



Process Analyzer
Freeze Point Analyzer Model P-800LT, 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 freeze point is the temperature at which the last of the wax crystals disappear when warming the sample, after first reaching the Cloud Point temperature.



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.

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

Straight path absorbance & 90° back-scatter detection

Rapid analysis cycle of 15 minutes or less

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

Remote diagnostics over IP

Correlates with ASTM D2386

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 Freeze 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 System is required**

Norms and Standards:**Correlates with:**

- **ASTM D2386**

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 automatic optical detection, absorbance or reflectance

Method correlates with:
ASTM D2386

Measuring range -100 to 25°C (-148 to 77°F)

Repeatability 0.25°C

Reproducibility ≤ ASTM

Measuring cycle typical is less than 15 min

Product streams jet fuel is normal, kero

■ 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 (68 to 104°F)

Ambient humidity up to 90 %

Sample

Quality clean and filtered,
less than 10 µm

Consumption 60 to 120 l/h; 2 bar (29 psi)

Pressure at inlet 1 to 24 bar (14 to 348 psi)

Temperature at inlet 15 to 85°C (59 to 185°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 to 120 psi)

Quality plant air

■ Coolant

Consumption if liquid cooled cyro then 240 l/h
(air cooled / no coolant)

Temperature -20 to 40°C (-4 to 104°F)

Pressure at inlet 1 to 20 bar (min 2 bar different)

Quality clean and filtered

Signal outputs and inputs

Analog outputs Freeze Point

Digital outputs F.P. alarm, analyzer fault, come read (programmable)

Digital inputs customer alarm, remote standby, stream switch, validation (dry contact)

Electrical data of signal outputs and inputs

Analog outputs 1 standard 4-20 mA self powered and isolated, 1 optional

Analog inputs None required

Digital outputs up to 3 dry contacts 250 VAC, 3 A

Digital inputs up to 4 dry contact

User interfaces

Display 7" color graphics

Keyboard 5 button magnetic, no hot work permit required

Connections

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-800LT 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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