ITS Intertek Testing Services

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: ITS02ATEX2036

4. Equipment or Protective System: BA488C SERIAL TEXT DISPLAY

5. Manufacturer: BEKA ASSOCIATES LIMITED

6. Address: Old Charlton Road, 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 ITS 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:
   ITS Report Ref 02007502, dated December 2002

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
   EN 50014:1997, EN 50020:2002 and EN 50284:1999
   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 of the specified equipment or protective system. Further requirements of this Directive apply to the manufacture and supply of this equipment or protection system.

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

    II 1 G, EEx ia IIC T5 (Tamb= -40°C to 60°C)

R M Adams
Deputy Certification Manager
20 December 2002

ITS Testing & Certification Limited
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This certificate may only be reproduced in its entirety and without any change, schedule included.

13. Schedule

14. EC-TYPE EXAMINATION CERTIFICATE NUMBER ITS02ATEX2036

15. Description of Equipment 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
$U_i = 25V$
$I_i = 108$ mA
$P_i = 0.58W$

The equivalent parameters are:
$C_i = 0.01$ μF
$L_i = 0.02$ mH

TB1 terminals 4 and 2
$U_i = 14$ V
$I_i = 108$ mA
$P_i = 0.45$ W

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13. Schedule

14. EC-TYPE EXAMINATION CERTIFICATE NUMBER ITS02ATEX2036

The equivalent parameters are:
$C_i = 0$
$L_i = 0$

TB1 terminals 1, 2, 5 and 6
$U_i = 20$ V
$I_i = 139$ mA
$P_i = 0.46$ W

The equivalent parameters are:
$C_i = 0.01$ µF
$L_i = 0.02$ mH

TBS terminals S1 to S7
Uo = 14.7 V
Io = 99 mA
Po = 0.6 W

The equivalent parameters are:
$C_i = 30$ µF at 6 V
$C_i = 0.4$ µF at 14.7V
$L_i = 0.3$ mH

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

$U_i = 28$ V	$U_O = 1.49$ V
$I_i = 200$ mA	$I_O = 1$ µA
$P_i = 0.85$ W	$P_O = 3$ µw

The equivalent parameters are:

$C_i = 0.04$ µF
$L_i = 0.02$mH

For intrinsic safety considerations, under fault conditions the voltage, current and power at the above terminals do not exceed those specified in Clause 5.4 of EN 50020: 2002. The equivalent capacitance and inductance are the result of r.f suppression components directly connected to the apparatus terminals.

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ITS Intertek Testing Services

13. Schedule

14. EC-TYPE EXAMINATION CERTIFICATE NUMBER ITS02ATEX2036

16. Report No. ITS Report Ref 02007502.

17. SPECIAL CONDITIONS FOR SAFE USE
None

18. Essential Health and Safety Requirements

Essential Health and Safety Requirements not covered by Standards listed at (9)		
Clause	**Subject**	**Compliance**
1.01	Principal of integrated explosion protection	The equipment is designed to comply with the requirements of EN 50014, EN 50020 and EN 50284
1.02	Analysis of possible operating faults	The equipment is designed to comply with failure modes specified in EN 50020
1.0.3	Special checking and maintenance conditions	No special requirements
1.2.4	Dust deposits	Certification for gas atmospheres only
1.2.7	Protection against other hazards	The equipment is designed to comply with the requirements of EN 50014

19. **DRAWINGS**

Number	**Issue**	**Date**	**Description**
CI480-01 sheets 1*, 2*, 3* & 4	1	Mar. 02	BA488C Certification Information

* These drawings are common to and held with EC-Type Examination Certificate No ITS02ATEX2036.

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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: **ITS02ATEX2036/1X**

4. Equipment or Protective System: **BA488C Serial Text 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 ITS02ATEX2036 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 Project No 10050420 (IECEx Test Report GB/ITS/ExTR07.0028/01 dated 2012-01-16).

   This Supplementary Certificate shall be held with the original Certificate

In accordance with EC NOTICE TO STAKEHOLDERS WITHDRAWAL OF THE UNITED KINGDOM AND EU RULES IN THE FIELD OF INDUSTRIAL PRODUCTS dated 13 March 2020.

This issued certificate - Certificate No: ITS02ATEX2036/1X

and supporting Technical Construction File underwent a legal transfer of new ownership by signed agreement between the named applicant on this certificate and the 3rd party bodies involved in the transfer from NB0359 to NB2575 on 18 December 2020

Name: Fabrizio Massei

Position: ATEX Certification Officer

Signature:

Date: 18 December 2020

A T Austin
Certification Officer
23 January 2012

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Schedule

SUPPLEMENTARY EC-TYPE EXAMINATION CERTIFICATE NUMBER ITS02ATEX2036/1X

VARIATION ONE

Description of the Variation to the Equipment or Protective System.

To permit the following changes:

1.1 Addition of alternative Alarm Board 01 (PC175). The entity parameter, Li, is changed from 20 µH to 8 µH at the TBA Terminals for each Alarm channel when PC175 is fitted. The remaining entity parameters are unchanged.

1.2 Assessment of the BA488C Serial Text Display to the latest standards listed below. Category of the instrument is changed from "ib" to "ia" and Special Condition for Safe Use added as the material limits of the enclosure are exceeded for equipment of ELP Ga.

IEC 60079-0:2011
IEC 60079-11:2011
IEC 60079-26:2006

The equipment coding is:

II 1 G, Ex ia IIC T5 Ga (Tamb = –40°C to +60°C)

Report No.

Intertek Project No 10050420 (IECEx Test Report GB/ITS/ExTR07.0028/01 dated 2012-01-16).

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SPECIAL CONDITION FOR SAFE 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.

Essential Health and Safety Requirements

See original certificate

DRAWINGS

Number	Sheets	Issue	Date	Description
CI480-01	1*, 2*, 3* & 4	3	Oct. 11	BA484D & BA488C Certification Information

* These drawings are common to and held with EC-Type Examination Certificate No ITS02ATEX2035/2

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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