



PROTECH903™ H2S ANALYZERS /TOTAL SULFUR ANALYZERS

The Protech903™ Family of Tape-Based H₂S/ Total Sulfur Analyzers Can Improve Both Quality And Economics.

- Low detection limits and outperform all other analytical methods in the critical application range of 0 to 15 ppmv.
- Easy remote-access capability and fast, accurate analyte-specific measurement – you have all you need to monitor critical parameter levels to improve product quality and lower costs, ensure pipeline, equipment, and public safety, or meet regulatory and contractual compliance targets.
- Interference free and are not matrix dependent
- Low total cost of ownership marks the ProTech903™ series as the highest-value tape-based analyzers on the market today.



FEATURES

- Proven colorimetric paper-tape technology
- Fast response-analysis time to quantify increasing or decreasing concentration levels
- Unbeatable performance: 5 ppbv sensitivity level; low ranges 0 to 1 ppmv and 0 to 100 ppbv
- Rugged, field-proven construction and five- to 14-week tape lifetime enable hands-off operation for extended periods of time (tape life depends upon application)
- Designed for easy serviceability throughout
- Comprehensive, “smart” self-diagnostics coupled with remote access enables fast and easy issue identification and resolution
- 10 quick-status indicator lights (LED) and large, easy-read visual display (LCD)
- Proprietary Tape Assurance System assures smooth, trouble-free operation
- User-friendly Windows® -based software with graphical interface
- Solar power option for remote area operation.

SELECTED INDUSTRIES & APPLICATIONS

- Chemical

40 CFR 60 Subpart Ja flare gas emissions monitoring

- Food & Beverage

Food-grade CO₂

- Natural Gas Pipeline

Custody transfer

Odorant monitoring

- Natural Gas Processing

40 CFR 60 Subpart Ja flare gas emissions monitoring

NG plant inlet/outlet gas

NG sweetening

- Oil & Refining / Petrochemical

40 CFR 60 Subpart Ja flare gas emissions monitoring

Catalyst protection

Feedstock/fuel gas monitoring

- Pharmaceutical

Stack emissions for reporting

Industrial hygiene/ worker safety

Organic synthesis – phosgene

PROTECH903 SPECIFICATIONS

PERFORMANCE

Zero drift $\pm 2\%$ F.S

Span Drift $\pm 2\%$ F.S.

Accuracy $\pm 2\%$ F.S. for ranges 1 to 50 ppm
 $\pm 2.5\%$ F.S. for ranges > 50 ppm
 $\pm 3\%$ F.S for ranges 0.5 to 1 ppm
 $\pm 5\%$ F.S. for ranges < 0.5 ppm

Repeatability $\pm 2\%$ F.S. for ranges 1 to 50 ppm
 $\pm 2.5\%$ F.S. for ranges > 50 ppm
 $\pm 3\%$ F.S for ranges 0.5 to 1 ppm
 $\pm 5\%$ F.S. for ranges < 0.5 ppm

Sensitivity $\pm 1\%$ F.S.

Linearity $\pm 2\%$ F.S.

Response time: 30 seconds to alarm (excluding sample system)

ENVIRONMENT

Ambient temperature 0°C to 50°C (32°F to 122°F)

Dimensions H2S: 686 mm W x 838 mm H x 318 mm D (27" W x 33" H x 12.5" D)
TS option: 686 mm W x 1219 mm H x 318 mm D (27" W x 48 " H x 12.5 D)

Weight H2S Div 1: 27.2 kg (60 lbs)
H2S Div 2: 20.4 kg (45 lbs)
TS Div 1: 36.3 kg (80 lbs)
TS Div 2: 29.4 kg (65 lbs)

UTILITIES

Power & consumption H2S:10-32 VDC, 10 watts + 1.5 watts per solenoid
H2S: 90-230 VAC, 50/60 Hz, 10 watts + 17 watts per solenoid
TS: 90-230 VAC, 50/60 Hz, 250 watts + 17 watts per solenoid

Sample flow 100 cc/min, 1 Barg (0.21 SCFH, 15 psig)

Gas requirements TS Option: Hydrogen 180 cc/min, 1 Barg (0.38 SCFH, 15 psig)

COMMUNICATIONS

Digital Outputs Modbus RS232, Modbus RS485, Modbus TCP/IP (optional)
Ethernet
USB

Digital Inputs 4 dry contact, 4 wet

Analog Inputs 2 x 4-20 mA, user scalable, loop or self powered

Analog Outputs 6 x 4-20 mA, user scalable, loop powered

Relays 6 x SPDT relays, 5 amps @ 30 VDC or 8 amps @ 120/230 VAC

APPROVALS & CERTIFICATIONS

CSA (C, CUS) Class 1 Division 1, Groups BCD T3
CSA (C, CUS) Class 1 Division 2, Groups BCD T3
ATEX Ex db [ia] ia op is IIB+H2 T4 Gb
IECEX Ex db [ia] ia op is IIB+H2 T4 Gb
China Pattern Approval
Russia TR-CU
Russia Pattern Approval
India CCOE

AVAILABLE MODELS			
Protech903 Total Sulfur/H2S Analyzer	W	D1	D2
H2S over-range capability	X	X	X
5 ppb sensitivity level	X	X	X
ASTM D4084-94 & D4323-84	X	X	X
Total Sulfur capability (ASTM D4468-95)		X	X
CSA Class 1, Div 1, Groups B,C & D, T3		X	
CSA Class 1, Div 2, Groups B,C & D, T3	X		X
Multi-stream capability		X	X
Solar power option (not available with Total Sulfur option)	X	X	X
Protech903 Arsine Analyzer	W	D1	D2
5 ppb sensitivity level	X	X	X
CSA Class 1, Div 1, Groups B,C & D, T3		X	
CSA Class 1, Div 2, Groups B,C & D, T3			X
Multi-stream capability		X	X

Protech903 Phosphine Analyzer	W	D1	D2
5 ppb sensitivity level	X	X	X
CSA Class 1, Div 1, Groups B,C & D, T3		X	
CSA Class 1, Div 2, Groups B,C & D, T3			X
Multi-stream capability		X	X
Protech903 Phosgene Analyzer	W	D1	D2
5 ppb sensitivity level	X	X	X
CSA Class 1, Div 1, Groups B,C & D, T3		X	
CSA Class 1, Div 2, Groups B,C & D, T3			X
Multi-stream capability		X	X

LOOK CLOSER



PRECISION OPTICAL ENCODER

The ProTech903™ H2S/ Total Sulfur Analyzer's system optical encoder ensures exact spacing between stains and keeps track of tape usage.



ADVANCED DIGITAL SENSOR

An advanced digital sensor puts the AD right at the measurement point, eliminating noise associated with transmitting analog signals.



PROPRIETARY MEMBRANE HUMIDIFIER

The ProTech903™ H2S/ Total Sulfur Analyzer's system proprietary membrane humidifier reduces dead volume for faster response times.



EXTERNAL-KEYPAD-DRIVEN DISPLAY

An intrinsically safe external keypad allows the user to configure and monitor the analyzer without declassifying the area – a feature unique to Galvanic systems. It provides full menu access for the high-resolution display, enabling at-a-glance status and results.



DUAL REDUNDANT POWER SUPPLIES & OPTIONAL ETHERNET CONNECTION

Unparalleled flexibility enables ProTech903™ H₂S/ Total Sulfur analyzers to be configured to meet any application need. Dual redundant power supplies (located inside the analyzer) allow the unit to be run on either AC or DC power, or to have backup DC power; optional Ethernet connection allows users to connect the analyzer on a local area network for remote operation and troubleshooting.