



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: **ITS11ATEX17425X**

4. Equipment or Protective System: **Model 6400TSG**

5. Manufacturer: **TELEDYNE ANALYTICAL INSTRUMENTS  
A BUSINESS UNIT OF TELEDYNE INSTRUMENTS, INC**

6. Address: **16830 Chestnut Street, City of Industry, California 91748. USA**

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. 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 11054584A1 dated December 2011

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with standards EN 60079-0:2009 & EN 60079-2:2007 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 and construction of the specified equipment or protective system in accordance to the directive 94/9/EC. 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 Ex px IIC T3 Gb



P Rawlinson,  
Certification Officer  
6<sup>th</sup> February 2011

Intertek Testing & Certification Limited  
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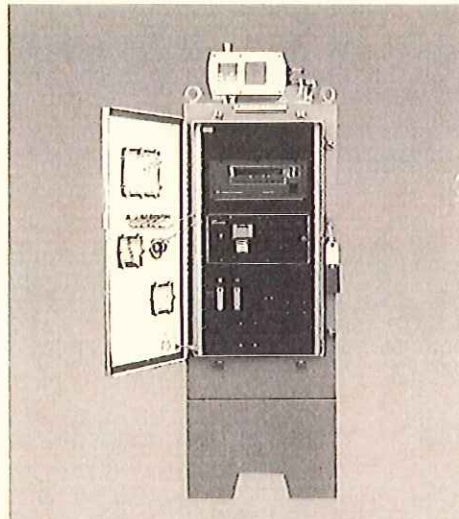




- 13. SCHEDULE
- 14. EC-TYPE EXAMINATION CERTIFICATE NUMBER ITS11ATEX17425X
- 15. Description of Equipment or Protective System

The Model 6400TSG Analysis System is designed for measuring the total sulfide concentration in a fuel gas. It consists of 3 main instruments: a Model 6400E UV Fluorescence SO<sub>2</sub> Analyzer, a Flame Combustion Converter, and a sample system. The system requires interfacing with the customer's sample/calibration gas switching and control system.

The purged enclosure is a metallic housing with the overall dimensions of 48" (height without stand) x 30" (depth) x 25.06" (width). The front of enclosure door has 3 certified viewing windows. Access to the enclosure is made either through the front of the enclosure or the rear both require a tool to gain access.



Model 6400TSG (front view)

The enclosure has the following purge parameters.

Minimum Purge Flow Rate	340SLPM N2 or Air
Minimum Purge Duration	6 minutes
Enclosure min. overpressure	6.9 mbar
Enclosure max. overpressure	12mbar
Supply min overpressure	4 bar
Supply max overpressure	5.5 bar
Maximum leakage rate	36 SLPM @ 12 bar
Category of internal release	Limited
Maximum release flow rate	H2 380 SCCM @ 2 bar CH4 1.5 SLPM @ 2 bar

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13. SCHEDULE

14. EC-TYPE EXAMINATION CERTIFICATE NUMBER ITS11ATEX17425X

16. Report Number:

Intertek Report 11054584A1 dated December 2011

17. CONDITIONS OF CERTIFICATION:

(a). Special Conditions for safe use

a) The end user must supply a flow restriction device that limits the flow to the containment system as follows

1. H2 to 380 SCCM at 2 BarG max
2. CH4 to 1.5 SLPM at 2 BarG max

b) Temperatures at the cable entry point could exceed 70°C and 80°C at the branching point. Selection of cable must be appropriate for the ambient temperature range.

c). Refer to drawing number D84709-7 for correct replacement of cable entries.

d) The manufacturers operating and maintenance instructions shall always be followed.

e) Internal battery to be replaced by the manufacturer only.

(b). Conditions For Use (Routine Tests)

- Functional test of safety devices shall be verified and recorded.
- Leakage test shall be carried out in accordance with EN 60079-2:2007 clause 16.2 and recorded.
- The containment system shall be tested in accordance with EN 60079-2:2007 clause 16.7 and results recorded.

18. Essential Health and Safety Requirements (EHSR's)

The relevant EHSR's have been identified and assessed in Intertek Report 11054584A1 dated December 2011.

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- 13. SCHEDULE
- 14. EC-TYPE EXAMINATION CERTIFICATE NUMBER ITS11ATEX17425X

19. Drawings and Documents

Number	Title	Issue	Date
C-85382	Fabrication Detail, ATEX Label	0	12/12/11
D-84709	Outline Diagram Analyser in natural Gas Model 6400 TSG (page 1 to 2)	7	10/31/11
B-86355	Tag detail Warning Label Pressurized Enclosure	0	11/04/11
B-86356	Tag Detail Warning Label Asphyxiation Risk	0	11/04/11
B-80321	Piping Diagram Combustion Convertor	2	08/26/08
D-75124	Gas Control Module Combustion Convertor (page 1 to 3)	6	3/15/11
D-86610	Outline Diagram General Arrangement Model 6400E	0	12/14/11

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1. **SUPPLEMENTARY EC-TYPE EXAMINATION CERTIFICATE**
2. **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**
3. Supplementary EC-Type Examination Certificate Number: **ITS11ATEX17425X/1**
4. Equipment or Protective System: **Model 6400TSG**
5. Manufacturer: **Teledyne Analytical Instruments Inc**
6. Address: **16830 Chestnut Street, City of Industry, California 91748. USA**
7. This supplementary certificate extends EC-Type Examination Certificate Number **ITS11ATEX17425X** to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said Certificate but having variations specified in the Schedule attached to this certificate and the documents therein referred to.

Intertek Report Ref Issue G100720431, dated July 2012

This Supplementary Certificate shall be held with the original Certificate

ITS11ATEX17425X Dated 6<sup>th</sup> February 2012



**A T Austin**  
**Certification Officer**  
**August 2012**

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## Schedule

SUPPLEMENTARY EC-TYPE EXAMINATION CERTIFICATE NUMBER: ITS11ATEX17425X/1

### VARIATION ONE

#### Description of the Variation to the Equipment or Protective System.

To permit the following change:

The addition of a wall mounted 6400TSG Analysis System designed for measuring the total sulfide concentration in a fuel gas. The introduction of an airflow manifold system allows air to flow through the 3 main instruments: a Model 6400E UV Fluorescence SO<sub>2</sub> Analyzer, an electronics housing and a Flame Combustion Converter housing in a different combination per the original certificate into the main enclosure. The system requires interfacing with the customer's sample/calibration gas switching and control system.

The purged enclosure is a metallic cold rolled steel housing with the overall dimensions of 49.49 (1257.05) (height) x 13.73" (348.66) (depth) x 35.99" (914.24) (width). The front of enclosure door has 1 certified viewing window. Access to the enclosure is made through the front of the enclosure requiring a tool via 8 fasteners.

#### Model 6400TSG Wall mounted version

The enclosure has the following purge parameters

Minimum Purge Flow Rate	340SLPM
Minimum Purge Duration	10 minutes (15 mins N2)
Enclosure min. overpressure	3.6 mbar
Enclosure max. overpressure	15 mbar
Supply min overpressure	4 bar
Supply max overpressure	5.5 bar
Maximum leakage rate	40 SLPM @ 12 mbar
Category of internal release	Limited
Internal Free volume	339.8 litres

#### Maximum release flow rate

H2 380 SCCM @ 2 bar  
CH4 1.5 SLPM @ 2 bar

#### Model 6400TSG (original)

The enclosure has the following purge parameters

Minimum Purge Flow Rate	340SLPM
Minimum Purge Duration	6 minutes
Enclosure min. overpressure	6.9 mbar
Enclosure max. overpressure	12mbar
Supply min overpressure	4 bar
Supply max overpressure	5.5 bar
Maximum leakage rate	36 SLPM @ 12 m bar
Category of internal release	Limited

#### Maximum release flow rate

H2 380 SCCM @ 2 bar  
CH4 1.5 SLPM @ 2 bar

#### Report No.

Intertek Report Ref: G100720431, dated July 2012

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## Schedule

SUPPLEMENTARY EC-TYPE EXAMINATION CERTIFICATE NUMBER: ITS11ATEX17425X/1

### CONDITIONS OF CERTIFICATION

- (a) Special Conditions for Safe Use:
1. The end user must supply a flow restriction device that limits the flow to the containment system as follows  
H2 to 380 SCCM  
CH4 to 1.5 SLPM
  2. Temperatures at the cable entry point could exceed 70°C and 80°C at the branching point.  
Selection of cable must be appropriate for the ambient temperature range.
  3. Refer to drawing number D84709-7 for correct replacement of cable entries.
  4. The manufacturer's operating and maintenance instructions shall always be followed.
  5. Purge Control Unit (PCU) shall be running at 12 CFM (340 LPM) in continuous flow mode and installed in accordance with the X condition's of the PCU.
  6. Entries into the enclosure shall be metal and maintain IP40 Min.
  7. Internal battery to be replaced by manufacturer.
- (b) Conditions for Use (Routine Tests):
- Functional test of safety devices shall be verified and recorded.
  - Leakage test shall be carried out in accordance with EN 60079-2:2007 clause 16.2 and recorded.
  - The containment system shall be tested in accordance with EN 60079-2:2007 clause 16.7 and results recorded.
  - Deflecting plate shown on drawing D-88975 sheet 5 of 5 to be in place, prior to shipping

### Essential Health and Safety Requirements

See original certificate

### DRAWINGS

Number	Issue	Date	Description
C-89545	0	06/28/12	Fabrication detail ATEX Label MDL 600TSG Wall Mount
B-86355	0	11/04/11	Tag Detail Warning Pressurized Enclosure
B-86356	0	10/31/11	Tag Detail Warning Label Asphyxiation Risk (Inert gas only)
D-88975	3	08/01/12	Outline Diagram Analyzer in Natural Gas Model 6400 TSG Wall Mount (sheets 1 to 5)
D-88871	2	5/11/2012	Sub-assembly Combustion Converter
D88967	2	6/13/2012	Sub-assembly Control Unit Combustion Converter

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