



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 : **BAS01ATEX7160**

4 Equipment or Protective System: **MTL5061 TWO CHANNEL LOOP-POWERED FIRE AND
SMOKE DETECTOR INTERFACE**

5 Manufacturer: **MEASUREMENT TECHNOLOGY LIMITED**

6 Address: **Luton, Bedfordshire, LU1 3JJ**

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 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)0220 dated 18 December 2001 (held on EECS 0703/02/299)

9 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.

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. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment or protective system.

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

⊕ II (1) GD [EEx ia] IIC (-20°C ≤ T₂ ≤ +60°C)

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

File No: EECS 0703/02/335

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
29 April 2002



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Schedule

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EC-TYPE EXAMINATION CERTIFICATE N° BAS01ATEX7160

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Description of Equipment or Protective System

An MTL 5061 Two Channel Loop-Powered Fire and Smoke Detector Interface is designed to restrict the transfer of energy from unspecified non-hazardous area apparatus to intrinsically safe circuits in a hazardous area by the limitation of voltage and current. Two transformers provide galvanic isolation between the hazardous and non-hazardous area circuitry.

The apparatus comprises of two isolating transformers and two detection circuits with zener-diode/resistance combinations to provide voltage and current limitation. The above, together with other electronic components are mounted on a printed circuit board and housed in a moulded plastic enclosure. Polarised plugs and sockets are provided for the hazardous and non-hazardous connections.

CON 3, Pins 7, 8, 9 and CON 4, Pins 10, 11, 12

$$U_m = 250V$$

The circuit connected to the safe area terminals on CON 3, CON 4 are designed to operate from a d.c. supply voltage of up to 35V.

Channel 1 - CON 1, Pins 2 & 3 wrt 1

Or

Channel 2 - CON 2, Pins 5 & 6 wrt 4

$$U_o = 28V$$

$$I_o = 93mA$$

$$P_o = 0.65W$$

$$C_i = 0$$

$$L_i = 0$$

Each channel may be considered as a separate intrinsically safe circuit.

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

GROUP	CAPACITANCE	INDUCTANCE	OR	L/R RATIO
	(μF)	(mH)		($\mu H/ohm$)
IIC	0.083	3.05 (4.2)		55
IIB	0.650	9.15 (12.6)		210
IIA	2.150	24.4 (33.6)		444

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 within parentheses.



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Equipment referred to in this certificate having the same type number as items in BASEEFA Certificate No Ex 96D2426 may be used as a direct substitute in a system provided that the cable parameters used are within the limits shown on this certificate.

VARIATION 0.1

To permit the connection of MTL5000 Ring Terminal assemblies in place of the safe and hazardous area screw terminals. The enclosure remains IP20 whether or not the Ring Terminal is fitted. The following MTL5000 Ring Terminals may be connected to the MTL5061. Blanking covers may be removed if necessary

Hazardous Area Terminal	MTL5061 pins	1, 2, 4, 5
	HAZ-RT-1-5	1, 2, 3, 4
Safe Area Terminal	MTL5061 pins	8, 9, 11, 12
	SAF-RT-8-12	5, 6, 7, 8

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Special Conditions For Safe Use

None.

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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)0220 Clause 5.1.1.3
1.2.2	Components for incorporation or replacement	Report No 01(C)0220 Clause 5.1.2.2
1.2.5	Additional means of protection	Report No 01(C)0220 Clause 5.1.2.5
1.2.7	Protection against other hazards	Report No 01(C)0220 Clause 5.1.2.7
1.4.2	Withstanding attack by aggressive substances	Report No 01(C)0220 Clause 5.1.4.2

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DRAWINGS

Number	Sheet	Issue	Date	Description
CI5061-1	2	1	09.96	MTL5061 Parts List
CI5061-1	3	1	09.96	MTL5061 Circuit Diagram
CI5061-1	4	2	12.96	MTL5061 Component Layout
CI5061-1	5	1	09.96	MTL5061 General Assembly
CI5061-1	6	2	12.01	MTL5061 Internal Construction



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Number	Sheet	Issue	Date	Description
CI5061-1	7	2	12.96	MTL5061 PCB Track Layout
CI5061-1	8	1	09.96	MTL5061 Transformer Winding Details
*CI4100-1	1	4	09.96	IS Transformer

Drawings marked * are associated with and are held on BASEEFA Certificate BAS01ATEX7175

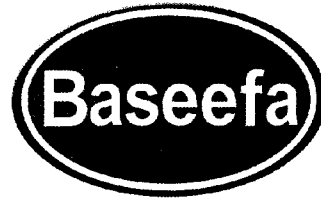
Drawing associated with Variation 0.1

Number	Sheet	Issue	Date	Description
**CI5000-12	1 to 4	1	02.02	MTL5000 Ring Terminal

Drawing marked ** is associated with and held on BASEEFA Certificate BAS01ATEX7144

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BASEEFA List Keywords
2ISOLBAR



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: **BAS01ATEX7160/1**
- 4 Equipment or Protective System: **MTL5061 Two Channel Loop-Powered Fire and Smoke Detector Interface**
- 5 Manufacturer: **Measurement Technology Limited**
- 6 Address: **Power Court, Luton, Bedfordshire, LU1 3JJ**

7 This supplementary certificate extends EC – Type Examination Certificate No. BAS01ATEX7160 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, 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 Customer Reference No. 0703

Project File No. 08/0601

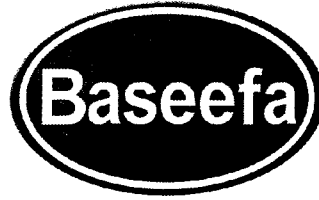
This certificate is granted subject to the general terms and conditions of Baseefa. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

Baseefa

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Baseefa is a trading name of Baseefa Ltd
Registered in England No. 4305578. Registered address as above.

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

R S SINCLAIR
DIRECTOR
On behalf of
Baseefa



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Schedule

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Certificate Number BAS01ATEX7160/1

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

Variation 1.1

- i) To permit a minor drawing change not affecting the original assessment.
- ii) To confirm that the equipment has been reviewed against the requirements of EN 60079-0:2006 and EN 60079-11:2007 in respect of the differences from EN 50014:1997+ Amds 1 & 2 and EN 50020:1994 and that, with the exception of the marking code, none of these differences affect this equipment.

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	Sheet	Issue	Date	Description
CI4100-1	1 of 1	5	6.98	MTL4000 Series Single Toroid I.S. Transformer