



1311-DR

Four Stage Chilled Mirror Sensor

The Model 1311DR is a 4-stage sensor designed to measure low frost points. It can be air-cooled giving 95°C (171°F) of depression capability, or liquid-cooled giving 105°C (189°F) of depression capability.

FEATURES:

- Primary, fundamental measurement of dew/frost point.
- Hermetically-sealed, wire-wound 4-wire PRT
- NIST traceability
- Interchangeable with other General Eastern sensors without recalibration

- Continuous, on-line measurement
- Infrared optics
- Field-replaceable mirror
- 95°C (171°F) depression capability; Air-cooled
- 105°C (189°F) depression capability; Liquid-cooled

SPECIFICATIONS

Sensing Element: 1/3 Class A DIN 43760 PRT, 100 ohm @ 0°C (32°F)

Dew/Frost Point Accuracy

Standard: ±0.2°C (±0.36°F)

Optional: ±0.15°C (±0.27°F)

Sensitivity: > 0.03°C (0.05°F)

Repeatability: ±0.05°C (±0.09°F)

Hysteresis: None

Cooling Stages: 4

Depression @ 25°C, 1 atm, air):

Air-cooled: 95°C (171°F)

Liquid-cooled: 105°C (189°F)

Typical Meas. Range, Air-cooled, 25°C (77°F), 1 atm, air:

Dew/Frost Point: -65° to +25°C (-85° to +77°F)

Relative Humidity: equivalent to 0.03% to 100%

Liquid-cooled (15°C(59°F) cooling water, at 25°C (77°F), 1 atm air):

Dew/Frost Point: -75° to +15°C (-103° to +59°F)

Relative Humidity: equivalent to 0.007% to 100%

Required Sample Flow: 0.5 to 5.0 scfh (0.25 to 2.5 L/min)

FUNCTIONAL:

Power: 115/230 VAC, 50-60 Hz, 300 watts max.

Operating Ranges:

Ambient Temperature: 0° to +35°C (+32° to +95°F)

Pressure: 0 to 300 psig (1 to 22 bar)

Auxiliary Cooling: Water cooling (standard)

PHYSICAL:

Sensor Body Material: Type 314 stainless steel

Sensor Wetter Material: 316SS, copper, mylar, silicone, rhodium or platinum mirror

Inlet/Outlet Fittings: 1/4" compression, 6 mm available

Weight: 16 kg. (34 lb.)

Shipping Weight: 18 kg. (40 lb.)

ACCESSORIES:

HEX-1, rhodium plated mirror (standard)

HEX-2, solid platinum mirror

TW-1, mirror torque wrench

1123HK, sensor cable (10 ft (3 m) standard, up to 300 ft (91 m) available)



Measurement & Sensing Technologies
General Eastern Instruments

500 Research Dr
Wilmington, MA 01887 USA
Tel: 978 203 1900 Fax: 978 203 1920
Email: info@geinet.com
www.generaleastern.com