BARTEC ORB

Process Analyzer

Viscosity Analyzer Model P–900

Credible Solutions for the Oil and Gas Industry

Viscosity Analyzer Model P–900

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.

Absolute viscosity provides a measure of a fluid's internal resistance to flow.

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.

Capillary type of viscometer

Correlates to ASTM D445

Continuously measures dynamic viscosity

Certified for installation in hazardous areas

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 viscosity analysis system 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:

- **Customizable 2–4000 cP Sample Range** (optional kinematic output)
- **Does not require atmospheric recovery system**
- **Modbus**
- **Optional densitometer**

Norms and Standards:

Correlates with:

- **ASTM D445**

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**

Viscosity Analyzer Model P–900

EXPLOSION PROTECTION

Ex protection marking	ATEX: Ex d II B + H2 [ia II C] T3 Gb CSA/CUS Class I Div 1 Group C + D CE 0518

TECHNICAL DATA

Technology	capillary type, absolute / dynamic viscosity
Method	
Measuring ranges and temperatures	2-4000 cP
Repeatability	± 1 % full scale or better
Reproducibility	correlates with: ASTM D445
Measuring cycle	continuous, response time T90: 180 Sec
Product streams	lube oils, asphalts and bunker fuels
■ **Electrical data**	
Nominal voltage	220 VAC, 50/60 Hz; 1 phase - Heater and Pumps 120/220 VAC, 50/60 Hz; 1 phase - Electronics
Maximum power consumption	less than 4000 W
■ **Protection class**	IP 65
■ **Ambient conditions**	
Ambient temperature	operation 5 to 40°C (41 to 104°F)
Ambient humidity	up to 90 %

Sample

Quality	filtered 10 µm - optional sample, conditioning system available, without free water
Properties	
Consumption	5 l/h (fixed metering pump)
Pressure at inlet	1.4 to 14 bar (20 to 203 psi)
Temperature at inlet	± 38°C (68°F) of bath temperature
Process sample	max temperature 111°C (232°F)

Utilities

■ **Coolant**	
Consumption	depends on application (consult factory)
Temperature	0 to 50°C (32 to 122°F)
Pressure at inlet	1 to 60 bar (14 to 870 psi)
Quality	clean and filtered (10 µm)

Signal outputs and inputs

Analog outputs	1 standard for viscosity, programmable for cST or cP, selectable for sample viscosity values, analyzer system / maintenance warning or analysis measurement indication
Digital outputs	3 dry contact outputs, selectable for sample viscosity value alarm, analyzer maintenance warning or analyzer fault alarm
Digital inputs	up to 2, customer alarm, remote standby

Electrical data of signal outputs and inputs

Analog outputs	isolated 4-20 mA output, 1 standard, 1 optional
Digital outputs	3 SPDT Relays with contacts rated at 3 A resistive load at 250 VAC
Digital inputs	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. 159 kg (350 lbs)
Dimensions (W x H x D)	approx. 1341 x 1803 x 762 mm (52.75” x 71” x 30” in)

Optional interfaces

Analog outputs	optional (bath temperature, density)
MODBUS interface	TCP/IP or Serial/RTU 485

Important notice P-900 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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