

UK-TYPE EXAMINATION CERTIFICATE

Product or Protective Systems Intended for Use in Potentially Explosive Atmospheres

UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

- UK-Type Examination Certificate Number:** ITS21UKEX0083X **Issue 00**
- Product:** BA488CF Fieldbus Display
- Manufacturer:** BEKA Associates Ltd
- Address:** Old Charlton Road, Hitchin, Herts, SG5 2DA, United Kingdom
- This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- Intertek Testing and Certification Limited, Approved Body number 0359, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential report 104629389CHE-007 dated 7th February 2022.
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN IEC 60079-0:2018 and EN 60079-11:2012 except in respect of those requirements referred to within item 14 of the Schedule.
- If the sign “X” is placed after the certificate number, it indicates that the product is subject to the special conditions of use specified in the Schedule to this certificate.
- This UK-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- The marking of the product shall include the following:



II 1 G Ex ia IIC T4 Ga

-40°C ≤ Ta ≤ +60°C

Certification Officer:



M Newman

Date:

3rd March 2022

SCHEDULE:

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11. Description of Product or Protective System

BA488CF Fieldbus Display is a panel mounting equipment designed to display up to eight fieldbus process variables in the hazardous area. The BA488CF incorporates six push buttons. The BA488CF fieldbus Display can be supplied with six optional alarm outputs that may be linked to any of the displayed fieldbus variables. The BA488CF is powered by fieldbus.

The BA488CF comprises a Fieldbus Interface CI-PC134, EX-Type Examination Certificate Number ITS04ATEX22023U, two Alarm Board 01's EC-Type Examination Certificate Number ITS02ATEX2044U and a CPU and Display, EC-Type Examination Certificate ITS02ATEX2045U, all housed with a metallic enclosure.

The enclosure provides a Degree of Protection of at least IP20.

Intrinsically safety is assured by the use of certified components, which provide limitation of voltage, current and power, limitation of capacitance and inductance, and infallible segregation.

The maximum intrinsically safe input and output parameters are as follows:

TB1 terminals 1 and 2

$U_i = 17.5 \text{ V}$

$I_i = 380 \text{ mA}$

$P_i = 5.32 \text{ W}$

The equivalent parameters are:

$C_i = 1 \text{ nF}$

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

Terminals 1 and 2 comply with Intrinsically Safe Concept (FISCO) to the IEC TS 60079-27 standard.

TBA1 terminals A1 & A2, A3 & A4 and TBA2 terminals A5 & A6 (each channel) TBA3 terminals A7 & A8, A9 & A10 and TBA4 terminals A11 & A12 (each channel)

$U_i = 28 \text{ V}$

$U_o = 1.49 \text{ V}$

$I_i = 200 \text{ mA}$

$I_o = 1 \text{ } \mu\text{A}$

$P_i = 0.85 \text{ W}$

$P_o = 3 \text{ } \mu\text{W}$

The equivalent parameters are:

$C_i = 0.04 \text{ } \mu\text{F}$

$L_i = 0.02 \text{ mH}$

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For intrinsic safety considerations, under fault conditions the voltage, current and power at the above terminals do not exceed those specified in Clause 5.7 of EN 60079-11:2012. The equivalent capacitance and inductance are the result of r.f suppression components directly connected to the apparatus terminals.

TBS terminals S1 to S7

$U_o = 14.7 \text{ V}$

$I_o = 146.7 \text{ mA}$

$P_o = 0.58 \text{ W}$

The equivalent parameters are:

$C_i = 30 \mu\text{F}$ at 6 V

$C_i = 0.54 \mu\text{F}$ at 14.7 V

$L_i = 0.3 \text{ mH}$

12. Report Number

Intertek Report: 104629389CHE-007 dated 7th February 2022.

13. Special Conditions of Certification

(a). Special Conditions of Use

- When installed in the Zone 0 potentially explosive atmosphere, the BA488CF Fieldbus Display shall be installed such that even in the event of rare incidents, ignition source due to impact or friction between the aluminium enclosure of the instrument and iron/steel is excluded.

(b). Conditions of Manufacture

- None.

14. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report: 104629389CHE-007 dated 7th February 2022

15. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
Certification information for BA484DF & BA488CF Fieldbus Display (Sheets 1, 2, 3 & 4)	CI480-11	3	Oct 11
UKCA Certification Information for BA484DF & BA488CF Fieldbus Display (Bus Powered variant)	CI480-11-UKCA	1	May 21