

Model 241CE Dew Point Monitor

THE NEED

The Western Research® Model 241CE Dew Point Monitor is a quality control tool for natural gas processing, distribution, and consumption. Detection and measurement of hydrocarbon dewpoint is achieved in a single cell, single cycle operation.

The Model 241CE is sensitive enough to detect trace amounts of hydrocarbon dew, yet strong enough to withstand saturation levels and process fluctuations such as temperature, pressure, and flow rate. A proprietary multiple stage filter protects the analyzer from most likely sources of contamination (aerosols, particulates, and liquid slugs). The programmable alarm system will automatically activate when problems are detected.

The Model 241CE is the economic solution to detecting costly problems such as off-spec gas, plugged lines, and compressor station malfunctions. A Model 241CE located anywhere on your pipeline ensures accurate and continuous monitoring, even at remote or hazardous locations. Your bottom line will show results.

DIRECT MEASUREMENT

The Model 241CE uses patented chilled-mirror technology. With the Model 241CE, all monitoring and measuring of dew points is done automatically under control of an onboard computer, rather than by an operator. The Model 241CE was designed for unattended operation. It carries CSA (Class I Division 1, Groups C & D) and CENELEC (Zone 1) certification for use in hazardous areas.

The dew point monitor may be located local to a plant or in remote locations. It requires only electrical power and a supply of dry purge gas¹: so fast, accurate readings are obtained with little service and maintenance.

¹. Purge gas must be inert and have a dew point of at least -40°C.
Consumption is approximately 10 l/day or 0.35 SCFD.

APPLICATIONS

- Pipeline quality and custody transfer
- Specification monitoring
- Gas turbine feed gas monitoring

For water dew point or concentration, please refer to AMETEK's 3050-OLV quartz crystal moisture analyzer.
For H₂S analysis, please refer to our Western Research® Model 933 Analyzer.



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SUPERIOR BENEFITS

- Accurate monitoring of hydrocarbon dew points at pipeline pressure
- Proprietary three stage filter provides superior protection
- Designed for unattended operation
- Electricity the only consumable

STANDARD FEATURES

Outputs

- Hydrocarbon dew point
- Monitor operational status

Heat Dissipation

- Via heat pipe

PERFORMANCE SPECIFICATIONS

Methodology: Chilled-mirror

Accuracy: Hydrocarbon dew point temperature $\pm 2^{\circ}\text{F}$ ($\pm 1^{\circ}\text{C}$)

Sensitivity: Temperature $\pm 0.2^{\circ}\text{F}$ ($\pm 0.1^{\circ}\text{C}$)

Outputs: 4 to 20 mA (isolated, loop-power by customer or optional self-powered)

Power Consumption: less than 350 W

Power: 120 VAC 60 Hz or 220 VAC/240 VAC 50 Hz

Approvals and Certifications:

- Class I, Division 1, Groups C & D
- CENELEC Ex d (s) IIB T4
- GOST 1ExdIIBT3 X

CE Compliance: Complies with all relevant European directives

Typical Flow: 2 to 10 scfh (1 to 5 NI/min.) depending on sample system configuration and pressure

Ambient Temperature: 50°F to 104°F (10°C to 40°C)

Analog Output Range: -40°F to 104°F (-40°C to 40°C)

Cooling Capability: Typically 90°F (50°C) below the temperature at the monitor installation. The cooling capability of the monitor is affected by the sample gas composition and the pressure. *(Consult your AMETEK representative for evaluation of your application.)*

Highest Measurable Dewpoint: 9°F (5°C) below the temperature at the monitor installation

Maximum Working Pressure: 2000 psi (13.79 MPa)

Sample Transport: 1/4 inch stainless steel instrument tubing recommended (heat tracing may be required)

Physical Dimensions (H x W x D):

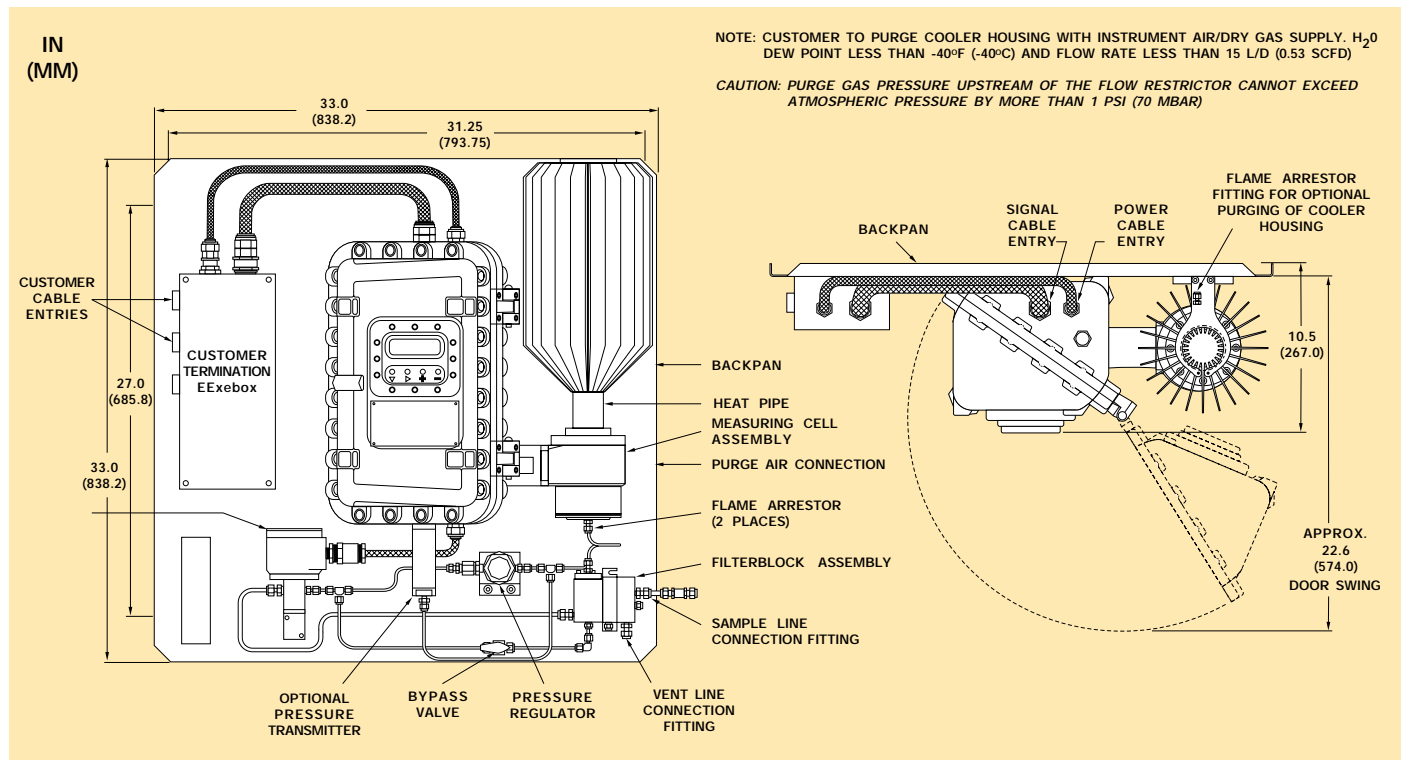
CENELEC/GOST model: 33 x 33 x 12 in. (840 x 840 x 300 mm)

Class I, Division 1 model: 33 x 23 x 12 in. (840 x 575 x 300 mm)

Weight:

CENELEC Certified: 120 lbs. (55 kg)

CSA Certified: 100 lbs. (46 kg)



Please Note: The photograph and drawing on this brochure refer to the CENELEC/GOST certified Model 241CE. Please consult the factory for information on the Class I, Division 1 certified Model 241CE.

One of a family of innovative process analyzer solutions from AMETEK Process Instruments. Specifications subject to change without notice.



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