



## EC-TYPE EXAMINATION CERTIFICATE

Equipment or Protective System Intended for use  
in Potentially Explosive Atmospheres  
Directive 94/9/EC

EC-Type Examination Certificate Number : **BAS01ATEX7437X**

Equipment or Protective System: **DUAL CHANNEL SMART TRANSMITTER ISOLATOR  
TYPE ED2-STC4-Ex2**

Manufacturer: **PEPPERL + FUCHS GB LIMITED**

Address: **Oldham, Lancashire, OL1 4EL**

This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

The Electrical Equipment Certification Service, notified body number 600 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 N°

**01(C)0877 dated 17 December 2001**

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 50014: 1997 + Amds 1 & 2      EN 50020: 1994**

except in respect of those requirements listed at item 18 of the Schedule.

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.

This EC-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment or protective system.

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

**⊕ II (1) GD    [EEEx ia] IIC    (-20°C ≤ T<sub>a</sub> ≤ +60°C)**

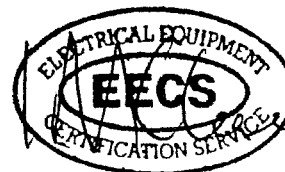
This certificate may only be reproduced in its entirety and without any change, schedule included.

File No: EECS 0807/02/199

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.



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**I M CLEARE**  
DIRECTOR  
28 January 2002



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Schedule

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EC-TYPE EXAMINATION CERTIFICATE N° BAS01ATEX7437X

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Description of Equipment or Protective System

The Dual Channel Smart Transmitter Isolator Type ED2-STC4-Ex2 is designed to provide an interface between unspecified non-hazardous area apparatus and intrinsically safe circuits in a hazardous area. The non-hazardous area circuits are galvanically isolated from the hazardous area circuits.

The apparatus comprises a number of fuses, transformers, zener diodes and other electronic components mounted on a printed circuit board. A socket at the rear of the card plugs into a corresponding connector in a rack. The fascia panel has an LED indicator and a six way socket for interrogation by a hand held HART communicator or ammeter either of which may be non-certified. An insulating cover is fitted to the card to protect the electrical circuit from adjacent cards. Each channel may be considered as a separate I.S. circuit.

Connector D14, Z14, D26, Z26, D30, Z30, D32, Z32

Alternatively

Front Facia connector BL1:A, BL2:A, BL3:A, BL1:B, BL2:B, BL3:B

$$U_m = 250V$$

The circuit connected to the safe area Connector D14, Z14, D26, Z26, D30, Z30, D32, Z32 is designed to operate from a d.c. supply voltage of up to 40V.

Channel 1 Connector D2 wrt D4

Channel 2 Connector Z2 wrt Z4

$$U_o = 25.2V$$

$$I_o = 93mA$$

$$P_o = 0.586W$$

$$C_i = 12nF$$

$$L_i = 0$$

The capacitance and either the inductance or the inductance to resistance ratio (L/R) of the load connected to the output terminals must not exceed the following values:

GROUP	CAPACITANCE in $\mu F$	INDUCTANCE in mH	OR	L/R RATIO in $\mu H/ohm$
IIC	0.095	4.2		60
IIB	0.808	17		243
IIA	2.888	33		486



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**Schedule**

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**EC-TYPE EXAMINATION CERTIFICATE N° BAS01ATEX7437X**

**VARIATION 0.1**

To permit minor changes to the circuit, transformer T1 and the PCB, that do not affect the original safety assessment.

**16 Report No**

01(C)0877

**17 Special Conditions For Safe Use**

The Dual Channel Smart Transmitter Isolator Type ED2-STC4-Ex2 must be mounted in an enclosure/rack which affords a degree of protection of at least IP20, e.g. a rack built to drawing E330215B held with this certificate or a rack type TCF---/Ex to Certificate Ex 90C2344.

**18 Essential Health and Safety Requirements**

ESSENTIAL HEALTH & SAFETY REQUIREMENTS not covered by standards listed in Section 9		
Clause	Subject	Compliance
1.1.3	Changes in characteristics of materials and combinations thereof	Report No 01(C)0877 Clause 6.1.1.3
1.2.2	Components for incorporation or replacement	Report No 01(C)0877 Clause 6.1.2.2
1.2.5	Additional means of protection	Report No 01(C)0877 Clause 6.1.2.5
1.2.7	Protection against other hazards	Report No 01(C)0877 Clause 6.1.2.7
1.4.2	Withstanding attack by aggressive substances	Report No 01(C)0877 Clause 6.1.4.2

**19 DRAWINGS**

Number	Sheet	Issue	Date	Description
01-5068	1 to 3	Orig	19.12.00	ED2-STC4-Ex2 Circuit Diagram
252-1311A	1 to 11	A	02.08.01	ED2-STC4-Ex2 Parts List
05-3460	1 to 6	Orig	19.12.00	ED2-STC4-Ex2 PCB layout
253-5006A	1 to 3	A	08.08.01	ED2-STC4-Ex2 PCB Assembly details
255-5007A	1 to 4	A	16.08.01	ED2-STC4-Ex2 PCB Creepage & Clearance
257-5008A	1 & 2	A	07.08.01	ED2-STC4-Ex2 PCB Lacquering details
252-1308A	1	A	02.08.01	Transformer T1 Parts List
256-0152	1	Orig	18.12.00	Transformer T1 Winding details
256-0153	1	Orig	18.12.00	Transformer T1 Connection details
252-1254A	1	A	25.08.98	Transformer T2 Parts List
256-0105A	1	A	24.08.98	Transformer T2 Winding details
256-0106B	1	B	11.11.98	Transformer T2 Connection details



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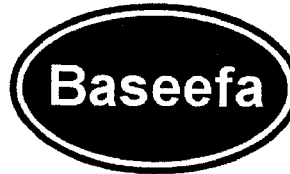
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Number	Sheet	Issue	Date	Description
255-0751C	1 & 2	C	14.01.99	Transformer PCB
254-0263A	1	A	16.06.98	Transformer plastic moulding
254-0275B	1 & 2	B	02.08.01	General Assembly for green E-Card housing
10-ADL2	1	0	24.07.01	ED2-STC4-Ex2 Certification Label
254-0267D	1 & 2	D	02.08.01	Eurocard connector coding details
E330215B	1 to 10	B	21.11.90	GA for 19" rack
<b>Drawings associated with Variation 0.1</b>				
01-5068A	1 to 3	A	31.07.01	ED2-STC4-Ex2 Circuit Diagram
05-3460A	1 to 6	A	02.08.01	ED2-STC4-Ex2 PCB layout
253-5006B	1 to 3	B	12.09.01	ED2-STC4-Ex2 PCB Assembly details
255-5007B	1 to 4	B	12.09.01	ED2-STC4-Ex2 PCB Creepage & Clearance
257-5008B	1 & 2	B	12.09.01	ED2-STC4-Ex2 PCB Lacquering details
256-0152A	1	A	11.09.01	Transformer T1 Winding details
252-1311B	1 to 11	B	11.09.01	Parts list

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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: **BAS01ATEX7437X/1**

4 Equipment or Protective System: **DUAL CHANNEL SMART TRANSMITTER ISOLATOR  
TYPE ED2-STC4-Ex2**

5 Manufacturer: **PEPPERL + FUCHS GB LTD**

6 Address: **Oldham, Lancashire, OL1 4EL**

7 This supplementary certificate extends EC – Type Examination Certificate No. BAS01ATEX7437X 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 any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This supplementary certificate shall be held with the original certificate.

The original certificate was issued by The Electrical Equipment Certification Service, Notified Body Number 0600, which retains responsibility for its original documentation. Baseefa (2001) Ltd., Notified Body Number 1180, is responsible only for the additional work relating to this supplementary certificate and any other supplementary certificate it has issued.

This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa (2001) Ltd. Customer Reference No. 0807

Project File No. 03/0426

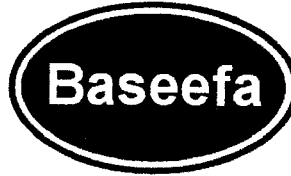
This certificate is granted subject to the general terms and conditions of Baseefa (2001) Ltd. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

**Baseefa (2001) Ltd.**

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R S SINCLAIR  
DIRECTOR  
On behalf of  
Baseefa (2001) Ltd.



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## Schedule

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Certificate Number BAS01ATEX7437X/1

15 **Description of the variation to the Equipment or Protective System**

### Variation 1.1

To permit minor changes to the parts list not affecting IS critical components.

16 **Report Number**

None.

17 **Special Conditions for Safe Use**

None additional to those listed previously

18 **Essential Health and Safety Requirements**

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

19 **Drawings and Documents**

Number	Sheet	Issue	Date	Description
252-1311C	1 to 11	C	12 May 03	Parts List for ED2-STC4-Ex2