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.:	IECEx ITS 06.0013X issue No.:3	Certificate history: Issue No. 3 (2015-10-12) Issue No. 2 (2009-11-3) Issue No. 1 (2008-7-23) Issue No. 0 (2006-8-10)
Status:	Current	
Date of Issue:	2015-10-12 Page 1 of 4	

Applicant:
BEKA Associates Limited
Old Charlton Road
Hitchin
Herts
SG5 2DA
United Kingdom

Electrical Apparatus: **BA418CF Fieldbus Indicator**
Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking:
IECEx ITS 06.0013X
Ex ia IIC T4 Ga
Ex ic IIC T4 Gc
FISCO Field Device Ex ia IIC T4
Ta = -40°C to 70°C

Approved for issue on behalf of the IECEx Certification Body: A M Smart

Position: Certification Officer

Signature:
(for printed version)

Date: 2015-10-12

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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Date of Issue: **2015-10-12** Issue No.: **3**

Manufacturer: **BEKA Associates Limited**
Old Charlton Road
Hitchin
Herts
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"

*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/ExTR06.0008/00 GB/ITS/ExTR08.0028/00 GB/ITS/ExTR08.0028/01
GB/ITS/ExTR08.0028/02

Quality Assessment Report:

GB/ITS/QAR06.0002/00 GB/ITS/QAR06.0002/01 GB/ITS/QAR06.0002/04

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Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

BA418CF Fieldbus Indicator is a panel mounting equipment designed to display one fieldbus process variable on a 5 digit LCD and 31 sgment analogue bar graph.

The BA418CF comprises a panel terminal board and a main display board, all housed within a metallic enclosure having a magnesium content less than 6% by weight. Part of the housing, bazel and keypads, or blanks is made of plastic. The display window is of polycarbonate.

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 parameters are as follows:
U_i = 17.5 V, I_i = 380 mA and P_i = 5.32 W (FISCO) OR,
U_i = 22 V, I_i = 250 mA and P_i = 1.2 W (Non-FISCO) OR,
Ui = 32V, Ii = 125mA and Pi = 1W (For "ic" only)
The equivalent parameters are:
C_i = 0 C_o = 165 nF
L_i = 8 uH L_o = 0.15 mH

CONDITIONS OF CERTIFICATION: YES as shown below:

When installed in a Zone 0 potentially explosive atmosphere requiring EPL Ga apparatus, the instrument shall be installed such that even in the event of rare incidents, an ignition source due to impact or friction between the aluminum enclosure at the rear of the instrument mounting panel and iron/steel is excluded.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Variation 1, to permit the following changes:

- Addition of C125, D118, D119, IC110 and additional connectors to two optional keypads and an optional switch support board, PC158, on the main display board, PC144 .

- Deletion of C114, D112 and D113 on the main display board, PC144.

- Change to the aggregate capacitance values on the main display board, PC144

- Addition of two test points and revised fuse footprint on the terminal board, PC147

- Change to the certification label details to include a '+' before the higher ambient temperature.

- Changes to the printed circuit board track layouts on PC144 and PC147 to reflect the above changes.

- Changes to the Certification Information drawing, CI410-01, to reflect the above changes.

The above changes do not impair intrinsic safety. The entity parameters are unchanged.

VARIATION 2 (GB/ITS/ExTR06.0028/01; Intertek Project No 09043172)

To permit the following changes:

1. Change in the value of the resistor R119. The change does not impair intrinsic safety and the temperature class of the equipment is unaffected.

2. Addition of FISCO Field Device input parameters:
U_i = 17.5 V
I_i = 380 mA
P_i = 5.32 W

3. Review of the BA418CF Fieldbus Indicator to the latest appropriate standards listed above and the markings have been updated accordingly. The original standards used for the assessment and tests are listed in Issues 1 and 2. Any differences do not affect the equipment and the entity parameters are unchanged.

4. BA418CF may alternatively be identified as a BA448CF Fieldbus Indicator, or a BA448CL Fieldbus Listener, or a BA428CF Fieldbus Set-Point Station, or a BA438CF (product name yet to be defined). The above alternate models are due to changes in the firmware.

5. Rewording of the Conditions of Certification

VARIATION 3 (GB/ITS/ExTR06.0028/02; Intertek Project No G102060830, dated September 2015)

To permit the following changes:
1.) Re-assessments of the Field bus Indicators to the requirements of the latest standards IEC 60079-0: 2011 and IEC 60079-11:2011.
2.) Addition of the entity parameters; Ui = 32V, Ii = 125mA and Pi = 1W when located in Zone 2 with level of protection "ic".
3.) Changes to appropriate documents to reflect the above changes.