



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: Sira 02ATEX3390X

4 Equipment: SA87 HT Ignition Lead

5 Applicant: Igniters Combustion Engineering Limited

6 Address: Unit 6 Prospect Drive
Enterprise Industrial Estate
Lichfield
Staffs
WS14 9UX
England

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

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report number R53A9411A.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 1127-1:1997

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment 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. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 2G

IIC T6 Tamb -50°C to +60°C (fixed installations)

IIC T6 Tamb -35°C to +60°C (flexible installations)

Project Number 53A9411
Date 10 April 2003
C. Index 18

R. Cooper IEng LInstMC
Deputy Chief Executive

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SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

The SA87 HT Ignition Lead permits a quick release connection to fuel-burning apparatus. It consists of a high voltage (H.V.), quick release connector with an ATEX approved cable gland and a length of high voltage cable attached. It is suitable for a supply of 9,000 Volts.

The screened, single cored H.V. cable is a Type KWL 12G(ST)C11Y 0 manufactured by dsf Dietrich Schentke and can be used in fixed installations at -50°C to +60°C ambient and flexible installations at -35°C to +60°C ambient.

The cable gland may be any EEx d IIC or EEx e II ATEX approved cable gland, which is suitable for the cable i.e. clamps the cable screen securely.

The H.V. (socket type) connector on the cable is formed from four or five main parts. An optional, EEx d IIC ATEX certified bush (1) is fitted to the cable gland, this screws into the main body (2). Attached to the main body is a snout (3), gland nut (4) and locking nut (5).

A PTFE insulator sleeve is held within the (brass) snout (3). This snout is held in position by the extended (zinc plated mild steel) gland nut (4), and (brass) locking nut (5). Within the (zinc plated mild steel) main body (2), the cable is twisted around the brass connection (6) prior to soldering. Once completed, the connection screw is fitted into the said connection. To ensure the connection is rigid and the hazardous area is prevented from entering the assembly, the body is filled with encapsulant.

The cable screen is earthed via the cable gland, and hence to the earthed metal of the fuel-burning apparatus that it connects too.

The mating (plug type) part of the H.V. quick release connector is formed from either a PTFE or Nylon insulated column fitted with a spring loaded contact. Although this forms part of the fuel-burning apparatus, it was tested successfully within a IIC hazardous area.

14 DESCRIPTIVE DOCUMENTS

14.1	Drawing No.	Sheet	Rev.	Date	Title
	A2/1G/9448F	1 of 1	F	28 Mar 03	General Arrangement

14.2 Report No. R53A9411A

Date 10 April 2003

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Sira Certification Service

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- 15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)
- 15.1 The high voltage, quick release connector of the SA87 HT Ignition Lead shall only be connected to the mating parts of the fuel-burning apparatus, as shown on the certified drawings.
- 15.2 The free end of the SA87 HT Ignition Lead shall only be used with a suitable ignition coil, as specified by the manufacturer, that has a maximum voltage of 9KV.
- 15.3 The free end of the SA87 HT Ignition Lead shall either be terminated in a non-hazardous area or, if it is connected in a hazardous area, then it shall be suitably terminated and protected.
- 15.4 The SA87 HT Ignition Lead shall not be connected or disconnected when it is energised in a hazardous area.
- 15.5 The SA87 HT Ignition Lead shall not be energised in a hazardous area if the high voltage, quick release connector is separated from the fuel-burning apparatus.
- 15.6 The SA87 HT Ignition Lead has a minimum bending radius of 50mm for fixed installations and 120mm for flexible installations; therefore, it shall not be subjected to bends that are more onerous than these values.
- 15.7 When installed in fixed installations, the SA87 HT Ignition Lead shall only be used in an ambient temperature range of -50°C to +60°C, when used in flexible installations the ambient temperature range is -35°C to +60°C.

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in Report No. R53A9411A.

17 **CONDITIONS OF CERTIFICATION**

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.
- 17.3 When the SA87 HT Ignition Lead IS fully assembled, it shall be subjected to an electric strength test in accordance with clause 7.1 of EN 50019:2000. This test shall be performed at 19 000 V for 60 seconds and shall be applied between the centre core of the cable and cable screen/gland body.
- 17.4 This certificate relies on the following previously certified products. When used as part of the SA87 HT Ignition Lead, the key attributes listed in the table below shall still be maintained by their original certificate.

Description	Certificate No.	Key attributes
Any suitable ATEX approved cable gland	As appropriate	EEx d IIC or EEx e II
Any suitable ATEX approved threaded bush	As appropriate	EEx d IIC or EEx e II

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