



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: Issue No.:

Status:

Date of Issue: **2015-11-23** Page 1 of 4

Applicant: **BEKA associates Ltd**
Old Charlton Road
Hitchin SG5 2DA
United Kingdom

Electrical Apparatus: **4 and 5 Digit Rugged Set Point Stations BA407E-SS and BA427E-SS**
Optional accessory:

Type of Protection: **Intrinsic safety 'i'**

Marking: BEKA associates Ltd
IECEX ITS 15.0056X
Ex ia IIC T5 Ga
Ex ia IIIC T5 Da IP20
-40°C ≤ Ta ≤ +60°C

Approved for issue on behalf of the IECEx Certification Body: A T Austin

Position: Certification Officer

Signature: 
(for printed version)

Date: 2015-11-23

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:
Intertek Testing & Certification Limited
ITS House, Cleeve Road,
Leatherhead,
Surrey, KT22 7SB
United Kingdom





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Manufacturer: **BEKA associates Ltd**
Old Chariton Road
Hitchin SG5 2DA
United Kingdom

Additional Manufacturing location
(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-26 : 2006 Edition: 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
GB/ITS/ExTR15.0051/00

Quality Assessment Report:
GB/ITS/QAR06.0002/04



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

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, all certified under IECEx certificate no. IECEx ITS12.0084X and housed within a stainless steel robust 105x60mm panel enclosure, certified under IECEx certificate no. IECEx ITS14.0007U. 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.

CONDITIONS OF CERTIFICATION: YES as shown below:

- 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: $-40^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$.



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EQUIPMENT(continued):

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)

$U_i = 30 \text{ V}$

$I_i = 200 \text{ mA}$

$P_i = 0.84 \text{ W}$

$C_i = 2 \text{ nF}$

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

$C_o = 64 \text{ nF}$

$L_o = 0.79 \text{ mH}$

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

$U_i = 30 \text{ V}$

$U_o = 5.0 \text{ V}$

$I_i = 200 \text{ mA}$

$I_o = 1.0 \text{ mA}$

$P_i = 0.84 \text{ W}$

$P_o = 1.25 \text{ mW}$

$C_i = 0$

$L_i = 0$

$C_o = 66 \text{ nF}$

$L_o = 0.8 \text{ mH}$