 50 mA Pi = 0.3W

The equivalent parameters are:

Ci = 0 Li = 0

The temperature class of the equipment is marked Tx, since the temperature rise within the BDI Strip is negligible. The surface temperature is dependent on the process temperature or the ambient temperature at the installation position.

#### 14. Report Number

Intertek Report Ref: 101585709LHD-002A Issue 1 dated August 2015 and 102872137DAL-001 dated March 2017.

# 15. Special Conditions of Certification

- (a). Specific Conditions of Safe Use
  - Temperature Class of the BDI sensor is marked as Tx, since the surface temperature is controlled by the process temperature being monitored. The sensor itself exhibits negligible temperature rise.
  - When located in an area requiring EPL Ga / Category 1G (e.g. Zone 0) hazardous area, the user shall ensure that electrostatic charging of the non-metallic parts cannot occur.
  - When provided with terminations by means of flying leads, these shall be terminated in an appropriately protected terminal box.
  - When installed, the BDI strip shall be provided with an IP rating of IP20 as a minimum.
  - For Group I applications, the BDI strip and terminations shall be protected to IP54 or better.
  - The BDI does not meet the 500V dielectric strength requirement of EN 60079-11:2012 Clause 6.3.13. The user shall take this into consideration in the installation, for example by the provision of equipotential bonding throughout the installation, additional earth bonding or the provision of Galvanic Isolation at the supply.
- (b). Conditions of Manufacture Routine Tests
  - None

#### 16. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report Ref: 1101585709LHD-002A Issue 1 dated August 2015 and 102872137DAL-001 dated March 2017.

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# **EU-Type Examination Certificate**



# SCHEDULE

### EU-TYPE EXAMINATION CERTIFICATE NUMBER ITS13ATEX27734X Issue 2

### 17. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
Special B.D.I. Assembly - Schedule Drawing	CD31720-63-SD	N/R	3/5/2014
Burst Disc Indicator Strip Label	LMD-BSL-1001- 01	AE	5/27/2015
Burst Disc Indicator Strip Schedule Drawing	STPSD	N/R	3-5-2014
Tantalum Low Pressure Universal Burst Disc indicator Schedule Drawing	TLPUBDSD	N/R	3-5-2014
Tantalum Universal or Integral Burst Disc Indicator Schedule Drawing	TUBDSD	N/R	3-5-2014
Universal or Integral Burst Disc Indicator Schedule Drawing	UBDSD	A	1-21-14

# 18. Details of Certificate changes

### Issue 1, Intertek Report Ref. G101980150, dated August 2015

#### Original certificate issue.

# Issue 2, Intertek Report Ref. 102872137DAL-001, dated 23 March 2017

To permit following updates, thus forming BDI:

- Update to the design of the BDI consist of Kapton film where previously certified single strip
  design is updated to a double strip design where the completely independent strips cross in an 'X'
  layout.
- Upper ambient temperature of the BDI design consist of Tantalum is increased to 288°C.
- Following change was made to the product description:
- From:
- The copper or tantalum strip assembly is mounted on a Teflon membrane. To:

The copper or tantalum strip assembly may be mounted on a Teflon membrane

# Drawings

Title:	Drawing No.:	Rev. Level:	Date:
Special Dual B.D.I. Strip - Schedule Drawing	DBSSD	A	3/16/2017

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