



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: **Baseefa02ATEX0063**

4 Equipment or Protective System: **A WIS1411 Galvanically Isolated 4-20mA Analogue Driver**

5 Manufacturer: **RTK Engineering Ltd**

6 Address: **Harrogate, North Yorkshire, HG2 0NP**

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 Baseefa (2001) Ltd. Notified body number 1180, 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 No. 02(C)0166/1

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

**EN 50014: 1997 +A1 & A2** **EN 50020: 2002**

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 and construction of the specified equipment or protective system. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

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

**⊕ II (1) G [EEx ia] IIC (-20°C ≤ Ta ≤ +60°C)**

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

Baseefa (2001) Ltd. Customer Reference No. 2308

Project File No. 02/0166

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

14

**Certificate Number Baseefa02ATEX0063**

### 15 Description of Equipment or Protective System

The WIS1411 Galvanically Isolated 4-20mA Analogue Driver is designed for mounting in a safe area, as an interface between safe area and hazardous area apparatus. A 4-20mA signal generated in the safe area is reproduced at the hazardous area terminals.

The isolated driver comprises two transformers, protected by three fuses, with the output voltage clamped at the terminals by two series zener diodes, triplicated and protected by a fuse and with the output current protected by two series current limiting resistors.

The isolated driver uses a mixture of discrete components and surface mounted components mounted on a glass fibre printed circuit board and are housed within an outer plastic enclosure, fitted with terminals, which provides a degree of protection of at least IP20 and incorporates a universal mounting foot.

**Terminals 11, 12, 21, and 22:**

$$U_M = 250V$$

**Terminal 13 w.r.t. 14:**

$$U_o = 27.3V$$

$$I_o = 90.4mA$$

$$P_o = 0.617W$$

$$C_i = 0$$

$$L_i = 0$$

### Cable Parameters

The Capacitance and either the Inductance or the Inductance to Resistance ( $L_o/R_o$ ) ratio of the cables connected to the combined output terminals of the isolator should not exceed the following values:-

GROUP	C $\mu F$	L mH	OR	$L_o/R_o$ Ratio $\mu H/ohm$
IIC	0.088	3.05 (4.2)		58
IIB	0.683	9.15 (12.6)		218
IIA	2.280	24.4 (33.6)		460

When the external circuit contains no lumped inductance greater than  $10\mu H$  i.e. the  $L_i$  of any attached apparatus is less than  $10\mu H$  the cable inductance may be increased to the values shown within parentheses.

### 16 Report No.

02(C)0166/1

### 17 Special Conditions for Safe Use

None



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**18 Essential Health and Safety Requirements**

None additional to those covered by the standards listed at item 9

**19 Drawings and Documents**

<b>Number</b>	<b>Issue</b>	<b>Date</b>	<b>Description</b>
CE5683	0	23/07/2003	Circuit Diagram WIS1411
CE5684	0	29/07/2003	General Assembly WIS1411
CE5685	0	23/07/2003	Printed Circuit Track Layout
CE5686	0	23/07/2003	Sub Board Layout
CE5687	0	23/07/2003	Power Transformer TFA
*CE5206	2	17/01/2002	Power Transformer Bobbin
CE5688	0	23/07/2003	Transformer TFB
*CE5205	3	18/03/2002	Marking Methods
*CE5207	-	23/11/2001	EG12 Housing

\* These drawings are held with Baseefa 02ATEX0062.