

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:** ITS21UKEX0092X **Issue 00**
- Product:** 4 and 5 Digit Set Point Stations
- Manufacturer:** BEKA Associates Ltd
- Address:** Old Charlton Road, Hitchin, Herts, SG5 2DA, 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 100957553 Issue 1, dated May 2013 and G102507332 Issue 1, dated April 2016.
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2012 and EN 60079-11:2012 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:

II 1 G Ex ia IIC T5 Ga



II 1 D Ex ia IIIC T80°C Da

-40°C ≤ Ta ≤ +70°C

Certification Officer:



M Newman

Date:

2nd July 2021

SCHEDULE:

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11. Description of Product or Protective System

The 4 and 5 Digit Set Point Stations are panel mounting instruments that allow an operator to manually adjust the current flowing in a 4/20 mA loop, incorporate a digital and bargraph display to represent current in engineering units.

The 4 and 5 Digit Set Point Stations may be one of the models listed below:

BA407E and BA408E 4 Digit Set Point Stations

BA427E and BA428E 5 Digit Set Point Stations

The 4 or 5 Digit Set Point Station may optionally be fitted with a Backlight board.

The Digit Set Point Station comprise a main board, a display board and an optional Backlight board, all housed within a plastic enclosure. The enclosure provides a degree of protection of at least IP20.

Intrinsic safety is assured by limitation of voltage, current and power, limitation of capacitance and inductance, and infallible segregation.

The maximum intrinsically safe input and output parameters at the external connections are as follows:

| TB1 Terminals 1, 2,3 and 4 (Loop Input) | TB2 Terminals 12, 13 and 14 (Optional Backlight input) | TB1 Terminals 1, 2, 3 and 4 (loop output) connected in series with TB2 Terminals 12 and 13 (loop powered backlight) |
|--|---|--|
| $U_i = 30 \text{ V}$ | $U_i = 30 \text{ V}$ | $U_i = 30 \text{ V}$ |
| $I_i = 200 \text{ mA}$ | $I_i = 200 \text{ mA}$ | $I_i = 200 \text{ mA}$ |
| $P_i = 0.84 \text{ W}$ | $P_i = 0.84 \text{ W}$ | $P_i = 0.84 \text{ W}$ |
| $C_i = 2.2 \text{ nF}$ | $C_i = 11 \text{ nF}$ | $C_i = 2 \text{ nF}$ |
| $L_i = 0.008 \text{ mH (0.01 mH)}$ | $L_i = 0$ | $L_i = 0.008 \text{ mH (0.01 mH)}$ |
| $C_o = 63.8 \text{ nF}$ | $C_o = 55 \text{ nF}$ | $C_o = 64 \text{ nF}$ |
| $L_o = 0.79 \text{ mH}$ | $L_o = 0.8 \text{ mH}$ | $L_o = 0.79 \text{ mH}$ |

TB3 Terminals 5, 6 and 7
(optional remote encoder)

$U_i = 30 \text{ V}$
 $U_o = 5.0 \text{ V}$
 $I_i = 200 \text{ mA}$
 $I_o = 1.0 \text{ mA}$
 $P_i = 0.84 \text{ W}$
 $P_o = 1.25 \text{ mW}$

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$$C_i = 0$$

$$L_i = 0$$

$$C_o = 66 \text{ nF}$$

$$L_o = 0.8 \text{ mH}$$

12. Report Number

Intertek Report: 100957553 Issue 1, dated May 2013 and G102507332 Issue 1, dated April 2016.

13. Special Conditions of Certification

(a). Special Conditions of Use

- For use in Group IIIC conductive dust atmospheres, the Set Point Station shall be mounted such that the instrument terminals have at least IP6X protection.

(b). Conditions of Manufacture

- No Conditions of Manufacture.

14. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report: 104629389CHE-015, dated 21st June 2021.

15. Drawings and Documents

| Title: | Drawing No.: | Rev. Level: | Date: |
|--|---------------|-------------|-------------|
| ATEX & IECEx Certification Information for BA407E & BA408E 4 Digit Set Point Stations, BA427E, BA428E 5 Digit Set Point Stations (19 sheets) | CI400-01 | 2 | January '16 |
| UKCA Certification Information for BA407E & 408E 4 Digit Setpoint Stations BA427E & BA428E 5 Digit Setpoint Stations | CI400-01-UKCA | 1 | May 21 |

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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