



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: **Baseefa03ATEX0624**

4 Equipment or Protective System: **The DAA149 Repeat Relay**

5 Manufacturer: **RTK Engineering Limited**

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)0509**

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 ≤ T_a ≤ +70°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. **03/0509**

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.



13

Schedule

14

Certificate Number Baseefa03ATEX0624

15 Description of Equipment or Protective System

The DAA149 Repeat Relay is designed to enable the control of unspecified safe area apparatus ("Contact" Terminals TM1 and TM2) from and intrinsically safe circuit ("Coil" Terminals TM3 and TM4). The Relay provides galvanic isolation between the two circuits and limits the transfer of energy from the unspecified safe area apparatus to the intrinsically safe circuit to less than any of the following parameters, 1.2V, 0.1A, 20 μ J and 25mW. The DAA149 Repeat Relay must be mounted within a Safe Area.

Although the DAA149 Repeat Relay Terminals TM3 and TM4 do not comply with the requirements of Clause 5.4 of EN 50020: 2002, when connected in an intrinsically safe circuit, the internal stored energy, voltage and current of the Repeat Relay will not add more than the values specified in Clause 5.4 of EN 50020: 2002 to the parameters of the circuit into which it is connected.

"Contact" Terminals TM1 and TM2

$$U_m = 250V$$

"Coil" Terminals TM3 and TM4

$U_i = 40V$	$U_o = <1.2V$
$C_i = 0$	$I_o = <100mA$
$L_i = 0$	$P_o = <25mW$

Variation 0.1

To permit the circuit to be redesigned and designated a DAE149 Repeat Relay, to enable the "Coil" Terminals TM3 and TM4 to be connected to unspecified safe area apparatus and the "Contact" Terminals TM1 and TM2 to be connected within an intrinsically safe circuit. The Relay provides galvanic isolation between the two circuits and limits the transfer of energy from the unspecified safe area apparatus to the intrinsically safe circuit to less than any of the following parameters, 1.2V, 0.1A, 20 μ J and 25mW. The DAE149 Repeat Relay must be mounted within a Safe Area.

Although the DAE149 Repeat Relay Terminals TM1 and TM2, do not comply with the requirements of Clause 5.4 of EN 50020: 2002, when connected in an intrinsically safe circuit, the internal stored energy, voltage and current of the Repeat Relay will not add more than the values specified in Clause 5.4 of EN 50020: 2002 to the parameters of the circuit into which it is connected. The Certification Code is not affected by this variation.

"Contact" Terminals TM1 and TM2

$U_i = 40V$	$U_o = <1.2V$
$C_i = 0$	$I_o = <100mA$
$L_i = 0$	$P_o = <25mW$

"Coil" Terminals TM3 and TM4

$$U_m = 250V$$



16 Report Number

03(C)0509

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	Sheet	Issue	Date	Description
CE5928		0	07APR04	DAA Circuit Diagram
CE5921		0	07APR04	DAA Board Assembly
CE5916		0	07APR04	DAA Certification Label
CE5920		0	07APR04	DAA General Assembly
CE5931		0	07APR04	DAE Circuit Diagram
CE5927		0	07APR04	DAE Board Assembly
CE5919		0	07APR04	DAE Certification Label
CE5926		0	07APR04	DAE General Assembly
*CE5934		0	30APR04	Electronic Parts List
*CE5932		0	02SEPT03	Toroidal Isolation Transformer
*CE5915		0	07APR04	PCB Track Layout
*CE6293		0	07APR04	PCB Specification
*CE6302		0	04MAY04	EG3 Enclosure
*CE5933		0	07APR04	Mounting Components
*CE6187		0	16FEB04	Marking Methods

* These drawings are also associated with Baseefa03ATEX0625X



1 **SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE**

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

3 Supplementary EC - Type Examination Certificate Number: **Baseefa03ATEX0624/1**

4 Equipment or Protective System: **The DAA149 Repeat Relay**

5 Manufacturer: **RTK Engineering Limited**

6 Address: **Knaresborough, North Yorkshire, HG5 8PJ**

7 This supplementary certificate extends EC – Type Examination Certificate No. Baseefa03ATEX0624 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.

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

Baseefa Customer Reference No. **2308**

Project File No. **07/0710**

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Baseefa

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Baseefa is a trading name of Baseefa (2001) Ltd
Registered in England No. 4305578 at the above address

A handwritten signature in black ink, appearing to read "R S Sinclair".

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



13

Schedule

14

Certificate Number Baseefa03ATEX0624/1

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

Variation 1.1

To permit the use of an alternative encapsulant.

16 **Report Number**

None

17 **Special Conditions for Safe Use**

None

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	Issue	Date	Description
CE5933	1	24/08/07	DA*149 Series Solid State IS Relay Relevant Info

This drawing is also associated with Baseefa03ATEX0625X/1