



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

Credible Solutions for the Oil and Gas Industry

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

## 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  $-200^{\circ}\text{C}$**
- **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  
CE<sub>0518</sub>

## 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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