



## EC - TYPE EXAMINATION CERTIFICATE

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

- EC - Type Examination Certificate Number: **Baseefa 03ATEX0176**
- Equipment or Protective System: **MTL5344 Two Channel Repeater Power Supply, 4/20mA for two wire transmitters**
- Manufacturer: **Measurement Technology Limited**
- Address: **Luton, Bedfordshire, LU1 3JJ**
- This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- 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)0522**
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 50014: 1997 + Amds 1 & 2      EN 50020: 2002**
- except in respect of those requirements listed at item 18 of the Schedule.
- 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.
- 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.
- The marking of the equipment or protective system shall include the following :

**Ⓔ II (2) GD [EEEx ib] IIC (-20°C ≤ T<sub>a</sub> ≤ +60°C)**

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

Baseefa (2001) Ltd. Customer Reference No. 0703

Project File No. 02/0522

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

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Certificate Number Baseefa03ATEX0176

### 15 Description of Equipment or Protective System

The MTL5344 Two Channel Repeater Power Supply, 4/20mA for two wire transmitters is designed to provide a fully floating d.c. power supply for energising two conventional 2- wire 4/20mA transmitters which may be located in the hazardous area and to repeat the current in two floating circuits to drive two safe area loads. It restricts the transfer of energy from unspecified safe-area apparatus to an intrinsically safe circuit by the limitation of voltage and current. Four transformers provide galvanic isolation between the hazardous and non-hazardous area circuitry.

The apparatus comprises of two power transformers, two current transformers, and two output channels each protected by duplicated zener diodes chains on 2mm track and active current limiting components 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 area connections.

#### CON3, CON4 and CON5

$$U_m = 253V$$

The circuit connected to the safe area terminals CON3, CON4 and CON5 is designed to operate from a d.c. supply voltage of up to 35V.

Either CON1 pins 1 & 2  
or CON2 pins 4 & 5

$$\begin{aligned}U_o &= 19V \\I_o &= 24mA \text{ (Non-linear)} \\P_o &= 0.45W\end{aligned}$$

$$\begin{aligned}C_i &= 0 \\L_i &= 0\end{aligned}$$

The capacitance and the inductance of the load connected to the output terminals must not exceed the following values:

GROUP	CAPACITANCE (nF)	INDUCTANCE (mH)
IIC	120	3.0
IIB	360	9.0

### 16 Report Number

02(C)0522

### 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
CI5344-1	1	1	02.03	MTL5344 Parts List
CI5344-1	2	1	01.03	MTL5344 Circuit diagram
CI5344-1	3	1	02.03	MTL5344 PCB component layout
CI5344-1	4	1	02.03	MTL5344 General assembly
CI5344-1	5	1	02.03	MTL5344 General assembly and label
CI5344-1	6	1	02.03	MTL5344 PCB Track layout
CI5344-1	7	1	02.03	MTL5344 transformer winding details
*CI 5000-1	1	1	05.95	I.S. Transformer TFR301
*CI 5000-1	2	1	05.95	I.S. Transformer TFR301
*CI 5000-2	1	1	05.95	I.S. Transformer TFR300
*CI 5000-2	2	1	05.95	I.S. Transformer TFR300

Drawings marked \* are held on EECS Certificate BAS01ATEX7157