



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: **Baseefa02ATEX0064**

4 Equipment or Protective System: **A WIS1611 Galvanically Isolated Temperature Converter**

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)0166/2**

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 [EEEx 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**

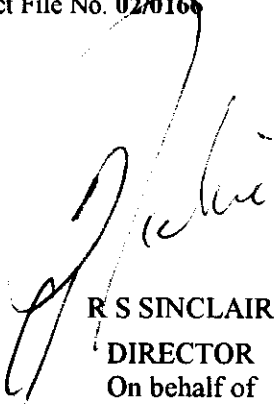
Project File No. **02/0166**

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 *R. Sinclair*
DIRECTOR
On behalf of
Baseefa (2001) Ltd.



13

Schedule

14

Certificate Number Baseefa02ATEX0064

15 Description of Equipment or Protective System

The WIS1611 Galvanically Isolated Temperature Converter is designed for mounting in a safe area, as an interface between safe area and hazardous area apparatus and to provide galvanic isolation between the safe area and hazardous area circuits.

The Temperature Converter uses a mixture of discrete components and surface mounted components mounted on three glass fibre printed circuit boards housed within an outer plastic enclosure which incorporates the field terminals, provides a degree of protection of at least IP20 and incorporates a universal mounting foot.

The Temperature Converter is designed for connection to equipment supplied at less than 40V and the Intrinsically Safe terminals may be used for a variety of RTD or thermocouple configurations.

Terminals 11 & 12, 21 & 22 and 31 & 41:

$U_m = 250V$.

a) Terminal 13, 23 & 33 w.r.t. 14, 24 & 34:

$U_o = 7.1V$
 $I_o = 168mA$
 $P_o = 0.247W$
 $C_i = 0$
 $L_i = 0$

For different operational requirements other specific combinations of terminals may be considered as separate circuits.

Terminals 14, 24 and 34 are interconnected within the unit.

b) 2 wire connections - Terminal 13 w.r.t. 14, 24 & 34:

$U_o = 5.9V$
 $I_o = 84mA$
 $P_o = 0.124W$
 $C_i = 0$
 $L_i = 0$

c) 2 wire connections - Terminal 23 w.r.t. 14, 24 & 34 or 33 w.r.t. 14, 24 & 34:

(For T/C or mV, a local link may also be added between Terminals 13 and 14.)

$U_o = 5.9V$
 $I_o = 42mA$
 $P_o = 0.062W$
 $C_i = 0$
 $L_i = 0$



d) 3 wire connections - Terminal 13 & 23 w.r.t. 14, 24 & 34 or 13 & 33 w.r.t. 14, 24 & 34:

$U_o = 5.9V$
 $I_o = 126mA$
 $P_o = 0.185W$
 $C_i = 0$
 $L_i = 0$

e) 3 wire connections - Terminal 13 w.r.t. 23 & 33:

$U_o = 7.1V$
 $I_o = 51mA$
 $P_o = 0.09W$
 $C_i = 0$
 $L_i = 0$

Cable Parameters.

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

a) Terminal 13, 23 & 33 w.r.t. 14, 24 & 34:

GROUP	C μF	L mH	OR	L/R Ratio $\mu H/ohm$
IIC	14.6	1.15		41
IIB	268	3.44		168
IIA	1000	9.16		345

b) 2 wire connections - Terminal 13 w.r.t. 14, 24 & 34:

GROUP	C μF	L mH	OR	L/R Ratio $\mu H/ohm$
IIC	43	5.26		293
IIB	1000	21.36		1086
IIA	1000	43.77		2292

c) 2 wire connections - Terminal 23 w.r.t. 14, 24 & 34 or 33 w.r.t. 14, 24 & 34:

GROUP	C μF	L mH	OR	L/R Ratio $\mu H/ohm$
IIC	43	20.57		567
IIB	1000	76.31		2120
IIA	1000	160.99		4119

d) 3 wire connections - Terminal 13 & 23 w.r.t. 14, 24 & 34 or 13 & 33 w.r.t. 14, 24 & 34:

GROUP	C μF	L mH	OR	L/R Ratio $\mu H/ohm$
IIC	43	2.35		199
IIB	1000	10.14		774
IIA	1000	20.13		1622



e) 3 wire connections - Terminal 13 w.r.t. 23 & 33:

GROUP	C μF	L mH	OR	L/R Ratio μH/ohm
IIC	14.6	14.08		391
IIB	268	53.42		1437
IIA	1000	112.73		2897

16 Report No.

02(C)0166/2

17 Special Conditions for Safe Use

None

18 Essential Health and Safety Requirements

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

19 Drawings and Documents

Number	Issue	Date	Description
CE5693	0	28/07/2003	Circuit Diagram WIS16XX
CE5692	0	30/07/2003	General Assembly WIS16XX
CE5689	0	30/07/2003	Printed Circuit Track Layout (Main)
CE5690	0	28/07/2003	Printed Circuit Track Layout (Daughter)
CE5691	0	28/07/2003	Printed Circuit Track Layout (Terminal)
CE5694	0	25/07/2003	Power Transformer TF1
CE5891	0	28/07/2003	Marking Methods
CE5695	0	28/07/2003	Terminals
*CE5206	2	17/01/2002	Power Transformer Bobbin
*CE5207	-	23/11/2001	EG12 Housing

* These drawings are held with Baseefa 02ATEX0062.