

EU - TYPE EXAMINATION CERTIFICATE

Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

EU - Type Examination Certificate **Baseefa10ATEX0066X – Issue 10**
Number:

In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

Product: **ELDS Open Path Gas Detector System**

Manufacturer: **Senscient Limited**

Address: **Unit F1, Arena Business Centre, Holy Rood Close, Poole,
Dorset, BH17 7FJ, United Kingdom**

This re-issued certificate extends EC Type Examination Certificate No. **Baseefa10ATEX0066X** to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

SGS Fimko Oy, Notified Body number 0598, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The original certificate was issued by SGS Baseefa Ltd (UK Notified Body 1180). It, and any supplements previously issued by SGS Baseefa Ltd have been transferred to the supervision of SGS Fimko Oy (EU Notified Body 0598). The original certificate number is retained.

The examination and test results are recorded in confidential Report No. **See Certificate History**.

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

EN IEC 60079-0:2018 EN 60079-1:2014 EN IEC 60079-31:2024

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 product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

The marking of the product shall include the following:

Ex II 2 GD Ex db IIC T5 Gb
Ex tb IIC T100°C Db IP66/67 Tamb -40°C TO +60°C

SGS Fimko Oy Customer Reference No. **6228**

Project File No. **25/0222**

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Schedule

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Certificate Number Baseefa10ATEX0066X – Issue 10

15 Description of Product

The ELDS Transmitter and Receiver Units are rated at 24V d.c. (labelled from 18V to 32V) with a maximum power dissipation of 12 watts for the Tx and 10W for Rx.

Both units comprise a cylindrical enclosure manufactured in stainless steel with the transmitter unit being significantly longer than the receiver. The enclosure front cover includes a glass lens and is secured by 8 off M5 x 16 socket head cap screws of stainless steel grade A4-70. The rear of the unit is closed by a circular threaded cover.

The interiors of the enclosures are effectively divided into two compartments, the largest of which houses an assembly of electronic, mechanical, and optical devices to the form a transmitter or receiver unit dependant on the internal component configuration.

The transmitter unit contains an optical assembly, including a laser diode assembly, several control printed circuit boards (PCBs) and a small, sealed sample of a calibration gas. A window heater is affixed to the internal window surface. The transmitter also incorporates a small brushless motor which drives a flat diffuser disc to aid optical performance.

The receiver unit contains an optical receiver assembly, a window heater, and several signal processing printed circuit boards (PCBs).

An anti-tamper bar is fitted to each enclosure with a socket head cap screw securing the rear cover. This bar is fitted with a mounting boss, mounting facilities may be provided in the front cover via an adaptor ring.

An internal earthing point is provided adjacent to the supply terminals and external earth connection facilities are also provided.

The rear sections of the transmitter and receiver housings both incorporate connection facilities for the supply and signal cables and are provided with an M25 female thread in the side wall to accommodate a suitable cable entry device.

16 Report Number

See Certificate History.

17 Specific Conditions of Use

1. The Transmitter and Receiver units are to be mounted horizontally and protected from impact.
2. Other than the rear cover providing access to the terminals for connection purposes this unit is not intended to be opened in service and is to be returned to the manufacturer for service or repair.
3. The window holder fasteners are stainless steel grade A4-70.

18 Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
1.2.7	LVD type requirements
1.2.8	Overloading of equipment (protection relays, etc.)
1.4.1	External effects
1.4.2	Aggressive substances, etc.

19 Drawings and Documents

New drawings submitted for this issue of certificate:

None.

Current drawings which remain unaffected by this issue:

Number	Sheet	Issue	Date	Description
01-02-1792-X		6	08/07/21	Certification Label, Transmitter
01-03-1793-X		6	08/07/21	Certification Label, Receiver
01-02-1796-X		8	02/11/17	General Arrangement, Transmitter
01-03-1798-X		7	02/11/17	General Arrangement, Receiver
01-02-1852-X		1	01/04/10	Cylinder Assembly, Transmitter
01-02-1783-X		8	02/11/17	Lens, Transmitter
01-03-1782-X		6	02/11/17	Lens, Receiver
01-01-1788-X		3	17/06/10	Lens Retaining Ring
01-01-1789-X		5	06/09/16	Front Cover, Window Holder
01-01-1854-X		4	06/09/16	Front Cover, Window Holder, Duct Mount
01-01-1790-X		5	06/09/16	Rear Cover
01-03-1779-X		5	06/09/16	Body Casing, Receiver
01-02-1781-X		5	06/09/16	Body Casing, Transmitter
01-02-1851-X		4	07/05/19	Optics Mount, Transmitter
01-03-1780-X		3	12/04/13	Optics Mount, Receiver
01-01-1787-X		3	12/04/13	Earth Connection Assembly
01-02-1784-X		3	12/04/13	Terminal PCB, Transmitter
01-01-1785-X		4	12/04/13	Mounting/Cover Locking Bar
01-01-1791-X		3	17/06/10	System Assembly Drawing
01-01-1853-X	1-2	2	12/04/13	General Arrangement, Duct Mounting
01-01-1855-X		2	11/05/10	Adaptor Ring, Duct Mounting
01-01-2013-X		1	31/01/11	Adaptor Ring, Duct Mounting c/w Gas Cell Facility
01-01-2014-X		1	31/01/11	Adaptor Ring, Duct Mounting c/w Ductenna

These drawings are common to IECEx BAS 13.0015X, Baseefa10ATEX0066X and BAS21UKEX0151X.

20 Certificate History

Certificate No.	Date	Comments
Baseefa10ATEX0066X	24 June 2010	The release of the prime certificate. The associated test and assessment against the requirements of EN 60079-0:2006, EN 60079-1:2007, EN 61241-0:2006 and EN 61241-1:2004 is documented in Test Report No. 09(C)0810.
Baseefa10ATEX0066X/1	14 February 2011	To permit the addition of a radio frequency interrogation system (Bluetooth), introduction of a duct mounting adaptor ring incorporating a radio frequency antenna (a.k.a. 'Ductenna') and introduction of a duct mounting adaptor ring incorporating a slot to facilitate the use of sample gas cells for calibration. Baseefa certification report 11(C)0107 refers.
Baseefa10ATEX0066X/2	15 August 2011	To permit the use of an alternative supplier for the optical glass lens of the transmitter unit. Baseefa Certification report 11(C)0287 refers.

Certificate No.	Date	Comments
Baseefa10ATEX0066X/3	27 August 2013	To permit an amendment to the alternative supplier specification for the optical glass lens of the transmitter unit. To permit an amendment to the dimensions of the optical glass lens of the Transmitter Unit. To permit minor amendments to drawings, having no effect on certification. To assess against the standards EN 60079-0:2012 and EN 60079-31:2009. Baseefa certification report 12(C)0286 refers.
Baseefa10ATEX0066X/4	5 September 2014	To update the certification to the latest version of the standard EN 60079-31:2014. Baseefa Certification Report GB/BAS/ExTR14.0246/00 refers.
Baseefa10ATEX0066X/5	28 September 2016	To permit the use of an optional glass material of manufacture for both the Transmitter (Tx) and Receiver (Rx) lenses. To update the certification to the latest version of the standard EN 60079-1:2014. To remove the option of the aluminium alloy as a material of manufacture. To change the working voltage of the equipment to 18-32 Vdc. Baseefa Certification Report GB/BAS/ExTR15.0246/00 refers.
Baseefa10ATEX0066X/6	24 November 2017	To allow an optional glass material for manufacture of both the Transmitter (Tx) and Receiver (Rx) lenses of the Open Path Gas Detector System, and to remove the requirement for routine pressure testing when fitted with this material. SGS Baseefa report GB/BAS/ExTR17.0324/00 refers.
Baseefa10ATEX0066X/7	25 March 2019	To allow the ELDS open path gas detector system, which is currently certified for gas group IIB+H ₂ to be certified for the Gas group IIC. To assess the ELDS open path gas detector system against the standard EN IEC 60079-0:2018. SGS Baseefa report GB/BAS/ExTR18.0117/00 refers.
Baseefa10ATEX0066X/8	14 May 2019	To allow the TX optics piston to be manufactured as an option from stainless steel 316L. To allow for an alternative dimension and tolerance of the TX optics piston. SGS Baseefa report GB/BAS/ExTR19.0121/00 refers.
Baseefa10ATEX0066X Issue 9	23 August 2021	Minor drawing changes. SGS Baseefa report GB/BAS/ExTR21.0057/00 refers.
Baseefa10ATEX0066X Issue 10	3 June 2025	To assess the equipment against EN IEC 60079-31:2024. Certification report GB/SGS/ExTR25.0065/00 refers.
For drawings applicable to each issue, see original of that issue.		