



EC-TYPE EXAMINATION CERTIFICATE

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

EC-Type Examination Certificate Number : **BAS00ATEX7064**

Equipment or Protective System: **MOBREY CONTROL UNIT TYPE MCU90*WH-A**

Manufacturer: **SOLARTRON MOBREY LIMITED**

Address: **158 Edinburgh Avenue, Slough, Berkshire, SL1 4UE**

This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

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°

99(C)1053 dated 20 November 2000

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


EN 50014: 1997 + Amd 1 and 2 **EN 50020: 1994**

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

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

 **II (1) G** **[EEx ia] IIC (-40°C ≤ T_a ≤ 55°C)**

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

File No: **EECS 0131/02/039**

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.



Electrical Equipment Certification Service
Health and Safety Executive
Harpur Hill, Buxton, Derbyshire. SK17 9JN, United Kingdom
Tel: 01298 28000 Fax: 01298 28244

I M CLEARE
DIRECTOR
20 November 2000



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Description of Equipment or Protective System

The Mobrey Control Unit Type MCU90*WH-A is mains powered apparatus for installation in a non hazardous (safe) area and is intended for connection to transmitters located in a hazardous area.

It can be used in one of two modes, either loop powered (transmitter powered from control unit) or externally powered (transmitter separately powered).

It comprises a plastic enclosure housing a printed circuit board (p.c.b.) assembly.

External connections are made via terminals mounted on the p.c.b., these terminals being located in a separate partitioned section of the enclosure provided with its own lid. Cable entry into this terminal section is made via cable glands mounted in the enclosure wall.

Terminals 4-30

$$U_m = 250V$$

a. Loop Powered Hazardous Area Transmitter Mode

Terminal 1 (24V) w.r.t. Terminal 2 (I_{IN}) and Terminal 1 (24V) w.r.t. Terminal 3 (Earth)

$$U_a = 28V \quad U_i = 0$$

$$I_o = 120mA$$

$$P_o = 0.82W$$

$$L_i = 0.2mH$$

$$C_i = 0.6nF$$

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

GROUP	CAPACITANCE in μF	INDUCTANCE in mH	OR	L/R RATIO in $\mu H/ohm$
IIC	*0.082 μF	1.2mH		42 μH
IIB	0.65 μF	10.9mH		172 μH
IIA	2.15 μF	21.9mH		346 μH

* of which the total C_i of the hazardous area apparatus connected must not exceed 0.020 μF



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b. External Powered Hazardous Area Transmitter Mode

Terminal 2 (I_{IN}) w.r.t. Terminal 3 (Earth)

(no connection to Terminal 1 (24V) must be made)

$U_o = 6.51V$ (capacitance charging only - see below)

$I_o = 0$

$P_o = 0$

$L_i = 0.1mH$

$C_i = 0.6nF$

$U_i = 30V$

$I_i = 120mA$

Terminal 2 (I_{IN}) w.r.t. Terminal 3 (Earth) must be treated as a 6.51V source. The 6.51V is considered as being the theoretical maximum to which a capacitive load across these terminals could become charged through leakage through internal series blocking diodes. This voltage does not contribute to the short circuit sparking risk of any external source connected to these terminals.

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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 at (9)		
Clause	Subject	Compliance
1.1.3	Changes in characteristics of materials and combinations thereof	see report
1.2.2	Components for incorporation or replacement	see report
1.2.5	Additional means of protection	see report
1.2.7	Protection against other hazards	see report
1.4.2	Withstanding attack by aggressive substances	see report



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DRAWINGS

<u>Number</u>	<u>Issue</u>	<u>Date</u>	<u>Description</u>
71097/977	3	17.10.00	Circuit
71095/978	2	26.07.00	P.C.B. Assembly Details
71097/980	4	15.11.00	General Assembly and Certification Label Details

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BASEEFA List Keywords

2CONTRUN
2POWERSU



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: **BAS00ATEX7064/1**

4 Equipment or Protective System: **MOBREY CONTROL UNIT TYPE MCU90*WH-A**

5 Manufacturer: **SOLARTRON MOBREY LIMITED**

6 Address: **Slough, Berkshire, SL1 4UE**

7 This supplementary certificate extends EC-Type Examination Certificate No. BAS00ATEX7064 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.

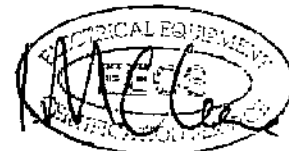
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Electrical Equipment Certification Service
Health and Safety Executive
Harpur Hill, Buxton, Derbyshire, SK17 9JN, United Kingdom
Tel: +44(0)1298 28000 Fax: +44(0)1298 28244
internet: www.baseefa.com e-mail: baseefa.info.cecs@hsl.gov.uk



I M CLEARE
DIRECTOR
27 November 2001



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14 **SUPPLEMENTARY EC-TYPE EXAMINATION CERTIFICATE N° BAS00ATEX7064/1**

Description of the Variation to the Equipment or Protective System

VARIATION 1.1

1. To permit use of a new printed circuit board assembly with modified layout and track work.
2. Change of apparatus type identification to **MCU*** W*_*_* ****.

Report No.

01(CI)0912 dated 22 November 2001

Special Conditions For Safe Use

None

Essential Health and Safety Requirements

See original certificate.

DRAWINGS

Number	Sheet	Issue	Date	Description
71097/977	-	4	13.06.01	Circuit
71097/978	-	4	06.11.01	PCB Assembly Details
71097/980	-	5	13.06.01	General Assembly and Certification Label Details

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