



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 06.0015 issue No.: 2 Certificate history:
Issue No. 2 (2009-11-4)
Issue No. 1 (2008-7-23)
Issue No. 0 (2006-8-10)

Status: Current

Date of Issue: 2009-11-04 Page 1 of 4

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

Electrical Apparatus: **BA414NDF Fieldbus Indicator**
Optional accessory:

Type of Protection: n

Marking: IECEx ITS 06.0015
Ex nL IIC T4
FNICO Field Device
Ex nL IIC T4
Ex tD IIIC T100°C Dc 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 60079-15 : 2005-03 Edition: 3	Electrical apparatus for explosive gas atmospheres Part 15: Construction, test and Marking of Type of Protection "n" electrical apparatus
IEC 60079-27 : 2008 Edition: 2.0	Explosive atmospheres - Part 27: Fieldbus intrinsically safe concept (FISCO)
IEC 61241-1 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

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/ExTR06.0011/00
GB/ITS/ExTR08.0029/00
GB/ITS/ExTR08.0029/01

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:

BA414NDF is a field mounting equipment designed to display one fieldbus process variable on a 5 digit LCD and 31 segment analogue bar graph.

The BA414NDF comprises a field terminal board and a main display board, all housed within a plastic enclosure fitted with a polycarbonate window or a toughened glass window.

The enclosure provides a degree of protection of IP66 for gas and dust.

The BA414NDF is designed and has been assessed to be suitable for use in a FNICO system in accordance with IEC 60079-27:2005.

External cable entry arrangements must maintain a degree of protection IP66 and satisfy the impact energy of 7J.

The maximum input parameters are as follows:

$$U_i = 36 \text{ V}$$

$$I_i = 250 \text{ mA}$$

$$P_i = 1.2 \text{ W}$$

The equivalent parameters are:

$$C_i = 0 \quad C_o = 125 \text{ nF}$$

$$L_i = 8 \text{ uH} \quad L_o = 0.99 \text{ mH}$$

CONDITIONS OF CERTIFICATION: NO



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

VARIAION 2 (GB/ITS/ExTR08.0029/01; Intertek Project No 09043172)

To permit the following changes:

1. Change in the value of the resistor R119. The change does not impair type of protection "n" and the temperature class of the equipment is unaffected.

2. Addition of FNICO 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 BA414NDF 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. BA414NDF may alternatively be identified as a BA444NDF Fieldbus Indicator, or a BA444NDL Fieldbus Listener, or a BA424NDF Fieldbus Set-Point Station, or a BA434NDF (product name yet to be defined). The above alternate models are due to changes in the firmware.

5. Upper ambient temperature of BA414NDF changed from 70°C to 60°C when used in explosive gas atmospheres.