



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 06.0012 issue No.: 2
Status: Current
Date of Issue: 2009-10-29 Page 1 of 4

Certificate history:
Issue No. 2 (2009-10-29)
Issue No. 1 (2008-7-23)
Issue No. 0 (2006-8-10)

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

Electrical Apparatus: **BA 414DF Fieldbus Indicator**
Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **IECEX ITS 06.0012**
Ex ia IIC T4 Ga
FISCO Field Device
Ex ia IIC T4
Ta = -40°C to 70°C
Ex ia IIIC T100°C Da IP66
Ta = -20°C to 60°C

Approved for issue on behalf of the IECEx
Certification Body:

A T Austin

Position:

Certification Officer

Signature:
(for printed version)

Date:

2009-11-11

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 Limited**
Old Charlton Road
Hitchin
Herts
SG5 2DA
United Kingdom

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 : 2007-10 Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-11 : 2006 Edition: 5	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
IEC 60079-27 : 2008 Edition: 2.0	Explosive atmospheres - Part 27: Fieldbus intrinsically safe concept (FISCO)
IEC 61241-11 : 2005 Edition: 1	Electrical apparatus for use in the presence of combustible dusts - Part 11: Protection by intrinsic safety 'ID'

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/ExTR06.0007/00
GB/ITS/ExTR06.0007/01
GB/ITS/ExTR08.0028/00

Quality Assessment Report:

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



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

BA414DF Fieldbus Indicator is a field mounting equipment designed to display one fieldbus process variable on a 5 digit LCD and 31 segment analogue bar graph.

The BA414DF comprises a field terminal board and a main display board, all housed within a stainless steel enclosure or a plastic enclosure. In each case the enclosure is fitted with a glass window. The enclosure provides a Degree of Protection of at least IP20.

The BA414DF field terminal board and a main display board may alternatively be housed within a plastic enclosure fitted with a polycarbonate window or a toughened glass window. The enclosure provides a Degree of Protection of IP66.

The BA414DF is designed and has been assessed to be suitable for use in a FISCO system in accordance with IEC 60079-27:2005.

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:

$U_i = 22 \text{ V}$

$i_i = 250 \text{ mA}$

$P_i = 1.2 \text{ W}$

The equivalent parameters are:

$C_i = 0$ $C_o = 165 \text{ nF}$

$L_i = 8 \text{ uH}$ $L_o = 0.15 \text{ mH}$

CONDITIONS OF CERTIFICATION: NO



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

VARIATION 2 (GB/ITS/ExTR06.0007/01; Intertek Project No 09048172)

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:

$U_i = 17.5 \text{ V}$

$I_i = 380 \text{ mA}$

$P_i = 5.32 \text{ W}$

3. Review of the BA414DF 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. BA414DF may alternatively be identified as a BA444DF Fieldbus Indicator, or a BA444DL Fieldbus Listener, or a BA424DF Fieldbus Set-Point Station, or a BA434DF (product name yet to be defined). The above alternate models are due to changes in the firmware.