



**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 : **BASOIATEX1021**

**4** Equipment or Protective System: **HEAT DETECTOR TYPE DCD-1E-IS**

**5** Manufacturer: **HOCHIKI EUROPE**

**6** Address: **Gillingham, Kent, ME8 OSA**

**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°

**00(C)0649 dated 8 May 2001**

**9** Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 50014: 1999                      EN 50020: 1994                      EN 50284: 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:-

 **II 1 G                      EEx ia IIC T5 (T<sub>amb</sub> =55°C)**

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

File No: EECS 3642/02/002

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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**13 Schedule**

**14 EC-TYPE EXAMINATION CERTIFICATE N° BASOIATEX1021**

**15 Description of Equipment or Protective System**

**The Heat Detector Type DCD-1E-IS** is designed to detect combustion products in the air within a hazardous area and to provide an alarm indication on a locally mounted LED and also to safe area apparatus via a suitable interface.

The Heat Detector Type DCD-1E-IS comprises electronic surface mounted components, a number of wire ended components including LEDs and a photo detector mounted on a printed circuit board. The circuit board is encapsulated and mounted within a plastic enclosure. The heat detector sub assembly is mounted on a Base Unit Type YBN-R/4IS which incorporates the field terminals. The enclosure provides a degree of protection of at least IP20 to the electrical circuit and the apparatus is capable of withstanding a 500V test to earth. The enclosure may present a static hazard but is fitted with a suitable warning label. Cable entry to the field terminals is from the base of the enclosure.

Supply Input Terminals 2 and 6 OR Loop Output Terminals 1 and 5  
and Remote Indicator Alarm Terminals 1 and 4

$$U_i = 30V \quad I_i = 200mA \quad P_i = 1W \quad C_i = 0 \quad L_i = 0$$

$$U_o = U_i \quad I_o = I_i \quad P_o = P_i \quad C_i = 0 \quad L_i = 0$$

Note:- Terminals 1 & 2 are directly interconnected only when the smoke detector is fitted to the Base Unit and Terminals 6 & 5 are directly interconnected within the Base Unit. All inputs / outputs are derived from the common source.

Terminal 3 may be used for terminating cable screens.

**16 Report No.**

OI(C)0649

**17 Special Conditions for Safe Use**

None

**18 Essential Health and Safety Requirements**

| Essential Health and 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)0649 Clause 6.1.1.3 |
| 1.2.2   | Components for incorporation or replacement                      | Report No. 00(C)0649 Clause 6.1.2.2 |
| 1.2.5   | Additional means of protection                                   | Report No. 00(C)0649 Clause 6.1.2.5 |
| 1.2.7   | Protection against other hazards                                 | Report No. 00(C)0649 Clause 6.1.2.7 |
| 1.4.2   | Withstanding attack by aggressive substances                     | Report No. 00(C)0649 Clause 6.1.4.2 |



13

**Schedule**

14

**EC-TYPE EXAMINATION CERTIFICATE N° BASOIA TEX1281**

19

**DRAWINGS**

| <b>Number</b> | <b>Sheet</b> | <b>Issue</b> | <b>Date</b> | <b>Description</b>             |
|---------------|--------------|--------------|-------------|--------------------------------|
| 2-1-0-051-2   | 1/2          | 2            | 23/11/2000  | General Assembly               |
| 2-1-0-051-2   | 2/2          | 2            | 23/11/2000  | Circuit                        |
| 2-1-0-110-2   | 2            | 2            | 22/11/2000  | Component Layout               |
| 2-2-9-055-3   | 1/6          | 3            | 06/02/2001  | pcb Drilling                   |
| 2-2-9-055-3   | 2/6          | 3            | 06/02/2001  | pcb Track Solder Side A        |
| 2-2-9-055-3   | 3/6          | 3            | 06/02/2001  | pcb Solder Resist Side A       |
| 2-2-9-055-3   | 4/6          | 3            | 06/02/2001  | pcb Track Component Side B     |
| 2-2-9-055-3   | 5/6          | 3            | 06/02/2001  | pcb Solder Resist Side B       |
| 2-2-9-055-3   | 6/6          | 3            | 06/02/2001  | Silk Screen                    |
| 2-1-2-110     | 1            | 2            | 23/11/2000  | Component List                 |
| 2-1-2-110     | 2            | 2            | 23/11/2000  | Component List                 |
| 1217170-00-3  | 1/3          | 3            | 1/5/2001    | Enclosure Marking              |
| 1217170-00-3  | 2/3          | 3            | 1/5/2001    | Packing                        |
| 1217170-00-3  | 3/3          | 3            | 1/5/2001    | Cross Section Encapsulation    |
| 2-3-0-421-3   | 1/1          | 3            | 1/5/2001    | Printing Details               |
| 2-3-0-422-3   | 1/1          | 3            | 1/5/2001    | Name Label                     |
| 2-1-0-051     | 1            | 1            | 21/08/2000  | General Assembly Parts List    |
| 1217170-00    | 1            | 2            | 20/04/2001  | Packing Parts List             |
| *1226060-00   | 1            | 1            | 20/07/98    | BASE UNIT YBN-R/4IS PARTS LIST |
| *1226060-00-1 | 1            |              | 21/07/98    | BASE UNIT YBN-R/4IS GA         |
| *2-3-0-315-1  | 1            |              | 21/07/98    | BASE UNIT YBN-R/4IS LABEL      |
| *2-3-2-097-2  | 1            | 2            | 21/9/98     | Encapsulation                  |

\*These drawings are held with BASEEFA Certificate No Ex 98D2098

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**BASEEFA List Keywords**  
2SMOKDET