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: **Baseefa03ATEX0569**

4 Equipment or Protective System: **Reed Relay Types RLHH****

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. **03(C)0680/1**

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

EN 50014: 1997 + A1 & A2 **EN 50020: 2002** **EN 50284: 1999**

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 :

Ⓔx II 1G EEx ia IIC T5 (-20°C ≤ Ta ≤ +60°C) or EEx ia IIC T6 (-20°C ≤ Ta ≤ +45°C)

Baseefa (2001) Ltd. Customer Reference No. **2308** Project File No. **03/0680**

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DIRECTOR
On behalf of
Baseefa (2001) Ltd.

13 **Schedule**

14 **Certificate Number Baseefa03ATEX0569**

15 Description of Equipment or Protective System

The Reed Relay Types RLHH** are designed as isolation relays for mounting within a hazardous area. Four contact configurations are covered denoted by the ** in the type number. (viz. 1A single contact, on/off; 1C single contact, change over; 2A dual contact, on/off and 2C dual contact, change over.) All of the types considered are intended to provide isolation for separate intrinsically safe circuits, either or both circuits having voltages of up to 45V. (i.e. Segregation for 90V.) Isolation is maintained between the coil circuit and the contact circuit, and in the case of the dual contact types, also between the separate contact circuits. The nominal coil voltage for all types is 12V.

The Relays are either a Single or Dual contact, encapsulated reed relay, which incorporates freewheel diodes in the coil circuit, mounted on a glass fibre p.c.b. fitted with coil and contact terminals and housed within a moulded plastic outer enclosure which incorporates a universal mounting foot. The assembly affords a degree of protection of at least IP20.

Since the coil and contact terminals are both intended to be connected to intrinsically safe circuits the universal mounting foot may be oriented either way round to suit the application.

The Reed Relay Type number is constructed as follows e.g:- RL H H 1 A

RL	H	H	1	A	
				Style - On/Off (A) or Change over (C)	
			Number of separate contacts (1 or 2)		
		Contacts to Hazardous Area (H)			
	Coil to Hazardous Area (H)				
Reed Relay (RL)					

RLHH** Coil Terminals

$U_i = 45V$ $U_o = 1.1V$
$I_i = 0.5A$ $I_o = 5mA$
$P_i = 1.3W$
$C_i = 0$
$L_i = 0$

The nominal coil voltage for all types is 12V.

RLHH** Contact Terminals either 1* (or 2* for the dual contact arrangements)

$U_i = 45V$
$P_i = 1.3W$
$C_i = 0$
$L_i = 0$

The contacts (1*or 2*) of the Reed Relay Types RLHH** do not generate or store more than the values of energy, voltage or current specified in Clause 5.4 of EN 50020: 2002

16 Report Number

03(C)0680/1

17 Special Conditions for Safe Use

None

18 Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 Drawings and Documents

Number	Issue	Date	Description
CE5815	0	23 Sept 2003	Reed Relay RLHH1A
CE5816	0	03 Sept 2003	Reed Relay RLHH1C
CE5817	0	03 Sept 2003	Reed Relay RLHH2A
CE5818	0	29 Aug 2003	Reed Relay RLHH2C
*CE5819	0	20 May 2003	p.c.b. Single contact
*CE5820	0	20 May 2003	p.c.b. Dual contact
**CE5205	3	18 March 2002	Marking Methods
*CE5821	0	20 May 2003	PM40 Cover and Base Plate
*CE5822	0	20 May 2003	PM40 Relay 12V-2A/3
*CE5823	0	20 May 2003	PM40 Relay 12V-2C/4
*CE5826	0	20 May 2003	Coil Winding Dual /3 /4 /5 /6
*CE5827	0	20 May 2003	Magnetic Screen Assembly Dual
*CE5828	0	20 May 2003	Bobbin and Cap Dual Contact
*CE5829	0	20 May 2003	PM40 Relay 12V-1A/4
*CE5830	0	20 May 2003	PM40 Relay 12V-1C/3
*CE5833	0	20 May 2003	Coil Winding Single/3 /4 /5 /6
*CE5834	0	20 May 2003	Bobbin and Cap Single Contact
*CE5835	0	20 May 2003	Magnetic Screen Assembly Single
*CE5836	0	20 May 2003	Relay Coil Freewheel Diode
*CE5837	0	20 May 2003	Single Contact 1A/1C General Assembly
*CE5838	0	20 May 2003	Dual Contact 2A/2C General Assembly
*CE5839	0	20 May 2003	Encapsulation Resins

*These drawings are held with Certificate No. Baseefa03ATEX0568.
**This drawings is held with Certificate No. Baseefa02ATEX00062.