

PRODUCT DATA SHEET

3050-RM Rack Mount Process Moisture Analyzer

Fast, reliable parts per million by volume (ppmv) moisture measurement

The 3050-RM moisture analyzer combines quartz-crystal accuracy with on-line verification in a cost-competitive package. This highly sensitive moisture analyzer is designed for applications that require continuous and reliable measurement of ppmv moisture in gases and vapors.

An internal moisture generator allows 3050-RM users to quickly confirm analyzer performance on a schedule or on demand. This is achieved by comparing sensor and system operation to conditioned sample gas that contains a known amount of moisture.

The 3050-RM is ideally suited to monitor atmospheric and hydrocarbon gases as well as various inert industrial chemical gases.

The analyzer's wide range of operation – the unit is factory calibrated over a range of 0.1 to 2500 ppmv, allowing users to monitor moisture levels from start-up through normal process operation.

Most accurate trace moisture measurement technology

The accuracy and speed with which changes are measured often enable users to diagnose the cause of a process change. The analyzer's accuracy, on-line verification capability, and repeatability stimulate user confidence in the readings.

Responds faster to changing moisture levels

The sensor's performance is unaffected by the process gas's temperature, and ambient temperature changes within the analyzer's operational limits. A fast response to either an increase or decrease in moisture concentration, enables the 3050-RM to catch a process variation as it happens.



KEY BENEFITS

- Most accurate trace moisture measurement technology available
- Fastest response to changing moisture levels
- Internal verification system for trusted, stable and accurate readings

APPLICATIONS

- The 3050-RM is ideally suited to monitor:
 - Atmospheric gases
 - Hydrocarbon gases
 - Inert industrial chemical gases

KEY MARKETS

- Air separation
- Cylinder filling
- Petrochemical
- Refinery
- Chemical

PERFORMANCE SPECIFICATIONS

Technology	Quartz-crystal microbalance (QCM)
Range	Calibrated from 0.1 to 2500 ppmv. Readout capability in ppmw, lb/mmscf, mg/Nm ³ , and dew point temperature in °C or °F, (requires process pressure as an input)
Reference gas	Continuously produced using actual sample gas
Online verification	Internal moisture source with NIST traceable calibration enables on demand verification of analyzer accuracy and responsiveness without uninstalling the analyzer
Accuracy	±0.1 ppmv or 10% of reading from 1 to 2500 ppmv with standard calibration; special calibration ranges not required
Reproducibility	±5.0% of reading from 1 to 2500 ppmv
Limits of detection	0.1 ppmv
A/D resolution	16 bit (0.0015%)
QCM response time	Near real-time. Computer-enhanced response, which may lead to errors, is not required to obtain quick wet-up or dry-down response
Sensitivity	0.1 ppmv or 1% of reading, whichever is greater
Sample inlet pressure requirement	138 to 345 kPa (20 to 50 psig); analyzer performance is independent of process pressure
Exhaust pressure	0-103 kPa (0-15 psig)
Sample gas temperature	0 to 100°C (32 to 212°F); analyzer performance is immune to changes in sample gas temperature
Sample flow requirement	Approximately 150 sccm Approximately 1.0 slpm bypass flow for increased speed of response
Ambient temperature limits	5 to 50°C (41 to 122°F)
Outputs	Four-line x 20 character LCD display; isolated 4-20 mA analog signal, 12 bit (0.025%) resolution, RS232 and RS485 serial communication ports
Alarms	Three contact closures; system, data valid, and concentration alarms
Utility requirements	85 to 265 volts, 47 to 63 Hz, 185 W
Mounting configuration	19-inch rack/bench-top installation
Dimensions (W x H x D)	483 x 133 x 419 mm (19 x 5.25 x 16.5 in.) Net Weight: 11.4 kg (25 lbs.)
Approvals and certifications	CE, MET Certified to: UL/CSA General Safety Requirements NEC/CEC Class I, Division 2, Groups A, B, C, D T4

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