Panametrics
a Baker Hughes business

Aurora 19

Reliable moisture measurement

Panametrics Aurora 19 analyzer uses tunable diode laser absorption spectroscopy (TDLAS) to accurately measure moisture in a variety of background gases. The Aurora 19 analyzer is suitable for installation in safe areas and operates over a wide range of environmental conditions. Aurora 19's fast response immediately alerts when moisture concentrations are out of compliance; once corrected, gas can be quickly cleared for process normalization.

The Aurora 19 analyzers have an intuitive interface that makes them easy to learn, configure and operate. With a local service team to support them, you have the confidence of knowing that Aurora 19 analyzers are always ready for immediate moisture measurement. With power and gas lines easily connected, the Aurora 19 moisture analyzer provides a wide range of reliable measurement with accuracy and fast response you need for immediate alerts to process upsets or out-of-compliance moisture concentrations.

Range	
Range	0 to 5000 ppm_v
Lower Detection Point	5 ppm_v For CO_2 applications: 50 ppmv
Dew/Frost Point	-85.9° to 27.3°F (-65.5° to –2.6°C) frost point @ STP of 25°C, 14.696 psia
Process Dew/Frost Point	Process or equivalent dew point/ frost point by calculation with process pressure signal (4-20 mA) or constant
Absolute Humidity	0.24 to 237 (3.8 to 3,803 mg/m3) lbs/MMSCF
Accuracy	
Moisture reading (parts per million by volume)	±2% of reading or 4 ppm_v For CO_2 applications: ±3% of reading or 5 ppmv (Accuracy of other parameters derived from ppm_v.)
Repeatability	±0.2 ppmv or ±0.1%, whichever is greater; For CO_2 applications: ±1.0 ppm_v or ±0.5%, whichever is greater
Calibration Certification	NIST or equivalent NMI traceable certification
Calibration Options	Nitrogen, standard natural gas and 3 customizable calibration curves
Response Time	
Response Time	Optical system <2 seconds
System Response	The system response is dependent on the length of sample tubing, sample system components, flow rate and pressure, as well as the change in moisture concentration.
Pressure	
Operating Sample Cell Pressure	69 to 172 Kpa (10 to 25 psia)
Process Pressure	102 psig (0.69MPa) *Higher pressure available with application of additional sampling system components.*

Flow Rate	
Sample Cell Flow Rate	10 to 60 SLH (0.4 to 2 SCFH); 30 SLH (1 SCFH) nominal
By-pass Fast Loop	5 to 10X of flowrate through sample cell, available upon request
I/O	
Display	Backlit LCD. Three programable simultaneous parameters. Alphanumeric status and diagnostic display. LEDs for power, laser temperature stability, keypad lockout
Power	Analyzer: 100-240 VAC, 50-60 Hz
Analog Outputs	Three 0/4-20 mA DC (source) with 500 ohm load. User programmable for any parameter and scalable. Complies with NAMUR protocol for analog signals.
Analog Input	Loop powered 4-20 mA input for remote pressure transmitter. Aurora supplies 24 VDC.
Digital Interfaces	Two programmable digital communications ports RS232, RS485 with multidrop capability and assignable address, MODBUS RTU protocol.
User Interface	Programmable “through-the-glass” via magnetic stylus
Laser	Class 1 product. Conforms to IEC 60825-1. Edition 2.0 Safety of Laser Products
Enclosure	
Ingress Protection	IP-54
Net Weight	37 kg (100 lb)
Dimensions (H x L x W)	6.97 H (177) x 19.92 L (506) x 18.86 W (479)
Temperature	
Operating	-20 to 65°C (-4 to 149°F)
Storage	-20 to 70°C (-4 to 158°F)

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