

	<h2 style="margin: 0;">IR1xxx Series & IR2xxx Series</h2> <h3 style="margin: 0;">EU Declaration of Conformity EUD-0065</h3>
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PRODUCT SERIES:	IR1xxx Series	IR2xxx Series
PRODUCT TYPE:	Miniature Infrared Gas Sensing Head	
PRODUCT DESCRIPTION:	The IR1xxx Series miniature gas sensing heads are fully certified flameproof sensor heads containing an infrared emitter and detector.	The IR2xxx Series are miniature gas sensing heads containing an infrared emitter and detector that are certified as intrinsically safe for mining applications.
DECLARATION:	It is declared under our sole responsibility that the above products conform to the essential Health and Safety Requirements of the ATEX Directive 94/9/EC and are certified as a component under the following EC Type-Examination Certificates	
EC TYPE-EXAMINATION CERTIFICATES NOS.	Sira 99ATEX1121U	Sira 02ATEX2015U
ISSUED BY:	Sira Test & Certification Service (Notified Body Number 0518) Rake Lane Ecclestone Chester CH4 9JN UK	
HAVE BEEN ASSESSED TO THE FOLLOWING HARMONIZED STANDARDS:	<p style="text-align: center;">EN 60079-0:2006 Electrical apparatus for explosive gas atmospheres – General requirements.</p> <p style="text-align: center;">EN 60079-1:2007 Electrical apparatus for explosive gas atmospheres Flameproof enclosures “d”</p>	<p style="text-align: center;">EN 60079-0:2006 Electrical apparatus for explosive gas atmospheres – General requirements.</p> <p style="text-align: center;">EN 60079-11:2007 Explosive atmospheres Equipment protection by intrinsic safety “i”</p> <p style="text-align: center;">EN 50303:2000 Group I, Category M1 equipment intended to remain functional in atmospheres endangered by firedamp and/or coal dust</p>
PRODUCT MARKING:	II 2G Ex d IIC Gb Ta -20°C to +55°C	I M1 Ex ia I Ma Ta -20°C to +60°C



Richard Lane
Quality and Operations Manager



IR1xxx Series & IR2xxx Series

INSTRUCTIONS SPECIFIC TO HAZARDOUS AREA INSTALLATIONS

(Ref. EU ATEX Directive 94/9/EC, Annex II, 1.0.6)

1. The **IR1xxx Series** and **IR2xxx Series** Gas Sensing Heads are component approved only and may not be used as standalone items in a hazardous area without further protection.
2. The **IR1xxx Series** Gas Sensing Heads shall be protected from impact in service. The Sensing Head shall be mounted in a protective enclosure such that an impact of 7 J in accordance with EN60079-0:2006 clause 26.4.2 from any direction shall not cause the impact head to make contact with the Sensing Head.
3. For the purpose of determining the maximum surface temperature of the **IR1xxx Series** Gas Sensing Head, the thermal resistance does not exceed 25K/W. Tests indicated that as internal ignition raises the temperature of the mesh by a further 4.2 K (including a 1.2 safety factor)
4. The thermal resistance of the **IR2xxx Series** Gas Sensing Heads does not exceed 25 K/W, i.e. equivalent to a 68 K temperature rise at an input power of 2.71 W; this shall be taken into account when considering its surface temperature and the temperature classification of the equipment into which it is to be incorporated.
5. The **IR1xxx Series** and **IR2xxx Series** Gas Sensing Heads have not been assessed as a safety device (EHSR 1.5).
6. There are no user-serviceable parts in the component.
7. The end-user/installer shall be aware that the certification of the **IR1xxx Series** and **IR2xxx Series** Gas Sensing Heads relies on the following materials used in its construction, which are suitable for most common applications:

- EnclosureStainless steel
- MeshStainless steel
- BushingEpoxy resin

In accordance with the Note in EN60079-0:2006 clause 6.1(a), the end-user/installer shall inform the manufacturer of any adverse conditions that the **IR1xxx Series** and **IR2xxx Series** Gas Sensing Heads may encounter. This is to ensure that the **IR1xxx Series** and **IR2xxx Series** Gas Sensing Heads are not subjected to conditions that may cause degradation of these materials.

8. The **IR1xxx Series** Gas Sensing Head shall only be used in an ambient temperature range of -20 and +55 °C.
9. The **IR2xxx Series** Gas Sensing Head shall only be used in an ambient temperature range of -20 and +60 °C.
10. When used as an intrinsically safe galvanically-isolating device, the **IR1xxx Series** Gas Sensing Head has the following safety description:

All versions apart from the 7-pin types (IR1xEx, IR1xFx, IR1xGx, IR1xHx & IR1xTx), which cannot be used as intrinsically safe galvanically-isolating devices.

Lamp circuit	Detector Circuit	Lamp + detector circuits
Ui = 7.2 V	Ui = 10 V	Pi = 2.5 W

11. The **IR2xxx Series** Gas Sensing Head is a galvanically isolating device with infallible separations between the lamp and detector circuits up to 10 V. When used as an intrinsically safe galvanically-isolating device, the various versions of the **IR2xxx Series** Gas Sensing Head have the following safety descriptions:

7-pin and 8-pin versions (IR2xEx, IR2xFx, IR2xGx, IR2xHx & IR2xTx)

Lamp circuit	Detector Circuit	Lamp + detector circuits
Ui = 7.2 V	Ui = 10 V	Pi = 2.71 W
	Pi = 1.2W	

All other versions (IR2xxx Series Only)

Lamp circuit	Detector Circuit	Lamp + detector circuits
Ui = 7.2 V	Ui = 10 V	Pi = 2.71 W

12. The **IR1xxx series** and **IR2xxx Series** Gas Sensing Head is dust-proof (IP5x) but offers no protection against the ingress of water. Where protection in excess of IP50 is required, the apparatus into which the IR Head is installed shall provide the necessary ingress protection (for example by fitting an external semi-permeable membrane).

13. The certification marking for the **IR1xxx series** Gas Sensing Head is: Ex II 2G Ex d IIC Gb

14. The certification marking for the **IR2xxx series** Gas Sensing Head is: Ex I M1 Ex ia I Ma