

# DewPoint Duo™

## Water and Hydrocarbon Dewpoint Analyzer



***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  $\pm 0.5$  °C ( $\pm 0.9$  ° F), distinguishes between hydrocarbon and water dewpoints and provides highly accurate, measurements. It is based on CEIRS™ (Chilled- Evanescent Infrared Spectroscopy), a patented method.

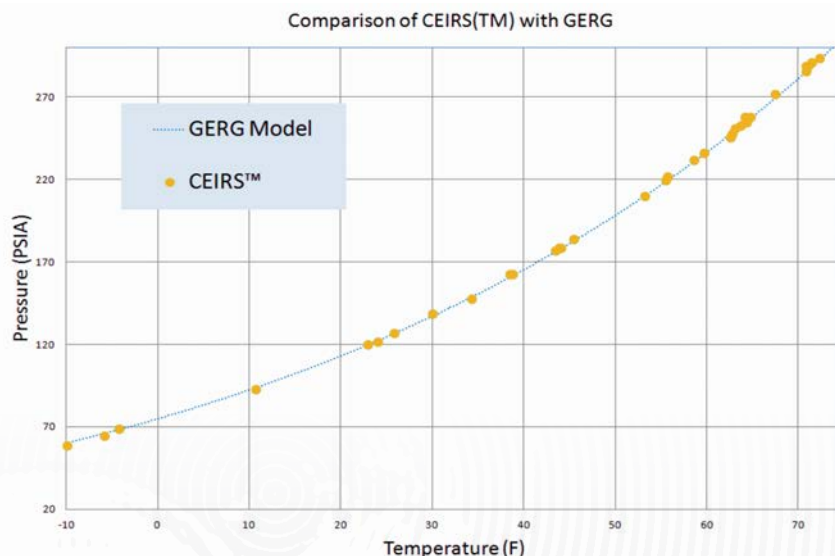
ZEGAZ Instruments products are the only analyzers in the world that use CEIRS™, a spectroscopic approach that determines the dewpoint, while unambiguously determining whether it was water or hydrocarbon dewpoint.

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.

### 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



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## 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) 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 |
| 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