

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:** ITS21UKEX0308X **Issue 1**
- Product:** BA474D Indicating Temperature Transmitter
- Manufacturer:** BEKA associates Limited
- 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 104596361LHD-004 20th May 2022.
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN IEC 60079-0:2018 & 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
II (1) G [Ex ia Ga] IIC
II 1 D Ex ia IIIC T80°C Da
II (1) D [Ex ia Da] IIIC
Tamb: -40°C ≤ Ta ≤ +70°C (Gas)
Tamb: -20°C ≤ Ta ≤ +60°C (Dust)

Certification Officer:



M Newman

Date:

5th July 2022

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. This Certificate is accredited under UKAS schedule 0010

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SCHEDULE:

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11. Description of Product or Protective System

BA474D Indicating Temperature Transmitter is a field mounted loop powered equipment designed to display temperature in a hazardous process area and to transmit a linearised 4/20 mA current to the non-hazardous area. It provides galvanic isolation between the input and output connections.

The BA474D Indicating Temperature Transmitter may optionally be situated in the non-hazardous area as the associated electrical apparatus and provide galvanic isolation between the non-intrinsically safe area input terminals and the intrinsically safe output terminals.

The BA474D may optionally be fitted with an Alarm board.

The BA474D may additionally be fitted with an optional Back Light board.

The BA474D Indicating Temperature Transmitter comprises a field terminal board PC159, a main display board, PC157 and optional Alarm board, PC62, and/or Back Light board, PC161 all housed within a plastic, glass reinforced polyester enclosure.

The BA474D utilizes the following terminals:

- 4/20 mA loop powered input terminals, TB2, which will also power the optional backlight circuit. A link is provided if the backlight circuit is not used.
- The sensor input terminals, TB1.
- The optional Alarm Interface input terminals, TB3.

The input and output parameters at the BA474D terminals for external connections are:

Terminals TB2- 5 & 6		Terminals TB3 8 & 9; 10 & 11	
The equivalent parameters are:		The equivalent parameters are:	
Ui = 28 V	Ci = 46.42 nF	Ui = 30 V	Ci = 0.02 μF
li = 200 mA	Li = 0.01 mH	li = 200 mA	Li = 0.01 mH
Pi = 0.85 W	Co = 36.58 nF	Pi = 0.85 W	Co = 46 nF
	Lo = 0.69 mH	Uo = 0.7 V	Lo = 0.69 mH
		Io = 1.3 μA	
		Po = 4.0 μW	
Terminals TB1- 1, 2, 3 & 4			
The equivalent parameters are:			
Ui = 6 V	Ci = 16.16 μF		
li = 100mA	Li = 0		
Pi = 194 mW	Co = 23.84 μF		
Uo = 6 V	Lo = 3 mH		
Io = 30.3 mA			
Po = 46 mW			

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BA474D, as an associated electrical apparatus, the input and output parameters are:

Terminals TB2- 5 & 6; TB3- 8 & 9; 10 & 11	Terminals TB1- 1, 2, 3 & 4	
Um = 250 V	The equivalent parameters are:	
	Ui = 6 V	Ci = 16.16 μ F
	Ii = 100mA	Li = 0
	Pi = 194 mW	Co = 23.84 μ F
	Uo = 6 V	Lo = 3 mH
	Io = 30.3 mA	
	Po = 46 mW	

12. Report Number

Intertek Report: 104596361LHD-004 dated 20th May 2022.

13. Special Conditions of Certification

(a). Special Conditions of Use

- The BA474D Indicating Temperature Transmitter when installed in Zone 0 potentially explosive atmosphere shall be installed such that even in the event of rare incidents, an ignition source due to impact or friction between aluminium marking label and iron/steel is excluded.

(b). Conditions of Manufacture - Routine Tests

- The voltages applied to infallible transformers shall conform to the values given in Table 10 as per the requirements of EN 60079-11:2012 Clause 11.2, Routine tests for infallible transformers.

14. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report: 104596361LHD-004 dated 20th May 2022.

15. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
ATEX & IECEx Certification Information for BA474D & BA478C Indicating Temperature Transmitters Sheets 1-24 & 26-28	CI470-01 (27 Sheets)	4	April 2022

16. Details of Certificate changes

Issue 1 (5TH July 2022):

This variation covers the following changes:

- Revision to the opto-isolator assembly.