

# 257 Series

# CONTINUOUS DEW POINT ANALYZER





### **APPLICATIONS**

For continuous dew point analysis of heat treat furnace gases, atmosphere gases, compressed air, and other similar applications.

# **FEATURES**

- Standard range of -40° to 104°F (-40° to 40°C) Dew Point (other ranges and units of measure available upon request)
- Rugged design that is easy to operate
- · Use on any non-corrosive gas
- Long-life dielectric polymer sensor
- · May be calibrated in the field
- Bright digital readout
- Built-in sample pump, oil vapor filter, and flow meter
- · Sensor easily replaced if contaminated
- Factory calibrated to NIST traceable standards

#### **OPTIONS**

- Compressed Air Configuration for dew point at line pressure
- Recorder outputs of 0-1V or 4-20mA
- Calibration kit
- Also available in NEMA 4, & 19" rack mount cabinets
- Carbon potential calculation, using input from customer-supplied Type K thermocouple

# **CALIBRATION**

- Calibration is easily performed in the field using the optional calibration kit (Part no. NDPCK-02).
- Alternatively, the analyzer may be returned to Nova for a certified calibration



Standard NEMA 12 (IP50) Enclosure



Optional NEMA 4 (IP65) Enclosure



Optional Rack Mount (RM) Enclosure

#### DESCRIPTION

The Nova 257 Series Continuous Dew Point Analyzers have been designed primarily for accurate dew point measurement of exothermic/endothermic heat treating atmospheres and other similar applications.

The dielectric polymer sensor provides stable and accurate dew point measurements and is not affected by most gas compositions (see below.) A built-in sample pump draws in samples that are of insufficient pressure from the process. The sample flow is shown on a small rotameter with valve. The analyzer then reads the dew point continuously.

# **MODELS**

- 257N12: NEMA 12 (IP50) dust-tight enclosure
- 257N4: NEMA 4 (IP65) weather-proof enclosure
- 257RM: 19" rack mount enclosure

- 257CAA-B compressed air applications 5 to 125 psig
- 257CAA-C compressed air applications 5 up to 3000 psig

#### **SPECIFICATIONS**

Nova reserves the right to specification changes which may occur with advances in design without prior notice.

Description	
Method of Detection:	Dielectric polymer sensor that changes capacitance with moisture variation
Ranges Available:	-40° to 104°F (-40° to 40°C) Dew Point (other ranges available)
Resolution:	1°F (1°C) Dew Point
Accuracy and Repeatability:	±1°F (±1°C) Dew Point
Drift:	Less than 1% of full scale per month
Response Time (T-90):	Less than 60 seconds after initial purge down
Ambient Temperature Range:	0° to 120°F (-18° to 49°C)
Linearity:	Better than 1°F (1°C) Dew Point
Size and Weight:	N12 & N4 style - approx. 16" H x 14" W x 8" D @ 10 lbs (41 x 36 x 20 cm @ 4.5 kg) RM style - approx. 19" W x 5.5" H x 14" D @ 15 lbs (48 x 14 x 36 cm @ 6.8 kg)
Power:	115VAC 60 Hz (other voltages available)
Output Options:	4-20 mA or 0-1 VDC
Alarms:	High or low dew point alarms with LED (optional)

#### UNIQUE APPLICATIONS

The 257 Series should not be used to measure dew points when trace amounts of sulfur dioxide (SO<sub>2</sub>), sulfur trioxide (SO<sub>3</sub>), chlorine (Cl<sub>2</sub>), hydrogen chloride (HCl), or ammonia (NH<sub>3</sub>) are present. All Nova analyzers are built using proven technologies and techniques. If this product does not suit your application, please contact Nova at 1-800-295-3771. In many cases, we are able to build an analyzer specific to your needs.





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