

PRODUCT DATA SHEET

888L Sulfur Recovery Tail Gas Analyzer

User interface can be placed in an existing shelter

A variation of the field proven 888 top-of-the-pipe air demand analyzer, the 888L enables users to remotely mount the analytical sample cell oven and electronics section away from the sample point. The 888L consists of three key components:

1. Remote demister probe installed at the sample tap
2. Heated sample lines
3. Analyzer assembly with user interface

Reliability

The 888L takes reliability to the next level by providing solutions to the four most common external failure modes:

1. Automatic flow adjustment for proactive response to adverse process conditions
2. Flange temperature alarm for early warning of poor-quality steam
3. Extended ambient temperature range to 60°C (140°F)
4. Integrated steam blowback (optional) to remove ammonia salts and other impurities

Safety

This unit includes many features to operate safely in hazardous locations.

- Process isolated demister
- Complete isolation from the process with optional double block valves
- Remote PC web-enabled interface

Maintenance/service

Based upon feedback from operations, analyzer technicians and process engineers the 888L includes smart diagnostic models to identify, communicate, and react to potential problems.



KEY BENEFITS

- Flange temperature alarm (to warn of wet steam)
- Rated to 60°C (140°F) ambient temperature
- No shelter required, IP65/NEMA 4X rated (user interface and oven can be shelter-based)
- Safe process isolation during service and installation
- Five-year lamp life
- Smart maintenance predicting diagnostics

APPLICATIONS

- Conventional Claus sulfur recovery
- Super Claus sulfur recovery
- Sub dew point Claus process
- Sulfur storage

KEY MARKETS

- Refining
- Gas processing
- Steel production/coke ovens
- Petrochemical

PERFORMANCE SPECIFICATIONS

Methodology	Non-dispersive ultraviolet
Measurement range	SO ₂ : 0-1%; H ₂ S: 0-2% (standard output range; other ranges available); air demand, excess H ₂ S or excess SO ₂ (as control outputs)
Accuracy	±1% of full scale
Reproducibility	±1% of full scale
Speed of response	90% in less than 15 seconds, typical. Sample line length will impact response time
Calibration	Automatic multi-point photo span validation
Sample flow	1-2 L/min typical
Outputs (analog & digital)	Four 4-20 mA, self-powered, linear, 1000 ohms load proportional to H ₂ S, SO ₂ , and either excess H ₂ S or ratio Four programmable relay contacts (30 VAC, 60 VDC, 50 VA, resistive load) RS485 Serial Communication Port, two-wire Ethernet: 10/100BaseT(X)
Inputs	One isolated digital input, contact closure, 5 VDC @ 2.5 mA
Communication	RS485 serial port, Ethernet, Modbus. Remote dial-in capabilities available with AMETEK web-enabled software
Ambient shaded temperature	-20 to 60°C (-4 to 140°F)
Process sample pressure	Typically slightly above atmospheric pressure
Customer-supplied items	2" 150# or DIN equivalent RF stainless steel flange connection
Ingress protection	IP65 (NEMA 4)
Enclosure material	316 stainless steel and cast aluminum
Physical dimensions (W x H x D)	Probe enclosure: 68.1 x 70.7 x 31.2 cm (26.8 x 27.9 x 12.3 in.) Cell and electronics enclosure back panel: 111.8 x 155.4 x 46 cm (44 x 61.2 x 18.1 in.)
Approximate weight	Cell/electronics assembly: ATEX/IECEX Zone 1: 163.3 kg (360 lbs.); NRTL Class I Division 2: 136.1 kg (300 lbs.) Probe enclosure: With steam blow back: 40.8 kg (90 lbs.); without steam blowback: 36.3 kg (80 lbs.)
Electrical	120 or 240 VAC 50/60 Hz 1000W, single phase
Instrument air/nitrogen	517 to 655 kPa (75-95psig)
Purge Air (Zone 1 analyzers only)	345 to 690 kPa (50-100psig)
Steam pressure	517 to 690 kPa (75-100 psig) for optional jacketed ball valve 207 to 345 kPa (30-50 psig) for optional blow back for ammonia salts
Approvals and certification	Meets ATEX, IECEX, CSA, and UL hazardous area requirements. Please consult AMETEK for specific details.

SALES, SERVICE & MANUFACTURING

USA - Pennsylvania

150 Freeport Road
Pittsburgh PA 15238
Tel: +1 412 828 9040
Fax: +1 412 826 0399

USA - Delaware

455 Corporate Blvd.
Newark DE 19702
Tel: +1 302 456 4400
Fax: +1 302 456 4444

Canada - Alberta

2876 Sunridge Way NE
Calgary AB T1Y 7H9
Tel: +1 403 235 8400
Fax: +1 403 248 3550

WORLDWIDE SALES AND SERVICE LOCATIONS

USA

Tel: +1 713 466 4900
Fax: +1 713 849 1924

Brazil

Tel: +55 19 2107 4100

Germany

Tel: +49 2159 9136 0
Fax: +49 2159 9136 39

India

Tel: +91 80 6782 3200
Fax: +91 80 6780 3232

Singapore

Tel: +65 6484 2388
Fax: +65 6481 6588

China

Beijing
Tel: +86 10 8526 2111
Fax: +86 10 8526 2141
Chengdu
Tel: +86 28 8675 8111
Fax: +86 28 8675 8141
Shanghai
Tel: +86 21 5868 5111
Fax: +86 21 5866 0969



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