



Intertek Industrial

1. EC-TYPE EXAMINATION CERTIFICATE
2. **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**
3. EC-Type Examination Certificate Number: **ITS06ATEX25313**
4. Equipment or Protective System: **BA414DF 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. The Intertek Testing and Certification Limited, notified body number 0359 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, 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.

The examination and test results are recorded in confidential Report Number:
Intertek Report Ref 06020618, dated August 2006.
9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0: 2004, EN 50020:2002, EN 60079-26:2004, EN 60079-27:2006 and EN 50281-1-1:1998,
except in respect of those requirements listed 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 EC 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 1 G, EEx ia IIC T4 (Tamb = -40°C to 70°C)
II 1 GD, EEx ia IIC T4 (Tamb = -20°C to 60°C), T100°C, IP66

Intertek Testing & Certification Limited
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P. Browning
P Browning
Certification Manager
6 September 2006

Intertek Industrial

13. **Schedule**
14. EC-TYPE EXAMINATION CERTIFICATE NUMBER ITS06ATEX25313
15. Description of Equipment or Protective System.

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 for gas.

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 for dust.

The BA414DF is designed and has been assessed to be suitable for use in a FISCO system in accordance with EN 60079-27:2006

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:

$$C_i = 0$$
$$L_i = 8 \mu\text{H}$$
$$C_o = 165 \text{ nF}$$
$$L_o = 0.15 \text{ mH}$$

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Intertek Industrial

13. Schedule

14. EC-TYPE EXAMINATION CERTIFICATE NUMBER ITS06ATEX25313

16. Report No. Intertek Report Ref 06020618, dated August 2006

17. SPECIAL CONDITIONS FOR SAFE USE

None

18. Essential Health and Safety Requirements

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

19. **DRAWINGS**

Number	Issue	Date	Description
CI410-01 sheets 1* to 9*, 11, 14 & 16*	1	Mar 06	BA414DF Certification Information

Drawings marked * are common to EC-Type Examination Certificate Nos
ITS06ATEX25314 and ITS06ATEX25324

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1. **SUPPLEMENTARY EC-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: **ITS06ATEX25313/1**
4. Equipment or Protective System: **BA414DF FIELDBUS DISPLAY**
5. Manufacturer: **BEKA ASSOCIATES LIMITED**
6. Address: **OLD CHARLTON ROAD, HITCHIN, HERTS, SG5 2DA**
7. This supplementary certificate extends EC-Type Examination Certificate Number ITS06ATEX25313 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 08033580, dated July 2008

This Supplementary Certificate shall be held with the original Certificate



A M Smart
Deputy Certification Officer
18 July 2008

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The Intertek logo is a black rounded rectangle with the word "Intertek" in white, bold, sans-serif font.

Schedule

**SUPPLEMENTARY EC-TYPE EXAMINATION CERTIFICATE NUMBER
ITS06ATEX25313/1**

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 Change to the certification label details to include a '+' before the higher ambient temperature.
- 1.6 Changes to the printed circuit board track layouts on PC144 and PC146 to reflect the above changes.
- 1.7 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.

Report No.

Intertek Report Ref 08033580, dated July 2008

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Schedule

SUPPLEMENTARY EC-TYPE EXAMINATION CERTIFICATE NUMBER
ITS06ATEX25313/1

SPECIAL CONDITIONS FOR SAFE USE

None

Essential Health and Safety Requirements

See original certificate

DRAWINGS

Number	Sheets	Issue	Date	Description
CI410-01	1 to 17	2	May 08	BA414DF, BA414CF & BA418CF Certification Information

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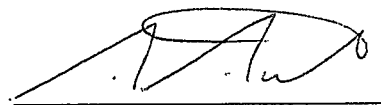
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1. **SUPPLEMENTARY EC-TYPE EXAMINATION CERTIFICATE**
2. **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**
3. Supplementary EC-Type Examination Certificate Number: **ITS06ATEX25313/2**
4. Equipment or Protective System: **BA414DF FIELDBUS DISPLAY**
5. Manufacturer: **BEKA ASSOCIATES LIMITED**
6. Address: **OLD CHARLTON ROAD, HITCHIN, HERTS, SG5 2DA**
7. This supplementary certificate extends EC-Type Examination Certificate Number ITS06ATEX25313 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 09043172A, 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 EC-TYPE EXAMINATION CERTIFICATE NUMBER
ITS06ATEX25313/2

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 BA414DF Fieldbus Display to BA414DF Fieldbus Indicator.
- 1.2 Value of R119 reduced from 209 Ω to 171 Ω .
- 1.3 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.
- 1.4 Addition of FISCO Field Device input parameters:
U_i = 17.5 V
I_i = 380 mA
P_i = 5.32 W

The above changes do not impair intrinsic safety and the temperature class of the equipment is unaffected. The entity parameters are unchanged.

VARIATION THREE

Assessment of the BA414DF Fieldbus Display to the standards listed below.

- EN 60079-0:2006
- EN 60079-11:2007
- EN 60079-26:2007
- EN 60079-27:2008
- EN 61241-0:2006
- EN 61241-11:2006

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Schedule

SUPPLEMENTARY EC-TYPE EXAMINATION CERTIFICATE NUMBER ITS06ATEX25313/2

The equipment coding is:



II 1 G, Ga Ex ia IIC T4 (Tamb = -40°C to +70°C)
FISCO Field Device Ex ia IIC T4 (Tamb = -40°C to +70°C)
II 1 D, Ex iaD 20 T100°C IP66 (Tamb = -20°C to +60°C)

Report No.

Intertek Report Ref 09043172A, dated October 2009

SPECIAL CONDITIONS FOR SAFE USE

None

Essential Health and Safety Requirements

See original certificate

DRAWINGS

Number	Sheets	Issue	Date	Description
CI410-01	2, 6, 7, & 16	3	Aug 09	BA414CF, BA414DF & BA418CF 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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