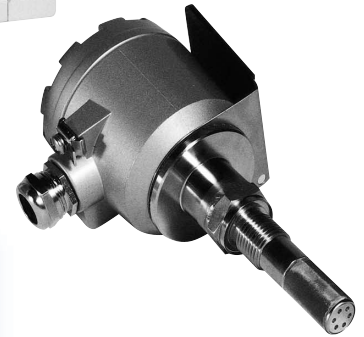


Hygrotec™ MMY 170 / DY 75

Trace Moisture Analyzer

The Hygrotec™ MMY 170 extends the capabilities of the Hygrotec MMY 150 by providing both moisture and temperature measurements in both gases and liquids. It consists of a MMY170 transmitter and DY 75 probe. The probe utilizes a planar capacitive gold/aluminum oxide moisture sensor and an RTD temperature sensor. The temperature signal is used for compensation of the moisture reading as well as for the measurement of process temperature.

The MMY 170 is an intrinsically safe (EEx ia) IIC analyzer and probe combination 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; it operates with a 24 V DC power supply. The microprocessor-controlled analyzer displays dew point temperature in °C, ppm_v, and, optionally, in ppm_w over a 0.01 to 9999 range. The MMY 170 mounts either in a 19" rack or a panel mount enclosure. Rack, panel mount or wall enclosure with 230/115 V AC power supply.



Features

- Cenelec approved EEx ia, Zone 0, T6, IIC
- Cost-effective, flexible trace moisture analyzer with dew point and optional ppm_w display
- Dew point measurement range of -100°C to +20°C with ±2°C accuracy
- Interference-free PFM signal transmission
- Compact, 7 pitch (35mm) module
- Standardized, programmable probe output signal; with three alarms

Dimensional Drawing &
Ordering Information: See page 13

DY 75 Probe Specifications

Sensor:	Planar gold/aluminum capacitance
Calibration Range:	-90°C to +20°C (-130°F to +68°F) dew point temperature
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 Temp.:	-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 three-wire cable
Probe Mounting Adapter:	Stainless Steel 1.4571 with G 1/2 thread (DIN/ISO 228) and O-ring seal out of Viton
Rating:	IP 65
Tightening Torque:	50 Nm
Wrench Width:	30 mm;
Protection:	Cap w/10µm filter
Weight:	830 grams (1.8 lbs)

MMY 170 Analyzer Specifications

Electronics:	Microprocessor-controlled
Measurement Units:	Dew point temperature in °C, ppm _v , ppm _w (optional)
Instrument Range:	-100°C to +20°C (-148°F to +68°F), standard. 0.01 to 9999 ppm _v , and ppm _w , optional
Display:	4-character LCD w/bar graph 0-100% and 2 control fields
Outputs:	Two current outputs of 0/4-20 mA into 500 ohms max., two 0/2-10 V outputs, 10 kohm; programming range, damping, and fail-safe mode (i.e. min./max/hold); two alarm relays SPDT dry contacts rating 2.5A max. 250 V AC, max. 300 VA at cos φ <0.7, max.100 W @ 100 V DC, programmable set points, and hysteresis, one system alarm, rating same as above, triggered by the self-diagnostics program. Rackbus: Serial bus connections to ZA 672 communications interface. User Interface: Six push-buttons for display manipulation, setting parameters and functions utilizing the supplied programming matrix.
Supply Power:	24 V DC, tolerance 20 to 30 V 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
Enclosures:	Monorack wall mount, 65 x 165 x 200mm with integral power supply (selectable voltage 220/110 V AC, 200/100 V AC, or 48/24 V AC); panel mount version 1, 144 x 48 x 260 mm (requires 24 V DC power supply or optional 220/115 V AC power supply; this version supports up to four Hygrotec MMY 170 analyzers with one NT 471 power supply; cable connection via screw terminals.
Protection:	IP 20
Weight:	Electronics module: 300 grams (.65 lb) Monorack: 1.3 kg (2.86 lbs)