

The Only TDL Analyzer That Rivals H₂S Tape Sensitivity



Low Maintenance

- No H₂S Scrubber Consumable
- Simple Sample System Quarterly PM

Rapid Response

- 10 Sec Response to Each Analyte
- H₂S + CO₂ + H₂O in Only 30 Sec

Low Detection

- 0.15 ppm H₂S Sensitivity
- 5 ppm H₂O Sensitivity

Easy Operation

- 1 Cell for Multi-Parameter Analysis
- Small Footprint for Smooth Installation

Multi-Stream

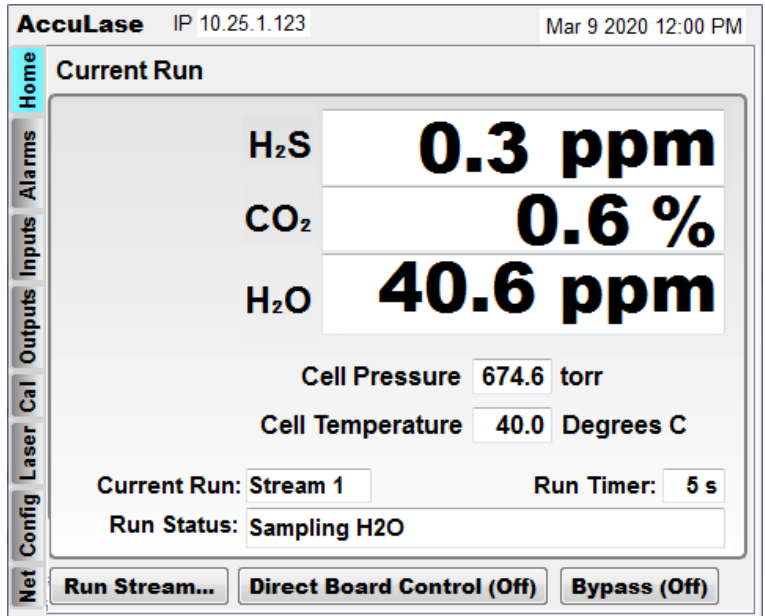
- 1 Analyzer Monitors 4 Channels
- Fast, Thorough Purge Between Streams

AccuLase Introduction

AccuLase-GPA™ is a process analyzer that can measure H₂S, CO₂ and H₂O in gas-phase samples. This includes both natural gas and refinery applications.

AccuLase-GPA™ provides rapid results which help operators optimize process control and custody transfer. All 3 analytes can be measured in just 30 seconds.

AccuLase-GPA™ marks Galvanic's 6th H₂S measurement technology after 40 years of field-proven gas processing experience.



On-Board Vacuum Pump = No Scrubber Consumable

Tunable Diode Laser Spectroscopy

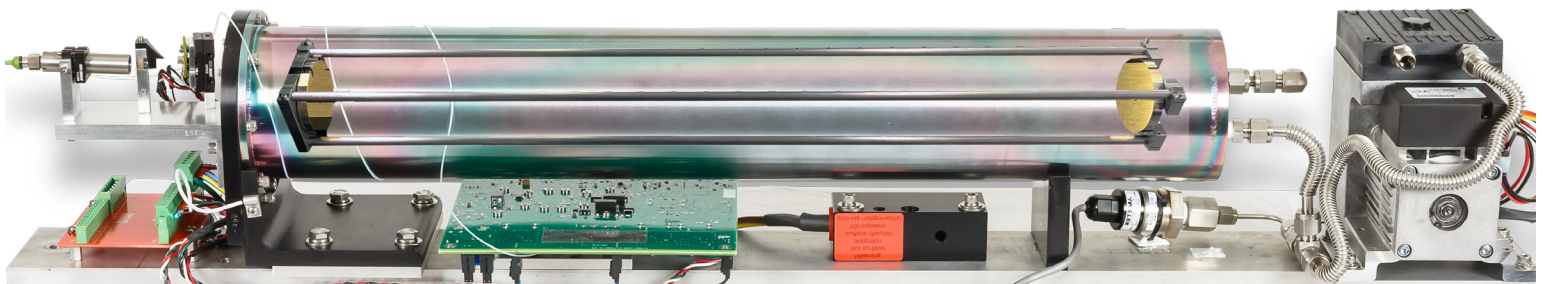
TDLAS is based on the NIR electromagnetic spectrum. The laser is "tuned" to specific wavelengths of interest (e.g H₂S).

The system consists of a laser board, laser launcher, and Herriott Cell. Combining the 52.6 cm long Herriott Cell with 100 laser passes, the total optical path length grows to 52.6 meters for maximum sensitivity.

Vacuum Pump

Most analyzers employing a TDLAS method use an H₂S scrubber to compensate for interferences.

AccuLase-GPA™ is uniquely configured with an on-board vacuum pump that maintains the cell at partial vacuum pressure. This enables a direct measurement without a scrubber consumable by improving separation with interferences.



Electronics Cabinet

Keypad

Rotameter

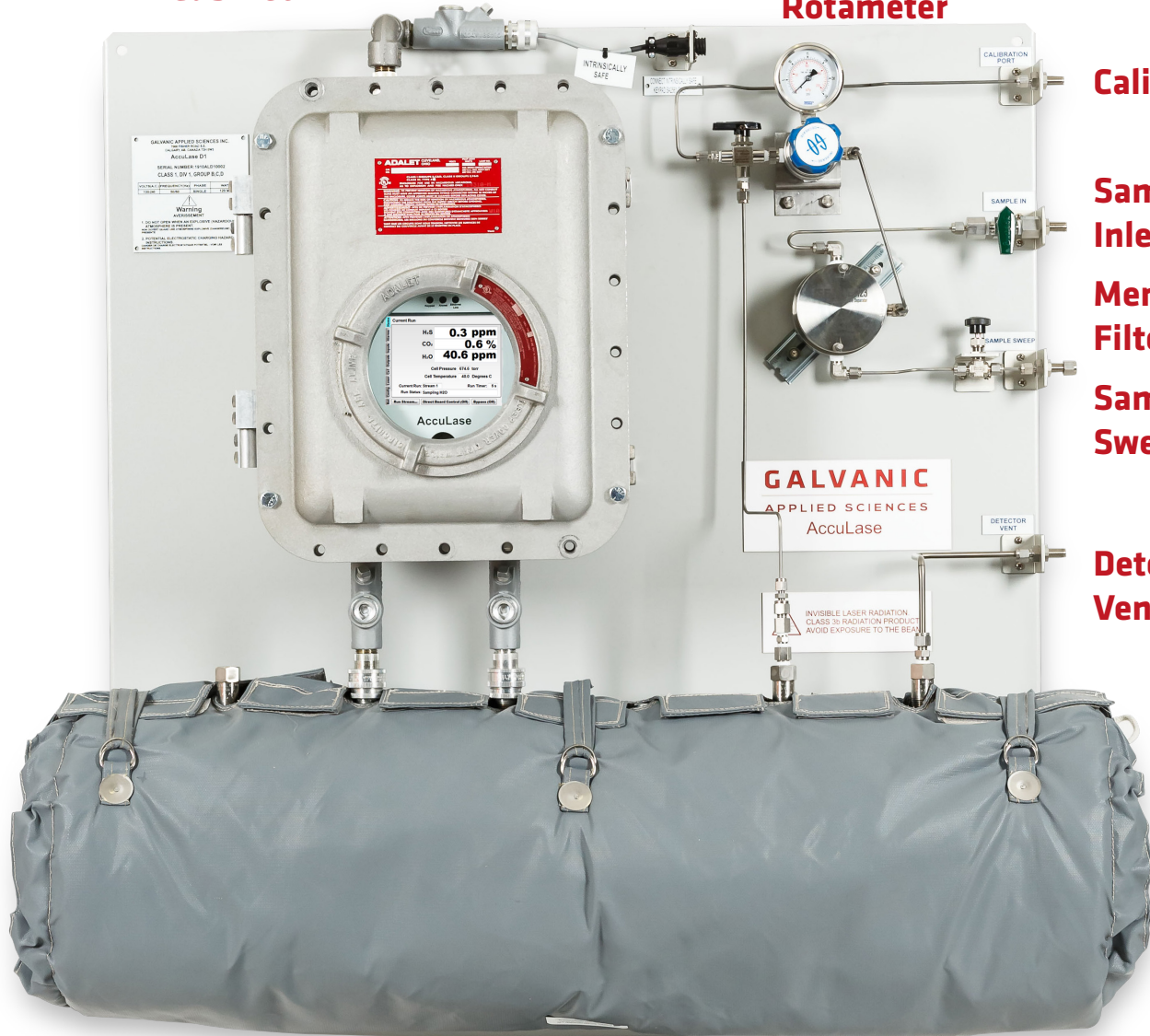
Calibration

Sample Inlet

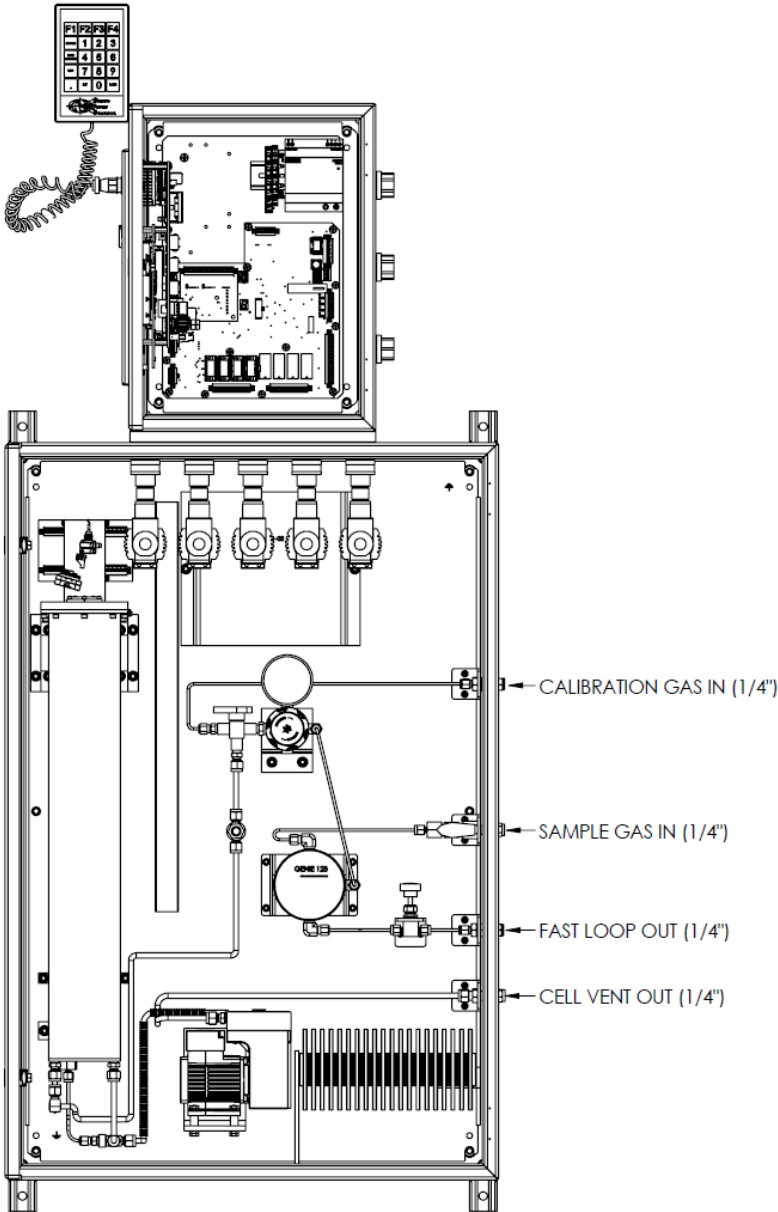
Membrane Filter

Sample Sweep

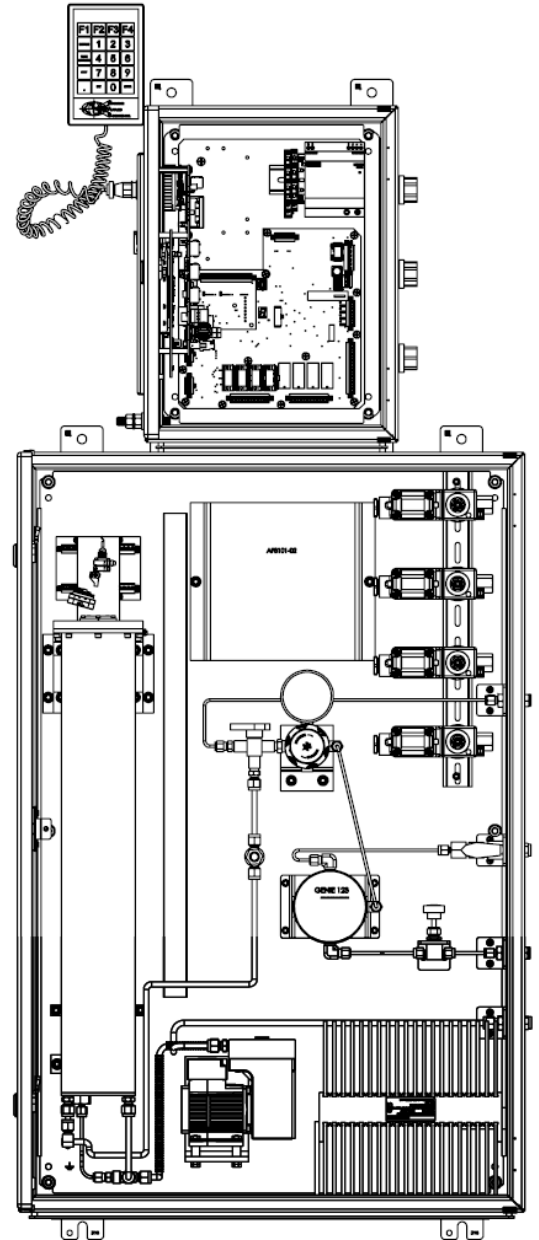
Detector Vent



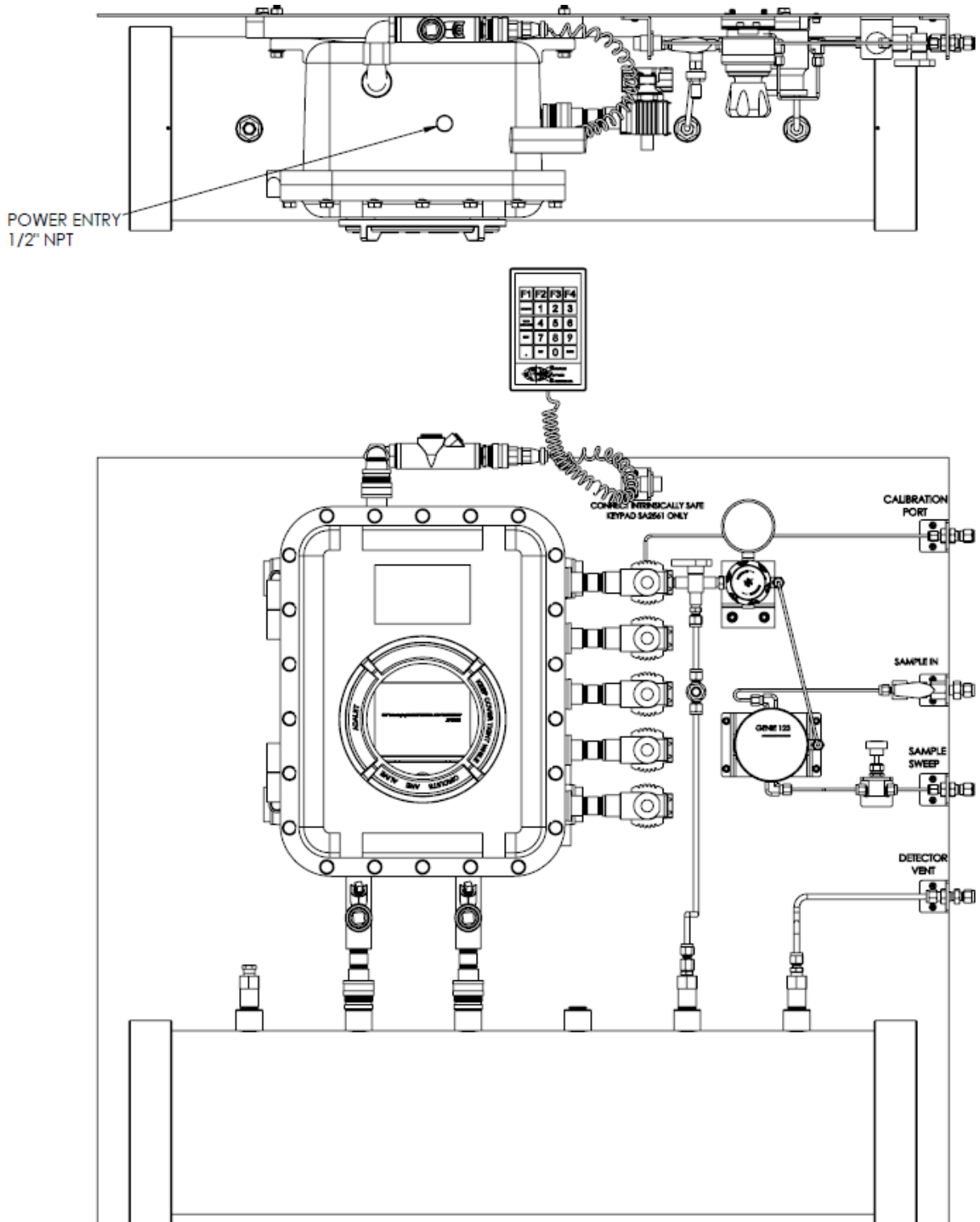
Insulated Blanket for Laser Assy



Class I Div. 2 Model



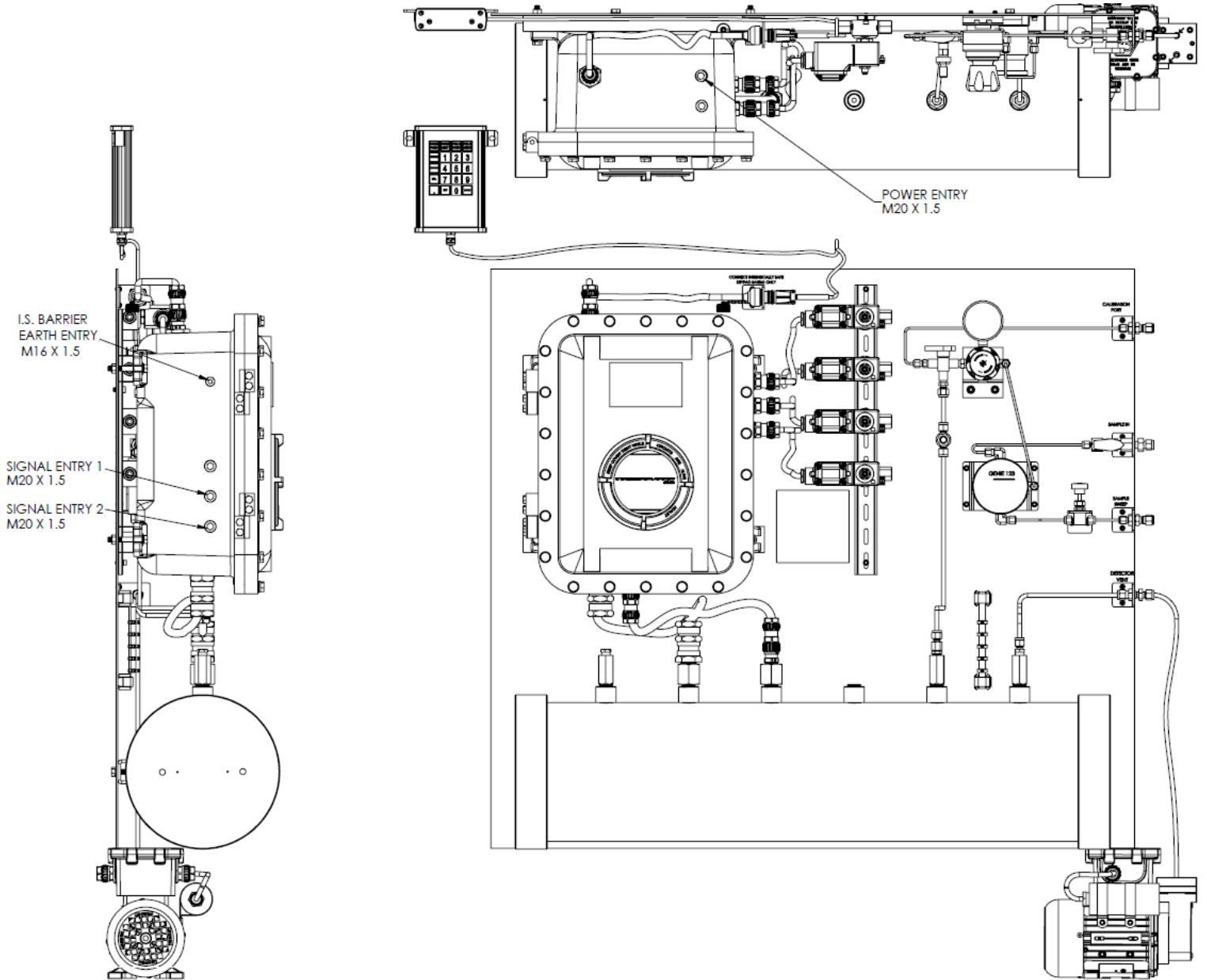
Class I Zone 2 Model





AccuLase-GPA™ Tunable Diode Laser (TDL)

Engineering Drawings: Zone 1 Model

GALVANIC
APPLIED SCIENCES



Parameter	H ₂ S		CO ₂	H ₂ O
Accuracy	± 2% F.S		± 2% F.S	± 2% F.S
Repeatability	± 2% F.S		± 2% F.S	± 2% F.S
Linearity	± 2% F.S		± 2% F.S	± 2% F.S
Sensitivity	0.15 ppm		500 ppm	5 ppm
Full Scale Range	0 to 500 ppm		0 to 5%	0 to 500 ppm
Method	Tunable Diode Laser Absorption Spectroscopy (TDLAS)			
Laser Configuration	1 Herriott Cell Configured With Up to 2 Laser Boards			
Response Time	T90: ≤ 10 Seconds for Each Analyte			
Analog Outputs	4 x 4-20mA Outputs (Self-Powered)			
Analog Inputs	2 x 4-20mA Outputs (Loop or Self-Powered)			
Modbus	TCP/IP or Serial RS485			
Digital Outputs	4 x SPDT Relays			
Digital Inputs	4 Discrete Inputs			
Remote GUI	Local Area Network Using Any Web Browser			
Analyzer Display	5.7" Color LCD With Extendable Keypad			
Model	Div. 2	Zone 2	Div. 1	Zone 1
Enclosure	Stainless Steel		Cast-Aluminium	Cast Aluminium
Enclosure Rating	NEMA 4 / 4X IP65		NEMA 4 / 4X / 7 IP65	NEMA 3 IP54
Ambient Temperature	-20°C to 55°C -4°F to 131°F	-20°C to 50°C -4°F to 122°F	-20°C to 55°C -4°F to 131°F	-20°C to + 45°C -4°F to 113°F
Relative Humidity	Up to 95% RH (Non-Condensing)			
Enclosure Dimensions	1,333 x 635 x 324 mm 52.5" x 25" x 12.8"		914 x 1,016 x 279 mm 36" x 40" x 11"	
Enclosure Weight	45 kg. [100 lbs.]		86 kg. [190 lbs.]	
Power	100 to 240 VAC		100 to 240 VAC 24 VDC	100 to 240 VAC
Power Consumption	230 Watts		200 Watts 150 Watts	120 Watts
Certification	Class I Div. 2 Groups BCD T3	 II 3G Ex ec op is IIB + H ₂ T3 Gc T _{amb} = -20° - 50°C	Class I Div. 1 Groups BCD T5	 II 2 G Ex db ia mb IIB + H ₂ T4 Gb -20° ≤ Ta ≤ 45°C

Digital Copies Available

