BARTEC ORB

Process Analyzer

Freeze Point Analyzer Model P–800 LT, Low Temperature

Credible Solutions for the Oil and Gas Industry

Freeze Point Analyzer Model P–800LT, Low Temperature

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.

BARTEC ORB

Your partner for innovative system solutions.

The BARTEC specialists have many years of experience. 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**

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EXPLOSION PROTECTION

Ex protection marking	ATEX: Ex d II B T6 Gb CSA/CUS Class I Div 1 Group B, C + D CE 0518

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 Vortec Purge	If air cooled cyro then 25 CFM 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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