



Intertek



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: **ITS13ATEX17816X**

4. Equipment or Protective System: **Thermal Sensors**

5. Applicant : **SENMATIC A/S.**  
Address : **Industrivej 8, DK-5471 Soendersoe, Denmark**

6. Manufacturer : **as above**  
Address

7. This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

8. Intertek Testing and Certification Limited, notified body number 0359 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 Intertek Report Ref. G101231657 dated October 2013.

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0: 2012, EN60079-1: 2007, EN 60079-31: 2009, and EN 60079-26: 2007 except in respect of those requirements referred to 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 of the specified equipment or protective system. Further requirements of this Directive apply to the manufacture and supply of this equipment or protection system.

12. For marking Information see schedule:



II 1/2 GD

Ex d IIC T4 Tamb -40°C to +95°C Ga/Gb

Ex ta IIIC T135°C Tamb -40°C to +95°C Da

**Intertek Testing & Certification Limited**  
**Intertek House, Cleeve Road, Leatherhead, Surrey, KT22 7SB**  
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<http://www.intertek.com>

**Registered No 3272281 Registered Office: Academy Place, 1-9 Brook Street, Brentwood, Essex, CM14 5NQ**



**Andrew Austin**  
**Certification Officer**  
**31 October 2013**

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## 13. Schedule

14. EC-TYPE EXAMINATION CERTIFICATE NUMBER ITS13ATEX17816X

## 15. DESCRIPTION OF EQUIPMENT OR PROTECTIVE SYSTEM

The Thermal Sensors comprise a stainless steel sensor connected to a component certified, flameproof, cast aluminium alloy terminal head.

The available types are as follows:

Type OPE, which can have a welded-in sheath of 9 mm diameter or a 6 mm diameter sheath which must be used with the type LOS thermowell for mechanical protection KT19 8DA.

Type OPX, which has a reduced tip size for faster response and is welded to a mounting flange.

All types can have a PT or NTC sensing element, with or without an incorporated transmitter

The terminal head has EPL Gb/Da and the probe tip has EPL Ga/Da

The following types are included

### Type OPE

Immersion/L1/mm  
min. 100 mm  
max. 2000 mm .....

Sheath dia./wallth./mm  
Ø9 .....  
Ø6 only Atax approved  
when ordered w. type LOS

Extension length/L2/mm  
80 mm .....  
145 mm .....  
240 mm .....

#### Mounting thread

1/2" NPT .....  
1" NPT .....  
1/2" BSP .....  
3/8" BSP .....

#### Number of conductors

2 cond. ....  
3 cond. ....  
4 cond. ....  
3 cond. prepared for transmitter .....  
4 cond. prepared for transmitter .....  
FF bus, 5350A .....

V3.5

Cable outlet  
1 1/2" NPT  
2 1/2" BSP

Temperature range  
1 ... -50 / +500°C

Tolerance Class/DIN  
1 ..... Cl. A : ±0.15°C  
2 ..... Cl. B : ±0.3°C  
3 ..... 1/3 DIN : ±0.1°C  
4 ..... 1/6 DIN : ±0.05°C

Resistance in ohms at 0°C  
1 100  
2 Others on request

Number of elements  
1 ..... 1×Pt  
2 ..... 2×Pt on special request  
3 ..... 1×NTC

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## V3.3

1/2"NPT  
1/2"BSP

**Temperature Range**  
-50 / -500°C

**Tolerance Class/DIN**  
 Cl. A :  $\pm 0.15^{\circ}\text{C}$   
 Cl. B :  $\pm 0.3^{\circ}\text{C}$   
 1/3 DIN :  $\pm 0.1^{\circ}\text{C}$   
 1/6 DIN :  $\pm 0.05^{\circ}\text{C}$

**Resistance in Ohms at 0°C**  
100  
Others on request

2 cond. ....	.....
3 cond. ....	.....
4 cond. ....	.....
3 cond. prepared for transmitter .....	.....
4 cond. prepared for transmitter .....	.....

**Number of Elements**  
1×Pt  
2×Pt on special request

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### Type LOS

**Thermowell - Imm./L1/ mm**  
**(Sensor - Imm./L1 + 15 mm)**  
 min. 140 mm  
 max. 3000 mm  
 Optional length

**Sheath dia./Wall thickness**  
 16×3 .....  
 21.3×2.65 .....



V3.2

**Mounting Thread**  
 1 ..... 1/2"NPT  
 2 ..... 1/2"BSP

**Process Connection**

1	.....	1.5" ANSI 150 PSI
2	.....	2" ANSI 150 PSI
3	.....	1.5" ANSI 300 PSI
4	.....	2" ANSI 300 PSI
5	.....	DN50/PN10-PN16
6	.....	DN50/PN40
7	.....	1" ANSI 300 PSI
8	.....	DN25/PN40
9	.....	1" NPT nipple
10	.....	DN50/PN25
11	.....	DN25/PN25
12	.....	4" ANSI 300 PSI
13	.....	DN40/PN40

## 16. REPORT NUMBER

Intertek Report No. G101231657 dated October 2013.

## 17. SPECIAL CONDITIONS FOR SAFE USE

### (a) Special conditions for safe use

- For temperatures below -20°C and above +70°C only cable suitable for the temperature must be used
- Any Dust layer must not exceed 50 mm
- Probes must be protected from any kind of mechanical Impact
- Sensor types OPE with diameter  $\varnothing 6$  may only be used when mounted into Thermowell type LOS.
- The connection head must be protected from radiated and conducted heat from the process so that the temp is not exceeded

### (b) Conditions for Use (Routine Tests)

- Routine pressure test at 50 bar.

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18. ESSENTIAL HEALTH AND SAFETY REQUIREMENTS (ESHR'S)

The relevant EHSR's that have not been addressed by the standards listed in this certificate have been identified and assessed in Intertek Report Ref. G101231657 dated October 2013.

### 19. DRAWINGS

Drawing Number	Revision	Date of Revision	Drawing Description
304-0490 sheets 1 and 2	3	07.04.09	OPE Lomme ½" NPT
304-0491 sheets 1 and 2	3	07.04.09	OPE Lomme ½" BSP
304-0092 sheets 1 and 2	3	07.04.09	OPE Lomme 3/8" BSP
304-0493 sheets 1 and 2	4	09.08.2013	OPE Lomme 1" NPT
304-0494 sheets 1 and 2	2	10.07.2013	OPX POCKET
700-0092 sheets 1 and 2	3	07.04.09	OPE Lomme 3/8" BSP
700-0093 sheets 1 and 2	6	26.06.2013	Type-OPE Open
700-0094 sheets 1 and 2	6	26.06.2013	Type-OPE med lomme
700-0095 sheets 1 and 2	3	26.06.2013	Type-OPX
700-1102 sheets 1 and 2	2	10.07.2012	MMI Ø6 med sokkel
700-1265 sheets 1 and 2	2	22.03.2011	MMI Ø6 INDSATS
1401-117 sheets 1 and 2	3	10.07.2013	Type LOS Ø16 (POCKET FOR OPE)
1401-118 sheets 1 and 2	3	22.11.2011	TYPE-LOS Ø21,3 (POCKET FOR OPE)
103-452	2	16.10.2013	Installation guide / data sheet OPE/OPX/LOS

*This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.*

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