AMETEK®
PROCESS INSTRUMENTS

MEASURES: H_2S, SO_2

PRODUCT DATA SHEET

888 Sulfur Recovery Tail Gas Analyzer

Field proven and highly reliable

As the next generation of our field-proven 880-NSL, the 888 utilizes highly reliable ultraviolet (UV) spectroscopy to accurately monitor hydrogen sulfide (H_2S) and sulfur dioxide (SO_2) concentrations in sulfur recovery tail gas. This compact, rugged analyzer mounts directly on the process pipe, eliminating the complexity and safety issues of fiber-optic coupled photometers.

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

- Automatic flow control for proactive response to adverse process conditions
- Flange temperature alarm for early warning of poor-quality steam
- Extended ambient temperature range to 60°C (140°F)

Safety
With the analyzer technician in mind, this unit includes many features to operate safely in hazardous locations.

- Close-coupled, easily accessible but process isolated demister
- Complete isolation from the process with double block valves
- Remote PC web-enabled interface

Maintenance/service
We listened to customer feedback from operations, analyzer technicians and process engineers:

- Smart diagnostic models identify, communicate, and react to potential problems
- 2X over range measurement allows an informed response to process upsets

KEY BENEFITS

- Auto-flow control, an industry first
- Flange temperature alarm to warn of non-functioning steam trap
- Rated to 60°C (140°F) ambient temperature
- No sample line, no fiber optics
- No shelter, IP65/NEMA 4X rated
- Safe process isolation during service
- Five-year lamp life
- Smart maintenance predicting diagnostics
- Web-enabled interface

APPLICATIONS

- Conventional Claus sulfur recovery
- Super Claus selective oxidation
- Sub dew point Claus process

KEY MARKETS

- Refining sulfur recovery
- Gas processing sulfur recovery
- Coke oven gas sulfur recovery

PERFORMANCE SPECIFICATIONS

Methodology	Non-dispersive UV
Measurement range	SO_2: 0-1%; H_2S: 0-2% (standard output range) air demand, excess H_2S or excess SO_2 (as control outputs)
Accuracy	H_2S and SO_2: ±1% of full scale
Reproducibility	±1% of full scale
Speed of response	90% in less than 15 seconds, typical
Calibration	Automatic multi-point photo span validation
Sample flow	2 L/min typical
Outputs (analog & digital)	Four 4-20 mA, self-powered, linear, 1000 ohms load proportional to H_2S, SO_2, and either excess H_2S or ratio Four programmable relay contacts (30 VAC, 60 VDC, 50 VA, resistive load) RS485 Serial Communication Port, two-wire
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 (-5 to 140°F)
Process sample pressure	Typically 17-22 psig
Customer-supplied items	2" 150# or DIN equivalent RF stainless steel flange connection
Ingress protection	IP65 (NEMA 4X)
Enclosure material	316 stainless steel
Physical dimensions (W x H x D)	1092 x 874 x 304.9 mm (34.4 x 43 x 12 in.)
Approximate weight	110 kg (242.5 lbs.)
Electrical	120/240 VAC 50/60 Hz 500W, single phase
Instrument air	379 to 690 kPa (55 to 100 psig)
Steam pressure	515 to 690 kPa (75 to 100 psig) for optional jacketed ball valve and optional blow back for ammonia salts
Approvals and certification	UL/CSA General Safety Requirements UL/CSA: Class I, Division 2, Groups A, B, C, D ATEX: II 2G Ex d pxb IIC T3 Gb IECEx: Ex d pxb IIC T3 Gb JIS (Japan) Russia (CU iEx db pxb IIC T3 Gb X) Complies with all relevant European directives

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

France
Tel: +33 1 30 68 89 20
Fax: +33 1 30 68 89 99

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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One of a family of innovative process analyzer solutions from AMETEK Process Instruments. Specifications subject to change without notice.