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EC-TYPE EXAMINATION CERTIFICATE

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

B EC-Type Examination Certificate Number

BAS01ATEX7225X

- 4 Equipment or Protective System: MOBREY CONTROL UNIT TYPE MCU*** P*-A **
- 5 Manufacturer: SOLARTRON MOBREY LIMITED
- 6 Address: 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 No

00(C)0822 dated 15 January 2002

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.

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

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

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

File No: EECS 0131/02/041

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
15 January 2002



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15 Description of Equipment or Protective System

The Mobrey Control Unit Type MCU*** P*-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 intended for panel mounting housing two printed circuit board (p.c.b.) assemblies.

External connections are made at terminals that protrude through apertures in the rear panel of the enclosure. These consist of five 'plug in' terminal blocks, one for the hazardous area connections and the others for the non-hazardous area connections and one 'fixed' terminal for connection to earth, this 'fixed' terminal and the mating connectors for the 'plug in' terminal blocks being mounted on one of the p.c.b's.

Terminals 4-29

 $U_m = 250V$

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)

 $U_0 = 28V$

 $U_i = 0$

 $I_d = 120 \text{mA}$

 $P_o = 0.82W$

 $L_i = 0.2 \text{mH}$

 $C_i = 0.6 nF$

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	R L/R RATIO in µH/ohm	
пс	*0.082µF	1.2mH		42μH	
ПВ	0.65μF	10.9mH		172μΗ	
IIA	2.15μF	21.9mH		346μΗ	

^{*} of which the total C of the hazardous area apparatus connected must not exceed 0.020µF





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b. External Powered Hazardous Area Transmitter Mode

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

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

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

 $U_i = 30V$ $I_i = 120mA$

 $I^{o} = 0$

 $P_0 = 0$

 $L_i = 0.1 \text{mH}$

 $C_i = 0.6 nF$

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.

16 Report No.

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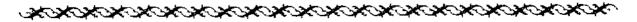
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17 Special Conditions For Safe Use

Terminal 30 must be earthed in the safe area via a high integrity earth.

18 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	Report No 00(C)0822 Clause 5.1.1.3			
1.2.2	Components for incorporation or replacement	Report No 00(C)0822 Clause 5.1.2.2			
1.2.5	Additional means of protection	Report No 00(C)0822 Clause 5.1.2.5			
1.2.7	Protection against other hazards	Report No 00(C)0822 Clause 5.1.2.7			
1.4.2	Withstanding attack by aggressive substances	Report No 00(C)0822 Clause 5.1.4.2			





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SACKER CHARACTER CHARACTER

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19 DRAWINGS

Number	Issue	Date	Description
71097/989	4	14.01.02	Circuit
71097/990	3	04.12.01	P.C.B. Assembly Details
71097/991	4	04.12.01	General Assembly and Certification Label Details

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BASEEFA List Keywords

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