

ATAC Luminos TDL model 18

ONLINE H₂O ANALYSER

The ATAC Luminos TDL moisture analyser utilizes a tunable laser for precise measurement, even at very low concentrations.

- Factory calibrated, Direct Absorption Spectroscopy based measurement requires no field calibration
- Intrinsically linear
- Ultra low noise
- Low maintenance
- “Built in” NIST traceable field validation method

APPLICATIONS

- Natural gas processing, storage and distribution
- Refinery processes and final products
- Petrochemical processes
- LNG processing and NGL products
- Specialty gases & other non condensable gases on request

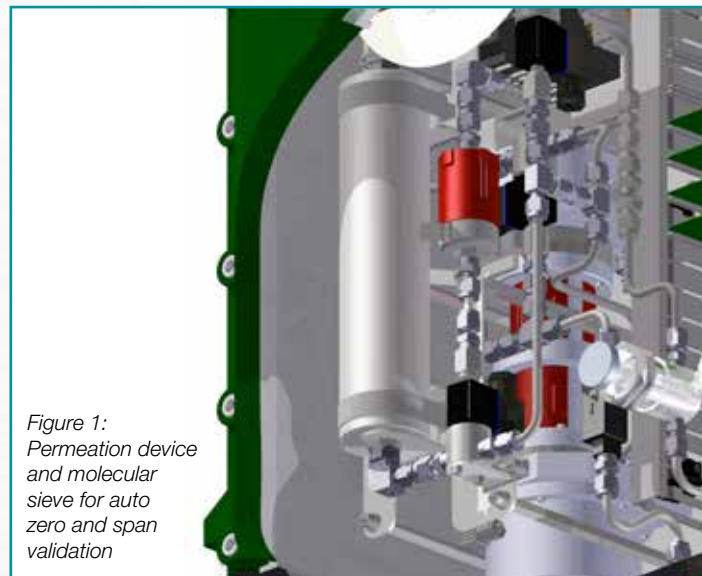


Figure 1:
Permeation device
and molecular
sieve for auto
zero and span
validation



AUTO VALIDATION

Contained within the analyser enclosure is a Validation System which may be automatic (on a timed basis) or manually invoked by the operator.

Sample is passed through a molecular sieve to remove any moisture and verify the zero level, the sample is then subsequently passed through a moisture permeation device at a controlled temperature and flow rate to provide the required concentration of moisture for a span validation.

The user interface software incorporates an alarm function which is invoked in the event of a failure of either zero or span accuracy.

FEATURES

- Laser based analyser with no moving parts
- Superb linearity is intrinsic to the measurement method
- Excellent long term stability
- “Built-in” span validation capability
- Specific measurement, no interference from other gases
- Single factory calibration over the whole range
- Ultra low maintenance requirements
- Real-time measurement <1s response time
- <90s dry down times
- Standard ranges up to 2,100ppm (consult factory for higher ranges)
- Repeatability better than 0.1ppm

PERFORMANCE SPECIFICATIONS

Configuration	7.6 meter multi-pass Herriott cell
Ranges	Ultra Low range 0-10ppm
	Low range 0-350ppm
	High range 0-2,100ppm (standard)
Repeatability	<0.1ppm (Low and Ultra Low ranges) & <0.5ppm (high range)
Limit of detection	<0.1ppm (Low and Ultra Low ranges) & <0.5ppm (high range)
Linearity	1% of full scale
Zero drift	<0.5% of full scale/year
Response time to T90	<90 seconds (depends on flow rate)
Sample gas flow rate	0.5-4.0 l/min
Explosion protection	IECEx and ATEX explosion proof certified for use in Zone 1 IIB+H2 T4
Weights & dimensions	Width: 582mm
	Depth: 360mm
	Height: 659mm
	Weight: 80kg+ depending on configuration
Operating temperatures	-20°C to +50°C (ambient)

COMMUNICATIONS AND NETWORKING

CAN bus	Local machine highway
Serial	Modbus 485 RTU Slave, other protocols available
Analogue & digital	2x 4-20mA isolated outputs, 2x analogue input 0-10V, digital IO option
Relays	2 off signal relays (8 off option)
Local display	7" colour touch screen

UTILITIES & CUSTOMER CONNECTIONS

Connections	Sample: 1/4" NPT Female
	Electrical: M20 Ex e (power), M25 Ex e (signal)
Sample conditions at inlet	Pressure within range 2.0 barg (30 psi)
	Temperature <50°C (Higher temperatures option)
	Flow 0.5-4.0 l/min
Power supply	86v to 264VAC Frequency 50/60Hz (24VDC option)
	Consumption 150-500VA (configuration dependent)

OPTIONS

Moisture verification	Automatic or on demand zero and span validation (option)
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