



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx BAS 04.0006 issue No.:2

Status: **Current**

Certificate history:
Issue No. 2 (2009-5-6)
Issue No. 1 (2005-4-20)

Date of Issue: 2009-05-06 Page 1 of 5

Applicant: **Measurement Technology Limited**
Great Marlings
Butterfield
Luton
Bedfordshire
LU2 8DL
United Kingdom

Electrical Apparatus: **MTL4021 / MTL4021S Solenoid / Alarm driver**
Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **IECEx BAS 04.0006**
[Ex ia] IIC
-20°C ≤ Ta ≤ +60°C
Um = 250V

Approved for issue on behalf of the IECEx
Certification Body:

RS R S Sinclair

Position: Managing Director

Signature:
(for printed version)

M Conway
19/5/09

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Baseefa
Rockhead Business Park
Staden Lane
Buxton
Derbyshire
SK17 9RZ
United Kingdom





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Manufacturer: **Measurement Technology Limited**
Great Marlings
Butterfield
Luton
Bedfordshire
LU2 8DL
United Kingdom

Manufacturing location(s):
MTL Instruments PVT Ltd
No 3 Old Mahabalipuram
Road
Sholinganallur
Chennai
India

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2000 Edition: 3.1	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 1999 Edition: 4	Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety 'i'

This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

IECEX ATR:
UK/BAS/03/0917/3

File Reference:
03/0917



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

An MTL4021 Solenoid / Alarm Driver is designed to drive apparatus such as solenoids and switches and to restrict the transfer of energy from unspecified non-hazardous area apparatus to an intrinsically safe circuit by the limitation of voltage and current. A transformer and an opto-isolator provide galvanic isolation between the hazardous and non-hazardous area circuitry. Two LEDs are provided to indicate power-on and output.

The MTL4021 S is identical to the MTL4021 except for an alternative non-hazardous area input circuit.

For electrical data see Additional information.

CONDITIONS OF CERTIFICATION: NO



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Variation 2.1

This document permits existing information (for example on Schedule Drawings) to be replaced by the revised certificate holders address. No other changes may be made to the certified design.



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Additional information:

Connector CON2, pins 7 to 14

$U_m = 250V$

The circuit connected to the non-hazardous area terminals CON2 is designed to operate from a dc supply voltage of up to 35V.

Connector CON1, pin 1 wrt 4/6

$U_o = 25.5V$

$I_o = 110mA$

OR

$U_o = -15.22V$

$I_o = -65mA$

$P_o = 0.7W$

$C_i = 0$

$L_i = 0$

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 μF	Inductance mH	OR	L/R Ratio $\mu H/\Omega$
IIC	0.104	1.82 (2.51)		52
IIB	0.800	5.46 (7.53)		201
IIA	2.780	14.5 (20.0)		423

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.