

1 **EU - TYPE EXAMINATION CERTIFICATE**

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

3 EU - Type Examination Certificate Number: **Baseefa17ATEX0052X**

4 Product: **Flameproof TC/RTD Assemblies With Terminal Head, Type PYRO S,
Type PYRO SAT and Type PYRO SRT**

5 Manufacturer: **Pyro Electric Instruments Goa Pvt. Limited.**

6 Address: **Plot No. 71, Bicholim Industrial Estate, Bicholim-Goa, 403 529, India**

7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 SGS Baseefa, Notified Body number 1180, 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 examination and test results are recorded in confidential Report No. **GB/BAS/ExTR18.0078/00**

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

EN IEC 60079-0: 2018 EN 60079-1: 2014 EN 60079-7: 2015

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

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 2 G Ex db eb IIC T6...T1(*) Gb (Tamb = -20°C ≤ Ta ≤ +60°C) (*) Refer to schedule.

SGS Baseefa Customer Reference No. **7276**

Project File No. **17/0104**

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SGS Baseefa Limited

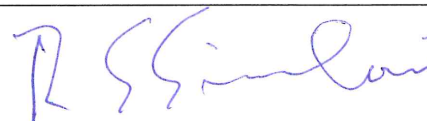
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R S SINCLAIR
TECHNICAL MANAGER

On behalf of SGS Baseefa Limited

13

Schedule

14

Certificate Number Baseefa17ATEX0052X

15 Description of Product

The Type PYRO S, Type PYRO SAT and Type PYRO SRT Flameproof TC/RTD assemblies with terminal head are rated up to 20 mA, 24 VDC, 900 mW.

The equipment comprises terminal head in type of protection flameproof “Ex db”, temperature probe in type of protection “Ex eb” and thermowell. The terminal head contains a terminal block for terminating sensor leads.

The spring loaded temperature probe which is a mineral insulated austenitic seamless steel tube, tightly packed with Magnesium Oxide powder. The temperature probe composed of 2,3 or 4 wire temperature sensing device run through the metal tube and the magnesium oxide powder helps keep these wires insulated and separated. Austenitic steel probe is TIG welded with steel cap at one end and had a potted seal at the other end. The probe can have a length up to 3000 mm and diameter from 3mm to 10mm.

Stainless steel sleeve (extension), which is threaded at both the ends is provided for attachment to the thermo well and for the attachment to the terminal head housing.

The spring loaded temperature probe is guided and protected inside steel sleeve and threaded thermo well.

The terminal head is provided with maximum 2 cable entries of size M20 X 1.5P , alternate size can be 1/2” NPT or 3/4” NPT. The cable entries have a threaded axial length of 14 mm. When required second threaded entry can be utilised for elbow adapter of size M20 X 1.5 or 1/2”NPT(Male) to 1/2” NPT OR M20 X 1.5(Female).

The terminal head is provided with internal tapped hole with a threaded axial length of 15 mm at the base to accommodate the sensor probe assembly. The thread size can be M20 X 1.5P , M24 X 1,5P, 1/2” NPT or 3/4” NPT.

The temperature probes are rated up to 20 mA and 24 VDC.

TABLE – 1

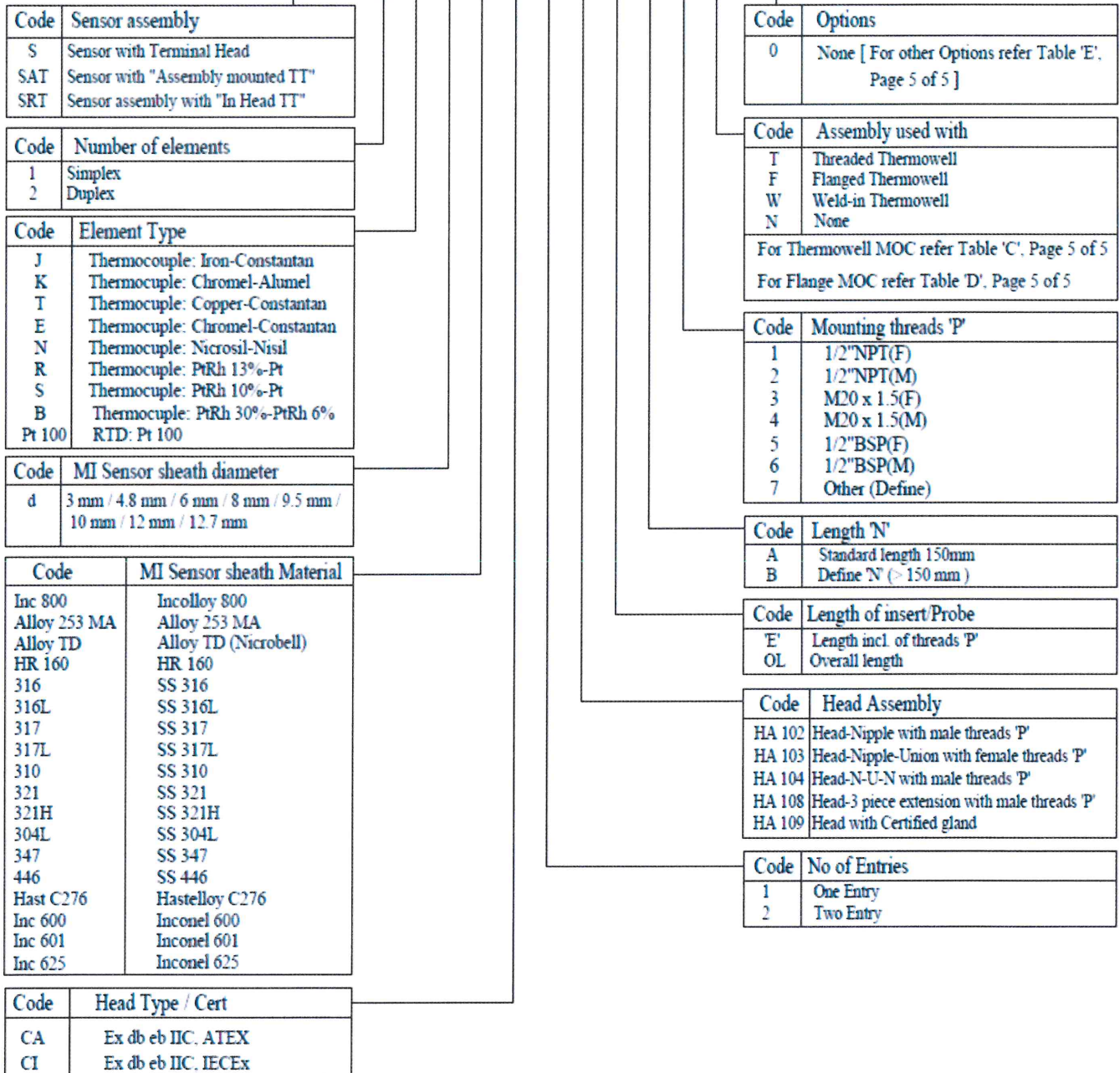
The maximum surface temperature due to process conditions (TP) is the maximum surface temperature of any part of the sensor in contact with the explosive atmosphere.

The relationship between equipment (*) temperature class, ambient temperature range and process temperature range is as described in table below:-

Ambient temperature	Temperature Class (*)	Process temperature (TP) range.
-20°C to +60°C	T6	-20°C to +80°C
-20°C to +60°C	T5	-20°C to +95°C
-20°C to +60°C	T4	-20°C to +130°C
-20°C to +60°C	T3	-20°C to +195°C
-20°C to +60°C	T2	-20°C to +290°C
-20°C to +60°C	T1	-20°C to +440°C

MODEL DECODING :

PYRO



16 Report Number

SGS Baseefa report number GB/BAS/ExTR18.0078/00.

17 Specific Conditions of Use

- 1) Only one elbow may be used between the enclosure and the cable entry device.
- 2) If elbow is used with lock nut it must be ensured that there are five full threads engaged prior to tightening of the lock nut.
- 3) The thermowell for the temperature probe must be fitted to protect the probe from high risk of mechanical danger.
- 4) A suitable ATEX Equipment certified Ex db IIC cable gland shall be used which provides the degree of protection of IP 68 (1.05 meter below the surface of water for 24 hours)
- 5) A suitable ATEX Equipment certified Ex db IIC blanking plug shall be used to close off any unused entries which provides the degree of protection of IP 68 (1.05 meter below the surface of water for 24 hours).
- 6) The fastening screws for terminal block shall be stainless steel socket head cap screws of property class A2-70 and yield stress 450 MPa.
- 7) No modification permitted to equipment as the manufacturer has maintained more stringent gap and flame path length than required by the standard. User must refer to manufacturer before carrying out any repairs to the equipment. The gaps observed in this report must never be exceeded.
- 8) The service temperature -20°C to +100°C of the cemented joint at the base of the terminal head shall not be exceeded.

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

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
PCRT-15.029	01 of 05	0	22/01/2018	Pyro Ex d Series TC/RTD Assemblies With Terminal Head
PCRT-15.029	02 of 05	0	22/01/2018	Pyro Ex d Series TC/RTD Assemblies With Terminal Head
PCRT-15.029	03 of 05	0	22/01/2018	Pyro Ex d Series TC/RTD Assemblies With Terminal Head
PCRT-15.029	04 of 05	0	22/01/2018	Model De-Coding Chart For RTD & TC Assemblies
PCRT-15.029	05 of 05	0	22/01/2018	Model De-Coding Related Detail Tables
PYRO/PRO/PROD/ POT-INS/26	1-4	01	27.10.18	Procedure for potting of inserts
P/QC/Ex-CPC/29	1	00	4.10.2019	Database of thermocouple sheath material.

These drawings are common to, and are held with, IECEx BAS 17.0037X