

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: **Baseefa07ATEX0060U - Issue 7**

4 Equipment or Protective System: **MiniPID or IonPID Range**

5 Manufacturer: **Ion Science Ltd**

6 Address: **The Way, Fowlmere, Cambridgeshire, SG8 7UJ**

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 Baseefa, Notified Body number 1180, 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 No **GB/BAS/ExTR15.0368/00**

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

**EN60079-0:2012+A11:2013 EN60079-11:2012**

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. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include the following :

**⊕ II 1G Ex ia IIC T4 Ga For ambient temperature limits see schedule**

Baseefa Customer Reference No. **2242**

Project File No. **15/0801**

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**R S SINCLAIR**

**GENERAL MANAGER**

On behalf of SGS Baseefa Limited

13 **Schedule**

14 **Certificate Number Baseefa07ATEX0060U – Issue 7**

15 **Description of Equipment or Protective System**

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:  $U_i = 5V, I_i = 3.3A$  peak or 272mA long term,  $P_i = 1.1W, C_i = 7\mu F, L_i = 0$   
Signals:  $U_i = 10V, I_i = 10mA, P_i = 50mW, C_i = 0.12\mu F, L_i = 0$

Ex ia IIC T4 Ga in a temperature range of  $-40^{\circ}C$  to  $+55^{\circ}C$

If Supply  $P_i$  is limited to 1W, the temperature range becomes  $-40^{\circ}C$  to  $+60^{\circ}C$

If Supply  $P_i$  is limited to 0.9W, the temperature range becomes  $-40^{\circ}C$  to  $+65^{\circ}C$

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:  $U_i = 10V, I_i = 10mA, P_i = 50mW, C_i = 0.12\mu F, L_i = 0$

Ex ia IIC T4 Ga in a temperature range of  $-40^{\circ}C$  to  $+55^{\circ}C$

If Supply  $P_i$  is limited to 1W, the temperature range becomes  $-40^{\circ}C$  to  $+60^{\circ}C$

If Supply  $P_i$  is limited to 0.9W, the temperature range becomes  $-40^{\circ}C$  to  $+65^{\circ}C$

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:  $U_i = 10V, I_i = 10mA, P_i = 50mW, C_i = 0.36\mu F, L_i = 0$

Ex ia IIC T4 Ga in a temperature range of  $-40^{\circ}C$  to  $+60^{\circ}C$

16 **Report Number**

GB/BAS/ExTR15.0368/00

17 **Specific Conditions of Use**

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 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

As follows, in addition to those covered by the standards at item 9.

Clause	Subject	Compliance
1.2.7	LVD type requirements	Manufacturer responsibility
1.2.8	Overloading of equipment (protection relays, etc.)	User/Installer responsibility
1.4.1	External effects	User/Installer responsibility
1.4.2	Aggressive substances, etc.	User/Installer responsibility

## 19 Drawings and Documents

New drawings submitted for this issue of certificate:

Number	Sheet	Issue	Date	Description
ATEX0061	1 of 1	7	12,Nov,15	MiniPID 3 pin Track Layers 1+2 Flexi PCB
ATEX0064	1 of 1	7	12,Nov,15	MiniPID 6 pin Track Layers 1+2 Flexi PCB

Current drawings unaffected by this issue of certificate:

Number	Sheet	Issue	Date	Description
ATEX0067	1 of 1	04	08/11/2012	Mini PID Series 4 G A
ATEX0068	1 of 2	4	24.Sept.09	MiniPID 3 Pin Analogue Circuit Dia (MiniPID or MiniPID Reg)
ATEX0068	2 of 2	4	24.Sept.09	MiniPID 3 Pin EHT Circuit Dia (MiniPID or MiniPID Reg)
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)
ATEX0070	1 of 1	2	08,Aug,08	EHT Transformer Details
ATEX0060	1 of 1	5	27,Apr,10	MiniPID 3 pin, Component Layout
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
ATEX0065	1 of 1	5	27,Apr,10	MiniPID 6 pin, Layers 3+4 Rigid PCB
ATEX0066	1 & 2	7	12 Nov 12	Mini PID - Critical Components Listing

## 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.

Certificate No.	Date	Comments
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	16 December 2015	This issue of certificate permits a new ASIC with an extension to the RF screen to cover the ASIC. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR15.0368/00. Project No. 15/0801
For drawings applicable to each issue, see original of that issue.		