



EC-TYPE EXAMINATION CERTIFICATE

Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

EC-Type Examination Certificate Number: ITS15ATEX28365X

Equipment or Protective System: BA407E-SS and BA427E-SS 4 and 5 Digit Rugged Set Point Stations

Manufacturer: BEKA associates Ltd

Address: Old Charlton Road, Hitchin SG5 2DA, UK

This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

Intertek Testing and Certification Limited, notified body number 0359 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems 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 Ref G102225176 Issue 1 dated November 2015.

Compliance with the Essential Health and Safety Requirements has been assured by compliance with standards EN 60079-0:2012, EN 60079-11:2012 and EN 60079-26:2007 except in respect of those requirements referred to at item 16 of the Schedule.

If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

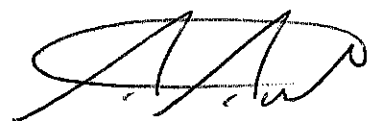
This EC Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

The marking of the equipment or protective system shall include the following:-

 II 1G Ex ia IIC T5 Ga

 II 1D Ex ia IIIC T80°C Da IP20

$-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$



A T Austin
Certification Officer
11th November 2015

Intertek Testing & Certification Limited
Intertek House, Cleeve Road, Leatherhead, Surrey, KT22 7SB
Tel: +44 (0)1372 370900 Fax: +44 (0)1372 370977
www.intertek.com

Registered No 3272281 Registered Office: Academy Place, 1-9 Brook Street, Brentwood, Essex, CM14 5NQ.

This certificate may only be reproduced in its entirety and without any change, schedule included and is subject to Intertek Testing and Certification's Conditions for Granting Certification.

SCHEDULE

EC-TYPE EXAMINATION CERTIFICATE NUMBER ITS15ATEX28365X

13. Description of Equipment or Protective System

The BA407E-SS and BA427E-SS 4 and 5 Digit Rugged Set Point Stations are panel mounting instruments that allow an operator to manually adjust the current flowing in a 4-20 mA loop. They incorporate a digital and bargraph display to represent current in engineering units. The 4 or 5 Digit Set Point Stations may optionally be fitted with a Backlight board.

The 4 and 5 Digit Set Point Stations models are listed below:

BA407E-SS – 4 Digit Set Point Station

BA427E-SS – 5 Digit Set Point Station

The 4 and 5 Digit Rugged Set Point Stations comprise a main board, a display board and an optional Backlight board, certified under EC-Type Examination certificate no. ITS12ATEX27718X and housed within a stainless steel robust 105x60mm panel enclosure, certified under EC-Type Examination certificate no. ITS14ATEX17967U. The enclosure provides a degree of protection of at least IP66 for the front of the panel and minimum of IP20 for the back of the panel. The front of the stainless steel enclosure complies with requirements for Ex e, Ex nA, Ex p and Ex t type of protection.

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)

$U_i = 30 \text{ V}$

$I_i = 200 \text{ mA}$

$P_i = 0.84 \text{ W}$

$C_i = 2.2 \text{ nF}$

$L_i = 0.008 \text{ mH (0.01 mH)}$

$C_o = 63.8 \text{ nF}$

$L_o = 0.79 \text{ mH}$

TB2 Terminals 12, 13 and 14 (optional Backlight input)

$U_i = 30 \text{ V}$

$I_i = 200 \text{ mA}$

$P_i = 0.84 \text{ W}$

$C_i = 11 \text{ nF}$

$L_i = 0$

$C_o = 55 \text{ nF}$

$L_o = 0.8 \text{ mH}$

TB1 Terminals 1, 2, 3 and 4 (loop output) connected in series with TB2 Terminals 12 and 13 (loop powered backlight)

$U_i = 30 \text{ V}$

$I_i = 200 \text{ mA}$

$P_i = 0.84 \text{ W}$

$C_i = 2 \text{ nF}$

$L_i = 0.008 \text{ mH (0.01 mH)}$

$C_o = 64 \text{ nF}$

$L_o = 0.79 \text{ mH}$

Intertek Testing & Certification Limited
Intertek House, Cleeve Road, Leatherhead, Surrey, KT22 7SB
Tel: +44 (0)1372 370900 Fax: +44 (0)1372 370977

www.intertek.com

Registered No 3272281 Registered Office: Academy Place, 1-9 Brook Street, Brentwood, Essex, CM14 5NQ.

This Certificate is the property of Intertek Testing and Certification Ltd and is subject to Intertek Testing and Certification's Conditions for Granting Certification.



SCHEDULE

EC-TYPE EXAMINATION CERTIFICATE NUMBER ITS15ATEX28365X

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

$U_i = 30\text{ V}$

$U_o = 5.0\text{ V}$

$I_i = 200\text{ mA}$

$I_o = 1.0\text{ mA}$

$P_i = 0.84\text{ W}$

$P_o = 1.25\text{ mW}$

$C_i = 0$

$L_i = 0$

$C_o = 66\text{ nF}$

$L_o = 0.8\text{ mH}$

14. Report Number

Intertek Report Ref G102225176 Issue 1 dated November 2015.

15. Conditions of Certification

(a). Special Conditions for safe use

- For use in Group IIIC explosive dust atmospheres the Set Point Station units shall be mounted such that the instrument terminals are protected by at least IP6X approved enclosure.
- When installed in accordance with manufacturer instructions front of the Robust Set Point Station enclosure provide minimum degree of protection by enclosures of IP66.
- For installation in Ex e, Ex nA, Ex p or Ex t panel enclosure, all connections must be supplied via appropriately rated and approved Zener barrier or galvanic isolator.
- When installed purely as intrinsically safe equipment, the ambient temperature range of the BA407E-SS and BA427E-SS is: $-40^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$.

(b). Conditions of Manufacture

- None.

Intertek Testing & Certification Limited
Intertek House, Cleeve Road, Leatherhead, Surrey, KT22 7SB
Tel: +44 (0)1372 370900 Fax: +44 (0)1372 370977

www.intertek.com

Registered No 3272281 Registered Office: Academy Place, 1-9 Brook Street, Brentwood, Essex, CM14 5NQ.

This Certificate is the property of Intertek Testing and Certification Ltd and is subject to Intertek Testing and Certification's Conditions for Granting Certification.



SCHEDULE

EC-TYPE EXAMINATION CERTIFICATE NUMBER ITS15ATEX28365X

16. Essential Health and Safety Requirements (EHSR's)

The relevant EHSR's have been identified and assessed in Intertek Report Ref G102225176 Issue 1 dated November 2015.

17. Drawings and Documents

Title	Drawing No.:	Rev. Level:	Date:
ATEX & IECEx Ex i Certification Information for BA407E-SS & BA427E-SS Rugged Set Point Stations (3 sheets)	CI400-06	1	03/11/2015

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.

Intertek Testing & Certification Limited
Intertek House, Cleeve Road, Leatherhead, Surrey, KT22 7SB
Tel: + 44 (0)1372 370900 Fax: +44 (0)1372 370977

www.intertek.com

Registered No 3272281 Registered Office: Academy Place, 1-9 Brook Street, Brentwood, Essex, CM14 5NQ.

This Certificate is the property of Intertek Testing and Certification Ltd and is subject to Intertek Testing and Certification's Conditions for Granting Certification.