



Process Analyzer
Cloud Point Analyzer Model P-820LT, Low Temperature

Credible Solutions for the Oil and Gas Industry

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Process Analyzer

To remain competitive, today's refiners must employ all optimization and product control techniques available. The use of online physical property analyzers is one of the key features to reach those objectives because they measure important quality properties in the process directly.

The cloud point is the temperature at which wax crystals form in a sample as it is cooled giving the sample a cloudy appearance.



Your partner
for innovative
system solutions.



The BARTEC
specialists have
many years of expe-
rience. They create
system solutions
that you can rely
on: efficient and
dependable for
decades to come.

Measuring range -150 to 77°F (-100 to 25°C)

Rapid measuring cycles of 8 minutes

Superior repeatability of less than 0.5°F (0.25°C)

Internal Cryo chiller cools to -125°C without external cooling system

No Sample Recovery System needed, can return directly to process

Stream switching and validation option

Correlates with ASTM D2500

APPLICATION

Given today's highly competitive environment, oil refiners are demanding instrumentation that aids in the optimization of the refining process. Therefore, refineries require a reliable and accurate analysis system of the Cloud Point temperature to meet the required specifications. This analysis will allow the operators to optimize the refining process and therefore lower production costs while improving product quality.

**Special Features:**

- **Internal Cyro Cooler**
- **Capable of -200°C**
- **High Pressure detection cell**
- **Dual optical system**
- **No Sample Recovery required**

Norms and Standards:**Correlates with:**

- **ASTM D2500**

Make your decision for a strong partner!

Choose **BARTEC GROUP** also for:

- **Fast Loop Systems**
- **Sample Conditioning Systems**
- **Validation Systems**
- **Recovery Systems**
- **Chillers**
- **Air Conditioning Systems/HVAC**
- **Pre Commissioned Analyzer Shelters/
Turn-Key Solutions**



EXPLOSION PROTECTION

Ex protection marking ATEX: Ex d II B T6 Gb
CSA/CUS Class I Div 1 Group B, C + D
CE₀₅₁₈

TECHNICAL DATA

Technology absorbance or reflectance
Method correlates with:
ASTM D2500
Measuring range -100 to 25°C (-148 to 77°F)
can go to -200°C (-328°F)
Repeatability ≤ 0.25°C
Reproducibility correlates with:
ASTM D2500
Measuring cycle less than 5 min
Product streams diesel, kerosene

■ **Electrical data**
Nominal voltage 100 to 120 VAC 1 phase; 50/60 Hz
200 to 240 VAC 1 phase; 50/60 Hz
Maximum power consumption 600 W
■ **Protection class** IP 65
■ **Ambient conditions**
Ambient temperature -20 to 40°C (-4 to 86°F)
Ambient humidity up to 90 %

Sample
Quality clean and filtered,
less than 10 µm
Consumption 60 to 120 l/h
Pressure at inlet 1 to 24 bar (348 psi)
Temperature at inlet 15 to 95°C (59 to 176°F)

Utilities
■ **Instrument air**
Consumption If air cooled cyro then 25 CFM
Vortec Purge 12 l/h
Pressure at inlet 5 to 9 bar (80-120 psi)
Quality plant air
■ **Coolant**
Consumption if liquid cooled cyro then 240 l/h
(air cooled / no coolant)
Temperature -10 to 40°C (14 to 86°F)
Pressure at inlet 1 to 20 bar (min 2 bar difference)
Quality clean and filtered

Signal outputs and inputs

Analog outputs Cloud Point, cell temperature, optical signals
Digital outputs Cloud Point alarm, analyzer fault, come read
Digital inputs customer alarm, remote standby, stream switch, validation request

Electrical data of signal outputs and inputs

Analog outputs 1 standard 4-20 mA self powered and isolated, 1 optional
Digital outputs up to 3 dry contacts 250 VAC, 3 A
Digital inputs up to 4 dry contact, (dry contact)

User interfaces

Display 7" color graphics
Keyboard 5 button magnetic, no hot work permit required

Connections

Pipe fittings Sample inlet 1/4" FNPT
Sample outlet 1/4" FNPT

Weight and dimensions

Weight approx. 228 kg (500 lbs)
Dimensions (W x H x D) approx. 940 x 1803 x 762 mm
(37" x 71" x 30" in)

Optional interfaces

Analog outputs optional (Sig0, Sig90, cell temperature)
MODBUS TCP IP / Serial RTU

Important notice P-820LT is subject to continuous product improvement, specifications are preliminary and may be subject to change without notice. If your technical data do not comply with existing data, please contact us for technical clarification.



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