AMETEK®
PROCESS INSTRUMENTS

MEASURES: H_2O

PRODUCT DATA SHEET

2850 Moisture Analyzer

Ultrafast response speed, exceptional accuracy, virtually no interferences, multi-gas compatibility, and on-board measurement verification

The 2850 is the moisture analyzer of choice for monitoring process desiccant dryers, instrument air dryers, or air separators, and for industrial gas production and quality assurance.

Ultrafast response

The 2850 reaches 63% of a steady state reading in less than five minutes, far faster than other moisture analyzers in the 1 to 100 parts per million by volume (ppmv) range. By using unique non-equilibrium measurement techniques, the 2850 provides this exceptional response speed drying-down as well as wetting-up.

Wide measurement range

The analyzer provides ±5% accuracy from 1 to 100 ppmv and indicates to 1000 ppmv. Between 100 parts per billion by volume (ppbv) and 1 ppmv, the measurement is exceptionally valuable as a sensitive trend indicator. Two customer-settable 4-20 mA analog outputs are provided which may be assigned to cover any portion of the operating range.

Internal verification

An internal, NIST-traceable moisture generator adds a known amount of moisture to conditioned sample gas. The resulting wet gas is then directed to the analyzer's sensor to verify proper sensor and system operation. An alarm contact is provided to alert the operator, if the analyzer fails the verification process. Verification may be initiated on programmable schedule or on manual demand.



KEY BENEFITS

- Most accurate trace moisture measurement technology available
- Responds quickly to both increasing and decreasing moisture levels
- Specific to moisture in most applications

APPLICATIONS

- Industrial gas production and quality assurance
- Cryogenic air separation
- Process dryers

KEY MARKETS

- Air separation
- Petrochemical
- Chemical
- Refinery

PERFORMANCE SPECIFICATIONS

Range	Operating range 0.1 to 1000 ppmv. Factory calibrated range 1 to 100 ppmv with trend indication above and below the calibrated range, (display will not display values below 0.1 ppmv). Two custom settable 4-20 mA outputs are available, which may be assigned to cover any portion of the calibrated range, such as 1 to 100 ppmv
Outputs	Four-line x 20-character vacuum fluorescent digital display, two fully programmable 4-20 mA analog outputs, into 1200-ohm load RS-485 bidirectional serial port
Alarms	Three pairs: System alarm, range alert/or calibration alert, concentration alert/or calibration alert. 32-volt, 1-amp noninductive (fail-safe by default)
Sensitivity	20 ppbv or 0.5% of instrument range, whichever is greater
Response time	63% to a step change in less than five minutes
Accuracy	± 0.05 ppmv or ± 5% of the reading, whichever is greater
Operating pressure	Atmospheric
Inlet pressure	1 to 6.89 bars (15 to 100 psig)
Exhaust pressure	Atmospheric sample flow requirements: less than 600 mL/min at STP
Electrical classifications	NEC Division 2; conforms to CE requirements
Sample gas temperature	0 to 100°C (32 to 212°F)
Ambient operating range	4 to 40°C (40 to 105°F), 90% relative humidity, non-condensing, non-corrosive atmosphere
Software features	Displays ppmv moisture reading or dew point, timer status, and instrument status
Power requirements	85 to 265 volts, 47 to 63 Hz
Mounting options	Available for stand-alone or 19-inch rack installation
Dimensions (W x H x D)	432 x 132 x 381 mm (17 x 5.2 x 15 in.)
Rack-mount version	Same as above, except height is 221 mm (8.71 in.)

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