

1 **EU - TYPE EXAMINATION CERTIFICATE**

2 **Component Intended for use on/in an Equipment or Protective System
Intended for use in Potentially Explosive Atmospheres
Directive 2014/34/EU**

3 EU - Type Examination Certificate **Baseefa07ATEX0060U – Issue 10**
Number:

3.1 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.

4 Product: **MiniPID or IonPID Range**

5 Manufacturer: **Ion Science Limited**

6 Address: **The Hive, Butts Lane, Fowlmere, Royston, SG8 7SL**

7 This re-issued certificate extends EC Type Examination Certificate No. Baseefa07ATEX0060U 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.

8 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 the product, as modified by this supplementary certificate, 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.

8.1 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. **GB/BAS/ExTR19.0246/00**

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

EN IEC 60079-0:2018 EN 60079-11:2012

except in respect of those requirements listed at item 18 of the Schedule.

10 The sign “U” is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.

11 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.

12 The marking of the product shall include the following:

 **II 1G Ex ia IIC Ga**

SGS Baseefa Customer Reference No. **2242**

Project File No. **19/0499**

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SGS Fimko Oy

Särkiniementie 3

P.O. Box 30 FI-00211 Helsinki Finland

Telephone +358 (0)9 696 361 Fax. +358 (0)9 692 5474

e-mail sgs.fimko@sgs.com

web site www.sgs.fi

Business ID 0978538-5



D BREARLEY
Certification
Manager

R S SINCLAIR

Authorised Signatory for SGS Fimko Oy

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Schedule

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Certificate Number Baseefa07ATEX0060U – Issue 10

15 Description of Product

The MiniPID STD or IonPID STD is designed to detect trace gases in a sample by detection of photo ionisation currents. It comprises electronic circuits on PCBs and a small cold discharge lamp, all contained in a cylindrical plastic enclosure with a removable grid assembly at one end (to enable replacement of the lamp when required), and three pins for electrical connection at the opposite end.

The parameters and code for this Component are:

Supply: $U_i = 6V, I_i = 3.3A$ peak or 272mA long term, $P_i = 1.1W, C_i = 7\mu F, L_i = 0$
Signals: $U_i = 10V, I_i = 10mA, P_i = 50mW, C_i = 0.12\mu F, L_i = 0$

or

All Lines: $U_i = 6V, I_i = 3.3A$ peak or 272mA long term, $P_i = 1.1W, C_i = 7.12\mu F, L_i = 0$

Ex ia IIC T4 Ga in a temperature range of -40°C to +55°C

If Supply P_i is limited to 1W, the temperature range becomes -40°C to +60°C

If Supply P_i is limited to 0.9W, the temperature range becomes -40°C to +65°C

The MiniPID REG or IonPID REG is the same as MiniPID STD or IonPID STD except that it has an internal voltage regulator to allow higher Supply voltage and the parameters and code are:

Supply: $U_i = 10V, I_i = 3.3A$ peak or 272mA long term, $P_i = 1.1W, C_i = 1.1\mu F, L_i = 0$
Signal: $U_i = 10V, I_i = 10mA, P_i = 50mW, C_i = 0.12\mu F, L_i = 0$

or

All Lines: $U_i = 10V, I_i = 3.3A$ peak or 272mA long term, $P_i = 1.1W, C_i = 1.22\mu F, L_i = 0$

Ex ia IIC T4 Ga in a temperature range of -40°C to +55°C

If Supply P_i is limited to 1W, the temperature range becomes -40°C to +60°C

If Supply P_i is limited to 0.9W, the temperature range becomes -40°C to +65°C

The MiniPID PLUS or IonPID PLUS is similar to the MiniPID STD or IonPID STD except that it is fitted with a 6 pin connector and has extra signal connections available for other circuit functions.

For this version the parameters and code are:

Supply: $U_i = 5V, I_i = 3.3A$ peak or 272mA long term, $P_i = 1.1W, C_i = 6\mu F, L_i = 0$
Signals: $U_i = 10V, I_i = 10mA, P_i = 50mW, C_i = 0.36\mu F, L_i = 0$

or

All Lines: $U_i = 5V, I_i = 3.3A$ peak or 272mA long term, $P_i = 1.1W, C_i = 6.36\mu F, L_i = 0$

Ex ia IIC T4 Ga in a temperature range of -40°C to +60°C

16 Report Number

GB/BAS/ExTR19.0246/00

17 Schedule of Limitations

1. The Component must be mounted within apparatus which provides ingress protection of at least IP20, protection against impact, and protection against possible electrostatic charging of the plastic enclosure.
2. No conductive surfaces or items to be mounted within 10mm creepage distance or 6mm clearance distance of the end cap (sensor face) unless either separated by 1mm of solid insulation or connected to the 0V of the supply to the Component.

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
1.4.1	External effects
1.4.2	Aggressive substances, etc.

19 Drawings and Documents

New drawings submitted for this issue of certificate:

Number	Sheet	Issue	Date	Description
ATEX0067	1 of 1	07	13/09/2019	Mini PID Series 4 GA
ATEX0070	1 of 1	3	30, Aug, 19	EHT Transformer Details

Current drawings which remain unaffected by this issue:

Number	Sheet	Issue	Date	Description
ATEX0060	1 of 1	6	04 Dec 17	MiniPID 3 Pin Component Layout
ATEX0061	1 of 1	8	04 Dec 17	MiniPID 3 pin Layers 1 + 2 Flexi PCB
ATEX0062	1 of 1	5	27, Apr, 10	MiniPID 3 pin, Layer 3+4 Rigid PCB
ATEX0063	1 of 1	5	27, Apr, 10	MiniPID 6 pin, Component Layout
ATEX0064	1 of 1	7	12, Nov, 15	MiniPID 6 pin Track Layers 1+2 Flexi PCB
ATEX0065	1 of 1	5	27, Apr, 10	MiniPID 6 pin, Layers 3+4 Rigid PCB
ATEX0066	1 & 2	9	30 April 2018	MiniPID – Critical Components Listing
ATEX0068	1 of 2	5	04 Dec 17	MiniPID 3 Pin Analogue Circuit Dia
ATEX0068	2 of 2	5	04 Dec 17	MiniPID 3 Pin EHT Circuit Dia
ATEX0069	1 of 2	4	24. Sept. 09	Analogue Circuits - 6 pin (Mini PID Plus)
ATEX0069	2 of 2	4	24. Sept. 09	EHT Circuits - 6 pin (Mini PID Plus)

These drawings are common to Baseefa07ATEX0060U and held with IECEX BAS 07.0030U

20 Certificate History

Certificate No.	Date	Comments
Baseefa07ATEX0060U	23 August 2007	The release of prime certificate covering Mini PID, Mini PID fused and Mini PID Plus. The associated test and assessment is documented in Test Report No. 04(C)0865.
Baseefa07ATEX0060U/1	7 November 2007	To permit various minor changes. These changes do not affect intrinsic safety. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR07.0146/00.
Baseefa07ATEX0060U/2	30 November 2007	To permit minor changes to the critical components list. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR07.0181/00.
Baseefa07ATEX0060U/3	24 September 2008	To delete Mini PID Fused which had never been manufactured. To carry out changes to the Mini PID and introduce Mini PID Reg and to add alternative model names. To add alternative values for Pi with corresponding alternative maximum ambient temperatures. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR08.0135/00.
Baseefa07ATEX0060U/4	28 May 2010	To permit changes to PCB layouts and circuits and to change values of Ci. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR09.0195/00.
Baseefa07ATEX0060U/5	19 October 2011	To change long term Ii to 272mA instead of 220mA. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR11.0231/00.
Baseefa07ATEX0060U Issue 6	8 February 2013	This issue of the certificate incorporates previously issued primary & supplementary certificates into one certificate and permits changes to the model names & to some component & PCB details. It also confirms that the component complies with EN60079-0:2012 and EN60079-11:2012. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR12.0273/00.
Baseefa07ATEX0060U Issue 7	15 December 2015	This issue of certificate permits a new ASIC with a conductive screen bonded over the ASIC. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR15.0/00. Project No. 15/0801
Baseefa07ATEX0060U Issue 8	22 March 2018	To permit minor electrical and PCB layout changes. The manufacturer address was also updated on page 1 of the certificate. The associated test and assessment is documented in report GB/BAS/ExTR18.0064/00, held with IECEx Certificate No. IECEx BAS 07.0030U Iss. 9 for Project number 17/0841.
Baseefa07ATEX0060U Issue 9	7 March 2019	To permit the use of alternative combined parameters for power and signal lines, to allow a replacement component, to modify the schedule of limitations and to confirm that the component complies with the requirements of EN IEC 60079-0: 2018. The associated test and assessment is documented in report GB/BAS/ExTR18.0329/00, held with IECEx Certificate No IECEx BAS 07.0030U Iss. 10 for Project 18/0825.
Baseefa07ATEX0060U Issue 10	24 October 2019	To permit a component change and update to the input parameters for the Standard MiniPID and IonPID. The associated test and assessment is documented in report GB/BAS/ExTR19.0246/00, held with IECEx Certificate No IECEx BAS 07.0030U Iss. 11 for Project 19/0499.
For drawings applicable to each issue, see original of that issue.		