

## EC - TYPE EXAMINATION CERTIFICATE

### Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

- 3 EC - Type Examination Certificate Number: **Baseefa11ATEX0071X – Issue 1**
- 4 Equipment or Protective System: **RAYSTAT-EX-03 and RAYSTAT-EX-04 Electronic Thermostats**
- 5 Is held by: **Pentair Thermal Management Belgium NV**
- 6 Address: **Research Park Hassrode –Zone 2, Romeinsestraat 14, B-3001 Leuven, Belgium**
- 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's. **See Certificate History**
- 9 — Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN60079-0: 2009 EN60079-7: 2007 EN60079-18: 2009 EN60079-11: 2012 EN 60079-31: 2009**  
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 2 G D Ex e mb ia IIC T5 Ta -50°C to +60°C Gb Ex tb IIIC T100°C Ta -50°C to +60°C Db IP66**

Baseefa Customer Reference No. **5034**

Project File No. **12/0278**

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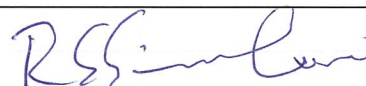
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R S SINCLAIR  
GENERAL MANAGER  
On behalf of SGS Baseefa Limited

13 **Schedule**

14 **Certificate Number Baseefa11ATEX0071 – Issue 1**

15 **Description of Equipment or Protective System**

The Types EX03 and EX04 Electronic Thermostats comprise an encapsulated control printed circuit board, with terminals and thumbwheel switches for adjusting the set temperature protruding from the potting. The enclosure may be manufactured from aluminium alloy or a non-metallic material.

The enclosure is a type 26... to certificate IECEx PTB 08.0003U or, a type 25... to IECEx PTB 08.0003U, the terminals are type BK12 and MK6/3 to certificates IECEx SIR 05.0035U or Sira 01ATEX3247U, IECEx SIR 05.0037U or Sira 01ATEX3249U respectively. The enclosure is provided with threaded cable entries, an earth assembly and a gland earthing plate.

The type EX04 is provided with an ambient air sensor and has a set point range of 0°C - 49°C, whereas the type EX03 is provided with a mineral insulated temperature sensor to control heating cables and has a set point range of 0°C - 499°C. Both sensors are Type RTL 617T to certificates IECEx BAS 11.0031X, or IECEx BAS 11.0035X or Baseefa11ATEX0062X or Baseefa11ATEX0070X.

Threaded holes are provided to facilitate the connection of external cables, via a suitably certified Ex e or Ex d cable gland to maintain the IP66 ingress protection of the enclosure.

Both types are rated up to 253V 0.5A, and have two relays for switching currents up to 16A each.

**Variation 0.1**

When the thermostats are connected to a 99-230Va.c. supply the thermostats are coded:-

**Ex e mb ia IIC T6 Ta -50°C to + 60°C Gb**

**Ex tb IIIC T85°C Ta -50°C to + 60°C Db IP66**

16 **Report Number**

GB/BAS/ExTR12.0084/00

17 **Specific Conditions of Use**

- 1 Not more than one single or multiple strand lead shall be connected to either side of the terminals, unless the conductors have been joined in a suitable manner, e.g. two conductors into a single insulated boot lace ferrule.
- 2 Leads connected to the terminals shall be insulated suitable for 255V and this insulation shall extend to 1mm of the terminal throat.
- 3 All terminal screws, used or unused, shall be tightened to between 0.5 Nm and 0.7 Nm.
- 4 The temperature at the sensor bulb shall not exceed 585°C  
The temperature of the sensor bulb was not considered in determining the T Class quoted on this certificate. Its temperature will match the T Class of the equipment to which it is attached.
- 5 The temperature at the cable gland shall not exceed 60°C.
- 6 The minimum bend radius is 6 times the diameter of the probe.
- 7 The minimum installation temperature of the probe is -50°C.
- 8 The probe gland must be tightened to a torque of 8Nm.

18 **Essential Health and Safety Requirements**

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

**19 Drawings and Documents**

New drawings submitted for this issue of certificate.

Number	Sheet	Issue	Date	Description
Baseefa11ATEX0064 – Issue 1				
* RGD 1102/109	-	2	29-07-2014	Raystat EX03 and EX-04 Base Label

\* These documents/drawings are common to and held with IECEx 11.0036X

There are no additional existing drawings associated with this certificate.

**20 Certificate History**

Certificate No.	Date	Comments
Baseefa11ATEX0071X	19 March 2012	The release of the prime certificate. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR12.0012/00.
Baseefa11ATEX0071X - Issue 1	4 August 2014	To permit minor changes to the PCB to incorporate additional components, to permit a change of the equipment name and to permit a change to the equipment label. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR12.0084/00.
For drawings applicable to each issue, see original of that issue.		