

British Approvals Service for Electrical
Equipment in Flammable Atmospheres



Certificate of Conformity

BAS No. Ex 96D2504

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- 3 This certificate is issued for the electrical apparatus:
- 4 **BA374C AND BA378C INDICATING TRANSMITTERS**
- 5 Manufactured and submitted for certification by:
- 6 **BEKA ASSOCIATES**
of Hitchin, Herts, SG5 2DA
- 7 This electrical apparatus and any acceptable variation thereto is specified in the Schedule to this Certificate and the documents therein referred to.
- 8 BASEEFA being an Approved Certification Body in accordance with Article 14 of the Council Directive of the European Communities of 18 December 1975 (76/117/EEC) certifies that the apparatus has been found to comply with harmonised European Standards:

EN50 014 (1977) + Amd 1 to 5
EN50 020 (1977) + Amd 1 to 5

and has successfully met the examination and test requirements recorded in confidential Report number:

96(C)0851 (ERA Report Ref 3627/821) dated May 1997

- 9 The apparatus marking shall include the code:
- EEx ia IIC T5 (T_{amb} = -40°C to 60°C)**
- 10 The manufacturer of the electrical apparatus referred to in this certificate, has the responsibility to ensure that the apparatus conforms to the specification laid down in the Schedule to this certificate and has satisfied routine verifications and tests specified therein.
- 11 This apparatus may be marked with the Distinctive Community Mark specified in Annex II to the Council Directive of 16 January 1984 (Doc 84/47/EEC). A facsimile of this mark is printed on sheet 1 of this certificate.

File No: EECS 0121/02/015

Sheet 1 of 3

This certificate is granted subject to the general conditions of the Electrical Equipment Certification Service. It does not necessarily indicate that the apparatus may be used in particular industries or circumstances. Representation of equipment as "Certified" is valid only when the number of this certificate is given on the relevant EECS Manufacturing Licence or Verification Certificate.



I M CLEARE
DIRECTOR
22 July 1997



Registration Number
020
The use of the Accreditation
Mark indicates accreditation in
respect of those activities
covered by the accreditation
certificate number 020



Electrical Equipment Certification Service
Health and Safety Executive
Harpur Hill, Buxton, Derbyshire. SK17 9JN. United Kingdom
Tel: 01298 28000 Fax: 01298 28244

Re-issued 22 September 1997 to replace original

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Schedule

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APPARATUS DESCRIPTION

BA374C and BA378C Indicating Transmitters are designed to be connected in a 4/20 mA d.c. process loop which is proportional to the input signal (eg from thermocouple, RTD, etc) and to provide a display in engineering units.

The BA374C is a Field Mounting Indicating Transmitter and BA378C is a Panel Mounting Indicating Transmitter.

The BA374C and BA378C may optionally be fitted with an alarm interface board and/or backlight board.

The BA374C/BA378C comprises six printed circuit boards containing electronic components, all housed within a metallic enclosure or conductive plastics enclosure, which may have a conductive coating on the inside surfaces. The enclosure provides a Degree of Protection of at least IP20.

Intrinsic safety is assured by limitation of voltage current and power, limitation of capacitance, suppression of inductance and infallible segregation.

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

Terminals 1 to 4

$U_o = 8.61 \text{ V d.c.}$
 $I_o = 62 \text{ mA d.c.}$
 $P_o = 0.14 \text{ W}$

The equivalent parameters are:

$C_i = 1.64 \text{ } \mu\text{F}$
 $L_i = 0.01 \text{ mH}$

Terminals 5 and 6

$U_i = 30 \text{ V d.c.}$
 $I_i = 280 \text{ mA d.c.}$
 $P_i = 0.85 \text{ W}$

The equivalent parameters are:

$C_i = 0.02 \text{ } \mu\text{F}$
 $L_i = 0.01 \text{ mH}$

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Terminals 8 and 9; 10 and 11

$$U_i = 30V \text{ d.c.}$$

$$I_i = 280 \text{ mA d.c.}$$

$$P_i = 0.85W$$

$$U_o = 0.7V \text{ d.c.}$$

$$I_o = 1.3 \mu A \text{ d.c.}$$

$$P_o = 4.1 \mu W$$

The equivalent parameters are:

$$C_i = 0.04 \mu F$$

$$L_i = 0.02 \text{ mH}$$

Terminals 12 and 13

$$U_i = 30V \text{ d.c.}$$

$$I_i = 159 \text{ mA d.c.}$$

$$P_i = 0.8W$$

The equivalent parameters are:

$$C_i = 0.04 \mu F$$

$$L_i = 0.02 \text{ mH}$$

For intrinsic safety considerations, under fault conditions the voltage, current, power and energy at terminals 8 and 9, and 10 and 11 do not exceed those specified in Clause 1.3 of EN50 014. The equivalent capacitance and inductance are the result of r.f suppression components directly connected to the apparatus terminals.

DRAWINGS

<u>Number</u>	<u>Issue</u>	<u>Date</u>	<u>Description</u>
CI370-01, sheets 1 to 32	1.0	16.07.96	BA374C/BA378C Certification Information

BASEEFA List Keywords

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