

Hygrotec™ MMY 150 / DY 55 Trace Moisture Analyzer

The Hygrotec™ MMY 150 provides economical trace moisture analysis system for dew point in specialty gases and dry air. It consists of a MMY 150 transmitter and DY 55 probe. The probe utilizes a proven, planar capacitive sensor for fast response times, corrosion-resistance, calibration stability, and a low temperature coefficient. The probe converts the capacitance into a standardized PFM signal and transmits it to the MMY 150. Process moisture is controlled with one current output, one voltage output, two alarm relays, and one system alarm relay.

The MMY 150 is a stand-alone, single-channel analyzer that measures dew point temperatures from -100°C to +20°C (-148°F to +68°F) with ±2°C (3.6°F) accuracy. The analyzer includes a four digit LCD display and analog bar graph. The microprocessor-controlled analyzer displays dew point temperature in °C, or, optionally, in ppm_v. This optional version can also communicate with an external computer to provide multi-channel configuration or integration with other process analyzers. The MMY 150 mounts in a 19" rack mount, a panel mount or a wall mount enclosure with 230/115 V AC power supply.



Features

- Cost-effective, flexible trace moisture analyzer with dew point and optional ppm_v display
- Dew point measurement range of -100°C to +20°C with ±1°C accuracy
- Interference-free PFM signal transmission
- Compact, 7 pitch (35mm) module
- Standardized, programmable probe output signal; with three alarms
- RACKBUS compatible

Dimensional Drawing &
Ordering Information: See page 12

DY 55 Probe Specifications

Sensor:	Planar gold/aluminum capacitance
Calibration Range:	-80°C to +20°C (-112°F to +68°F) dew point temp.
Recommended Recalibration Cycle:	6-24 months, depending on application and required accuracy
Accuracy:	±2°C (±3.6°F)
Repeatability:	±1°C (±1.8°F)
Max. Relative Humidity:	50% @ dew points > 0°C (32°F)
Temperature Coefficient:	<0.2°C/°C (<0.2°F/°F)
Ambient & Storage Temperature:	-60°C to +50°C (-76°F to +122°F)
Nominal Operating Temperature:	-20°C to +40°C (-4°F to +105°F)
Max. Operating Pressure:	350 bar (5100 psi)
Helium Leak Rate:	<10 ⁷ , mbar l/s
Max. Gas Velocity:	50.0 m/s at 1 bar; 5.0 m/s at 10 bar; 0.5 m/s at 100 bar
Signal Transmission:	Standardized pulse (PFM) via two-wire cable
Probe Mounting Adapter:	Stainless Steel 1.4571 with G 1/2 thread (DIN/ISO 228) and Viton "O" ring seal
Rating:	IP 40
Tightening Torque:	50 Nm
Wrench Width:	30 mm
Protection:	Cap w/10µm filter
Weight:	250 grams (.55 lb)

MMY 150 Analyzer Specifications

Electronics:	Microprocessor-controlled
Measurement Units:	Dew point temperature, ppm _v optional
Instrument Range:	-100°C to +20°C (-148°F to +68°F), standard 0.01 to 9999 ppm _v (optional)
Display:	4-character LCD w/ bar graph and two control fields
Outputs:	One 0/4-20 mA into 500 ohms max. load One 0/2-10 V output, 10 kohm min. load programmable range, damping & fail-safe mode (max/max/hold); two alarm relays SPDT dry contacts rating 2.5A, max. 250 V AC, max. 300VA at cos. <0.7, max. 100 W @ 100 V DC, programmable set points, fail-safe mode min. (dry) or max. (wet), and hysteresis; one system alarm, rating same as above, triggered by the self-diagnostics program.
Supply Power Module:	24 V DC, tolerance 20 to 30V DC, max. 2 V ripple within the tolerance, max. 125 mA
Power Supply:	Monorack II, 230/115 V AC, wall mount enclosure
Analyzer Module:	Formatted to Europa Card 100 x 160mm, fitting into a Racksyst, electrical connection via 28 pin plug DIN 41612
Front Panel:	7 pitch (35mm), black plastic, with blue overlay
Protection:	IP 20
Weight:	300 grams (.65 lb)