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 : **BAS02ATEX2105X**

4 Equipment or Protective System: **TYPE BGE BREAK GLASS UNIT**

5 Manufacturer: **MEDC LTD**

6 Address: **Pinxton, Nottingham, NG16 6JF**

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)1067 dated 8 May 2002**

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

**EN 50014: 1997 + Amds 1 & 2** **EN 50018: 2000** **EN 50019: 2000** **EN 50028: 1987** **EN 50281-1-1: 1999**

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:-

**Ex II 2 GD** **T135°C EEx emd IIC** **T4 (-20°C $T_{amb}$ +50°C)**
**or** **T85°C EEx ed IIC** **T6 (-20°C $T_{amb}$ +50°C)**

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

File No: EECS 0676/01/417

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.

HSE Health & Safety Executive

**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.eecs@hsl.gov.uk**

I M CLEARE
DIRECTOR
16 May 2002

13 **Schedule**

14 **EC-TYPE EXAMINATION CERTIFICATE N° BAS02ATEX2105X**

15 **Description of Equipment or Protective System**

**The Type BGE Break Glass Unit** is used as the fixed stations in an alarm system.

The unit comprises a two part enclosure manufactured from a glass reinforced polyester dough moulding compound.

The base shell of the unit contains a rail mounted terminal strip and optionally, an encapsulated housing equipped with resistors or a zener diode.

The top shell has an external recess housing a glass panel which is smashed during alarm activation to release an actuator which in turn operates one or two microswitches. Optionally, a light emitting diode housing may be fitted into the wall of the top moulding under the glass panel and is used to indicate alarm activation.

Interconnections between the electrical components in each part of the enclosure shell are made by means of a flying wiring loom. Adverse mechanical loading of the wiring loom is prevented by means of a restraint loop comprising an insulated stainless steel cable, the ends of which are anchored respectively in each part of the enclosure housing.

The equipment provides ingress protection levels of IP66 and IP67 and internal and external earthing facilities are provided.

ELECTRICAL SUPPLY RATINGS

i) For versions which are equipped with up to two microswitches only - the maximum values for each switch fitted are as specified in Table 1;

**TABLE 1**

| Voltage (d.c.) | Resistive Load (Amps) | Inductive Load (Amps) |
|---|---|---|
| 30 | 5 | 3 |
| 50 | 1 | 1 |
| 75 | 0.75 | 0.75 |
| 125 | 0.5 | 0.03 |
| 250 | 0.25 | 0.03 |

| Voltage (a.c.) | Resistive Load (Amps) | Inductive Load (Amps) |
|---|---|---|
| 125 | 5 | 5 |
| 250 | 5 | 5 |

13 **Schedule**

14 **EC-TYPE EXAMINATION CERTIFICATE N° BAS02ATEX2105X**

ii) For versions which are equipped with the encapsulated housing - the maximum system values are 24V and 0.05A or 6V and 0.2A independent of the number of units connected in the system. The alternative resistor values and electrical ratings are given in Table 2 below:-

**TABLE 2**

| | R1 min. | R2 min. | MAX VOLTAGE | MAX CURRENT |
|---|---|---|---|---|
| A | 100R | 250R | 24V | 0.05A |
| B | 250R | 47R | 6V | 0.2A |

**ASSOCIATED CERTIFIED ELECTRICAL COMPONENTS**

The following certified Components may be incorporated into the equipment:-

**TABLE 3**

| Certificate No | Description | Manufacturer / Type Designation |
|---|---|---|
| BAS01ATEX2358U | Micro Switch | SAIA-BurgessType E1V3CS/XXXX |
| BAS01ATEX2378U | Terminal | Weidmuller Type AKZ 4 |
| BAS01ATEX2378U | Terminal | Weidmuller Type AKZ 2.5 |

**VARIATION 0.1**

To permit the use of a Type BK6 Terminal Strip manufactured by Weidmuller and certified under BASEEFA EC-Type Examination Certificate No BAS98ATEX3084U.

To permit the use of an alternative red pigmented dough moulding compound for the enclosure.

In this form the equipment is identified as a **Type BG2E Break Glass Unit**.

**VARIATION 0.2**

To permit an alternative top enclosure shell which incorporates a revised actuator. To permit revised location of electrical components to obviate the need for an intershell flying wiring loom.

In this variation a single unit comprises a two part enclosure manufactured from a glass reinforced polyester dough moulding compound. The base shell of the enclosure contains all of the electrical components relevant to this apparatus comprising; a rail mounted terminal strip and optionally, an encapsulated housing equipped with resistors or a zener diode.

The top shell has an external projection which houses a mechanically protected spring loaded press button. This is held open by a spring loaded detent when it is in the non activated state. During alarm activation the button is forced along its housing and, by means of a spring loaded intermediate actuator, operates either one or two integral microswitches.

*Optionally, a light guide may be fitted into the face wall of the top moulding.* This is used, in conjunction with a light emitting diode housing fitted into the base shell, to indicate alarm activation.

13 **Schedule**

14 **EC-TYPE EXAMINATION CERTIFICATE N° BAS02ATEX2105X**

Interconnections between the electrical components in the base shell of the enclosure are made by means of an integral wiring loom.

The enclosure may be supplied as the black pigmented moulding without additional surface treatment or may be supplied coated externally with a pigmented epoxy paint system.

This variation of the apparatus is called a **Type PBE Press Button Unit**.

**ELECTRICAL SUPPLY RATINGS**

i) For versions which are equipped with up to two microswitches only - the maximum values for each switch fitted are as specified in Table 1.

ii) For versions which are equipped with the encapsulated housing - the maximum system values are 24V and 0.05A or 6V and 0.2A independent of the number of units connected in the system. The alternative resistor values and electrical ratings are given in Table 2.

**ASSOCIATED CERTIFIED ELECTRICAL COMPONENTS**

For certified Components which may be incorporated into the equipment see Table 3 above.

16 **Report No.**

01(C)1067

17 **Special Conditions For Safe Use**

1) The units must be incorporated in systems which limit the electrical supply ratings to the values above.

2) The wiring loom between the fixed and detachable enclosure shells must be located, during assembly, such that the conductors and the restraint loop are not trapped in the sealing face between the shells.

18 **Essential Health and Safety Requirements**

Essential Health & Safety Requirements not covered by Standards listed at (9) - None.

19 **DRAWINGS**

| Number | Sheet | Issue | Date | Description |
|---|---|---|---|---|
| 280-656 | 1 | A | 11.02.02 | General Arrangement-Type BGE |
| 280-656 | 2 | A | 11.02.02 | General Arrangement-Type BGE |
| 280-659 | - | A | 11.02.02 | Certification Label - Type BGE |
| 280-665 | - | A | 27.02.02 | Wiring Details |

13 **Schedule**

14 **EC-TYPE EXAMINATION CERTIFICATE N° BAS02ATEX2105X**

| Number | Sheet | Issue | Date | Description |
|---|---|---|---|---|
| 380-447 | - | A | 26.02.02 | General Arrangement-Type PBE |
| 380-449 | - | A | 26.02.02 | Certification Label - Type PBE |



**BASEEFA** List Keywords
2MISCELL