



## 1. TYPE EXAMINATION CERTIFICATE

### 2. Equipment or Protective System Intended for use in Potentially Explosive Atmospheres

3. Type Examination Certificate Number: **ITS06ATEX45315**

4. Equipment or Protective System: **BA414NDF FIELDBUS DISPLAY**

5. Manufacturer: **BEKA ASSOCIATES LIMITED**

6. Address: **Hitchin, Herts, SG5 2DA**

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

8. Intertek Testing and Certification Limited 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 94/9/EC of 23 March 1994.

The examination and test results are recorded in confidential Report Number: Intertek Report Ref 06020618A Issue 1 dated October 2006.

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-15:2005 except in respect of those requirements referred to at item 18 of the Schedule.

10. 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.

11. This 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.

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



II 3 G, EEx nL IIC T4 (Tamb = 70°C)  
II 3 GD, EEx nL IIC T4 (Tamb = 60°C)

**Intertek Testing & Certification Limited**  
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Registered No 3272281 Registered Office: 25 Savile Row London W1X 1AA

**A T Austin**  
Deputy Certification Manager  
13 October 2006

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

# Intertek Industrial

## 13 Schedule

14 TYPE EXAMINATION CERTIFICATE NUMBER ITS06ATEX45315

## 15 DESCRIPTION OF EQUIPMENT OR PROTECTIVE SYSTEM

BA414NDF 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 BA414NDF comprises a field terminal board and a main display board, all housed within a plastic enclosure or 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 EN 60079-27:2006

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:

$C_i = 0$   
 $L_i = 8 \mu\text{H}$

## 16 REPORT NUMBER

Intertek Report Ref 06020618A Issue 1 dated October 2006

## 17 SPECIAL CONDITIONS FOR SAFE USE

None

## 18 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS (EHSR'S)

The essential health and safety requirements not covered by reference to the standards identified in Section 9 above have been addressed in Intertek Report Reference 06020618

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# Intertek Industrial

13 Schedule

14 TYPE EXAMINATION CERTIFICATE NUMBER ITS06ATEX45315

19 DRAWINGS

Number	Issue	Date	Description
CI410-01, sheets 4* to 8*, 11*	1	Mar 06	BA414DF Certification Information
CI410-06, sheets 1 to 3	1	28/03/2006	BA414NDF Certification Information

Drawings marked \* are common to and held with EC-Type Examination Certificate No ITS06ATEX25313

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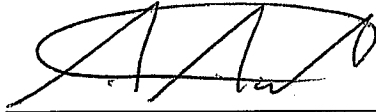
**Intertek**



1. **SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**
2. **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**
3. Supplementary Type Examination Certificate Number: **ITS06ATEX45315/1**
4. Equipment or Protective System: **BA414NDF FIELDBUS DISPLAY**
5. Manufacturer: **BEKA ASSOCIATES LIMITED**
6. Address: **OLD CHARLTON ROAD, HITCHIN, HERTS, SG5 2DA**
7. This supplementary certificate extends Type Examination Certificate Number ITS06ATEX45315 to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said Certificate but having variations specified in the Schedule attached to this certificate and the documents therein referred to.

Intertek Report Ref 08033580a, dated July 2008

This Supplementary Certificate shall be held with the original Certificate



**A T Austin**  
**Deputy Certification Manager**  
**06 August 2008**

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## Schedule

SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE NUMBER ITS06ATEX45315/1

### VARIATION ONE

#### Description of the Variation to the Equipment or Protective System.

To permit the following changes:

- 1.1 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 .
- 1.2 Deletion of C114, D112 and D113 on the main display board, PC144.
- 1.3 Change to the aggregate capacitance values on the main display board, PC144.
- 1.4 Addition of terminal 4, two test points and a revised fuse footprint on the terminal board, PC146.
- 1.5 Changes to the printed circuit board track layouts on PC144 and PC146 to reflect the above changes.
- 1.6 Changes to the Certification Information drawing, CI410-06, to reflect the above changes.

#### Report No.

Intertek Report Ref 08033580a, dated July 2008

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The Intertek logo consists of the word "Intertek" in a bold, white, sans-serif font, centered within a solid black rounded rectangular background.

## Schedule

**SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE NUMBER ITS06ATEX45315/1**

### **SPECIAL CONDITIONS FOR SAFE USE**

None

### **Essential Health and Safety Requirements**

See original certificate

### **DRAWINGS**

<b>Number</b>	<b>Sheets</b>	<b>Issue</b>	<b>Date</b>	<b>Description</b>
CI410-06	1 to 3	2	May 08	BA414NDF Certification Information

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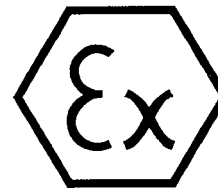
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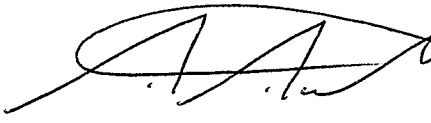
**Intertek**



1. **SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**
2. **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**
3. Supplementary EC-Type Examination Certificate Number: **ITS06ATEX45315/2**
4. Equipment or Protective System: **BA414NDF FIELDBUS INDICATOR**
5. Manufacturer: **BEKA ASSOCIATES LIMITED**
6. Address: **OLD CHARLTON ROAD, HITCHIN, HERTS, SG5 2DA**
7. This supplementary certificate extends Type Examination Certificate Number ITS06ATEX45315 to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said Certificate but having variations specified in the Schedule attached to this certificate and the documents therein referred to.

Intertek Report Ref 09043172B, dated October 2009

This Supplementary Certificate shall be held with the original Certificate



**A T Austin**  
**Certification Officer**  
**4 November 2009**

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## Schedule

SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE NUMBER ITS06ATEX45315/2

### VARIATION TWO

#### Description of the Variation to the Equipment or Protective System.

To permit the following changes:

- 1.1 Title of the equipment changed from BA414NDF Fieldbus Display to BA414NDF Fieldbus Indicator.
- 1.2 Value of R119 reduced from 209 $\Omega$  to 171 $\Omega$ .
- 1.3 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.
- 1.4 Addition of FNICO Field Device input parameters:  
 $U_i = 17.5 \text{ V}$   
 $I_i = 380 \text{ mA}$   
 $P_i = 5.32 \text{ W}$
- 1.5 Upper ambient temperature of BA414NDF changed from 70°C to 60°C when used in explosive gas atmospheres.

The above changes do not impair Type of protection "n" and the temperature class of the equipment is unaffected. The entity parameters are unchanged.

### VARIATION THREE

Assessment of the BA414NDF Fieldbus Indicator to the standards listed below.

- EN 60079-0:2006
- EN 60079-27:2008
- EN 61241-0:2006
- EN 61241-1:2004

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## Schedule

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The equipment coding is:



II 3G, Ex nL IIC T4  
FNICO Field Device Ex nL IIC T4  
II 3D, Ex tD A22 IP66 T100°C  
Tamb = -20°C to +60°C

### Report No.

Intertek Report Ref 09043172B, dated October 2009.

### SPECIAL CONDITIONS FOR SAFE USE

None

### Essential Health and Safety Requirements

See original certificate

### DRAWINGS

Number	Sheets	Issue	Date	Description
CI410-06	1 to 3	3	08/2009	BA414NDF Certification Information

*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.*

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