

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:** ITS21UKEX0079X **Issue 00**
- Product:** BA488C Serial Text 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 02007502 dated December 2002, 10050420 dated January 2016 and 104629389CHE-003 dated 15 September 2021.
- 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 T5 Ga
-40°C ≤ Ta ≤ +60°C

Certification Officer:  **Date:** 10 November 2021
M Newman

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11. Description of Product or Protective System

BA488C Serial Text Display is a panel mounting equipment designed to display text and simple graphics in the hazardous area. The BA488C incorporates four push-buttons and two solid state outputs to form an operator interface for simple machine and process control applications.

The BA488C comprises a 5051 Power Supply & Communications Board, EC-Type Examination Certificate Number ITS02ATEX2043U, an Alarm Board 01, EC-Type Examination Certificate Number ITS02ATEX2044U and a CPU and Display, EC-Type Examination Certificate Number ITS02ATEX2045U, all housed within a metallic enclosure.

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

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

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

TB1 terminals 1 and 2

$U_i = 25V$

$I_i = 108 \text{ mA}$

$P_i = 0.58W$

The equivalent parameters are:

$C_i = 0.01 \mu F$

$L_i = 0.02 \text{ mH}$

TB1 terminals 4 and 2

$U_i = 14 V$

$I_i = 108 \text{ mA}$

$P_i = 0.45 W$

The equivalent parameters are:

$C_i = 0$

$L_i = 0$

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TB1 terminals 1, 2, 5 and 6

$U_i = 20 \text{ V}$

$I_i = 139 \text{ mA}$

$P_i = 0.46 \text{ W}$

The equivalent parameters are:

$C_i = 0.01 \mu\text{F}$

$L_i = 0.02 \text{ mH}$

TBS terminals S1 to S7

$U_o = 14.7 \text{ V}$

$I_o = 99 \text{ mA}$

$P_o = 0.6 \text{ W}$

The equivalent parameters are:

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

$C_i = 0.4 \mu\text{F}$ at 14.7V

$L_i = 0.3 \text{ mH}$

TBA terminals A1 & A2, A3 & A4 (each Alarm channel)

$U_i = 28 \text{ V}$

$U_O = 1.49 \text{ V}$

$I_i = 200 \text{ mA}$

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

$P_i = 0.85 \text{ W}$

$P_O = 3 \mu\text{w}$

The equivalent parameters are:

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

$L_i = 0.02\text{mH}$

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.

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12. Report Number

Intertek Report: 104629389CHE-003 dated 15 September 2021.

13. Special Conditions of Certification

(a). Special Conditions of Use

- When installed in the Zone 0 potentially explosive atmosphere, the BA488C Serial Text 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

- No Conditions of Manufacture

14. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report: 104629389CHE-003 dated 15 September 2021.

15. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
Certification information for BA386 LED beacon (Sheets 1-4)	CI480-01	3	Oct. 11
UKCA Certification information for BA484D & BA488C Serial Text Display	CI480-01-UKCA	1	May 21

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Intertek Testing & Certification Limited, Cleeve Road, Leatherhead, Surrey, KT22 7SA
Registered No 3272281 Registered Office: Academy Place, 1-9 Brook Street, Brentwood, Essex, CM14 5NQ.