AMETEK®
PROCESS INSTRUMENTS

MEASURES: H_2O

PRODUCT DATA SHEET

3050-AMS Moisture Analyzer

Fast, reliable sub-ppmv moisture measurement

The 3050-AMS sets the standard for fast, accurate, parts-per-million-by-volume (ppmv) process moisture analysis.

Multi-gas compatibility
The 3050-AMS combines excellent multi-gas compatibility with an easy-to-use operator interface. It is completely compatible with virtually all non-corrosive gases including inert gases (He, Ar, Ne, Xe, Kr), H_2, O_2, N_2, air, and many specialty gases such as sulfur hexafluoride. A single, simple menu selection is all that is needed to re-configure the analyzer for a new gas type.

Exceptional accuracy
The 3050-AMS accurately measures from 0.035 ppmv to 100 ppmv. While this is the recommended usable range, the analyzer will provide measurements up to 1000 ppmv to capture the nature of a process upset.

Online zero-gas verification confirms analytical stability
The 3050-AMS uses an internal zero verification system, which strips the moisture from the sample gas prior to analysis. This allows the user to verify the zero point of the sensor's calibration, enhancing accuracy and confidence when monitoring in the critical 0 to 10 ppmv range. This internal system eliminates the need to break process connections along with the "wet-up" that would occur from ambient moisture. An alarm alerts the operator if the analyzer fails verification. The verification sequences can be started on a programmable schedule or manually on demand.

Fast response speed
A unique non-equilibrium measurement technique continuously exposes the sensor to wet sample gas followed by dry sample gas, so the analyzer never needs to wait for the sensor to reach equilibrium to establish an accurate measurement. Quartz crystal technology does not utilize prediction software to "speed up" the analysis process, resulting in faster, more accurate moisture readings.

KEY BENEFITS:

- Quartz crystal technology provides accuracy, speed, and calibration stability
- Online zero-gas verification confirms analytical stability
- Intuitive, easy-to-use interface with keypad and display allows quick access to all operating variables
- Multi-gas compatibility is ideal for periodic testing of multiple sample gases
- Menu-driven gas selection eliminates manual adjustments

APPLICATIONS:

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

KEY MARKETS:

- Air separation
- Semiconductor manufacturing
- LCD/OLED display manufacturing

PERFORMANCE SPECIFICATIONS

Compatible gases	Inert gases (He, Ar, Ne, Xe, Kr), H_2, O_2, N_2, air, and some specialty gases such as sulfur hexafluoride. CO_2 requires a custom measurement cell. (Contact the factory to confirm compatibility with other gases)
Range	0.035 to 100 ppmv. Indicates trend to 1000 ppmv Display is software-settable to show ppmv, or dew point (requires pressure input)
Reference dryer life	Over 1,000,000 ppmv-hours (e.g. dryer will last over 5 years with a 20 ppmv inlet moisture concentration)
Limit of detection	0.035 ppmv
Accuracy	±0.035 ppm or ±10%, whichever is greater
Response time	63% in 5 minutes (as measured for a 0 to 5 ppmv step change)
Inlet pressure	42 to 345 kPa (6 to 50 psig)
Exhaust pressure	Atmospheric
Sample flow requirements	Approximately 50 sccm Approximately 900 sccm @ 50psig inlet with Bypass option
Sample gas temperature	0 to 100°C (32 to 212°F)
Outputs	Three independent contact closures of 30 VAC or 60VDC max., 50VA or 1A max., resistive for system alarm, moisture concentration alarm, and data valid. All are fail-safe by default. Alarms are available on RS485 interface
Software features	Displays ppmv moisture reading or dew point, timer status, and instrument status
Environmental conditions	5 to 50°C (41 to 122°F), 90% relative humidity, non-condensing, noncorrosive atmosphere. Optimal performance in sub-ppmv applications is achieved when the ambient temperature is maintained within ±2°C
Utility requirements	120/240 VAC, 47 to 63 Hz, 185 W max. Instrument air: 483 to 690 kPa (70 to 100 psig)
Mounting configuration	19-inch rack/bench-top installation
Dimensions (W x H x D)	133 x 483 x 419 mm (5.25 x 19 x 16.5 in.)
Net weight	9.8 kg (22 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

New England - ETA Process Instrumentation
119 Foster Street, Bldg #6
Peabody, MA 01960
Tel: (978) 532-1330
www.etapii.com
sales@etapii.com

Upstate NY - Martech Controls
2000 Teall Avenue
Syracuse, NY13026
Tel: (315) 876-9120
www.martechcontrols.com
sales@martechcontrols.com