# DewPoint Duo™ Water and Hydrocarbon Dewpoint Analyzer

## KEY FEATURES

- ✓ Direct, First Principle Measurement
- ✓ NIST Tested
- ✓ No Consumables
- ✓ Self Cleaning
- ✓ Immune to Most Contaminants
- ✓ Accurate and Unambiguous
- ✓ No Calculation or Model Errors
- ✓ Distinguishes Between Hydrocarbon and Water
- ✓ Fully Automated
- ✓ Works at Line Pressure
- ✓ No Moving Parts
- ✓ No Carrier Gas or Replacement Parts
- ✓ Sensor Not Damaged by Contaminants, Slugs or Aerosols

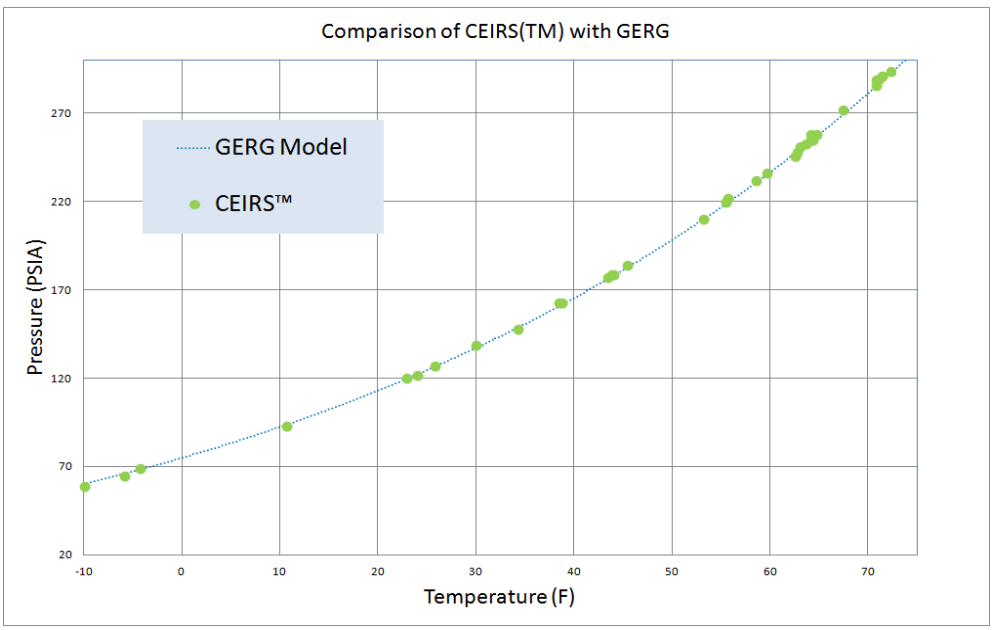
***ZEGAZ Instruments DewPoint Duo™ water and hydrocarbon dewpoint analyzer is the most advanced dewpoint measurement system available, capable of measuring both dewpoints simultaneously.***

It has an accuracy of ±0.5 ºC (±0.9 º F), distinguishes between hydrocarbon and water dewpoints and provides highly accurate, measurements. It is based on CEIRS™ (Chilled-Evanescent Infrared Spectroscopy), a patented method.

ZEGAZ Instruments products are the only analyzers in the world that use CEIRS™, a spectroscopic approach that determines the dewpoint, while unambiguously determining whether it was water or hydrocarbon dewpoint.

The CEIRS™ method uses advanced IR technology. It is immune to contaminations. It is designed for remote operation at line pressure up to 2000psi. It provides 4 analog outputs as well as 3 digital alarms, and serial communications.

DewPoint Duo™ has unprecedented accuracy and repeatability. The graph below shows the correlation between theoretical and DewPoint Duo™ measured values.



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ZEGAZ instruments

## SPECIFICATIONS

### Performance

| | |
|---|---|
| Dewpoint Measurement Range† | 126°F (70 °C) below ambient temp. † |
| Lowest Detectable Dewpoint | -40 °F (-40 °C) |
| Highest Detectable Dewpoint | +131°F (+55°C)<br>9 °F (5°C) below ambient temp. |
| Measurement Time | 2-12 Minutes |
| Dewpoint Accuracy | ±0.9 °F (±0.5 °C) |
| Dewpoint Repeatability | ±0.4 °F (±0.2 °C) |
| Dewpoint Resolution | ±0.1 °F (±0.1 °C) |

### Application Condition

| | |
|---|---|
| Operating Temperature | -4 to 140°F (-20 to +60°C) |
| Storage Temperature | -22 to 140°F (-30 to +60°C) |
| Process Pressure | Up to 2000psi (135bar) |
| Flow Rate | 0.3-1.5 SLM |

### Electrical and Communication

| | |
|---|---|
| Input Voltage | 100-264 VAC, DC Optional |
| Power Usage | 120W Peak, <30W Average |
| Signal Outputs | 4x4-20mA, 3xDO, RS-232, RS-485, Ethernet |
| Protocol | Modbus Gould RTU, Daniel RTU |

### Physical

| | |
|---|---|
| Size (not including sample system) | 14”x14”x6” (355x355x150mm) |
| Weight (not including sample system) | 40lbs (18Kg) |

### Certification

| | |
|---|---|
| Hazardous Location | CSA Class I, Div. 1, Group B,C&D, T6<br>ATEX/IECEX II 2 G Ex db IIB+H2 T6 Gb |
| Other | IP66, CE, ISO 9001 |

† The cooling range is a function of several different factors, including ambient temperature, flow rate, etc. and may be different