

Beacon 3000 Process NIR Analyzer

Low Maintenance

Proprietary window material prevents fouling and eliminates the need to dismantle and clean the probe. Little or no conditioning is required, further increasing the system's reliability.

Low Cost

In many applications, the Beacon 3000's performance and price make it an attractive alternative to traditional analyzers, such as gas chromatographs or distillation analyzers. No analyzer shelter is required, and the low maintenance requirements reduce ownership costs to a minimum.

Field Proven

The Beacon technology has been successfully implemented in Refinery, Pipeline and Petrochemical applications.



Unique Architecture

- The Main Analyzer is located in the Control Room, protected from the process environment.
- The Main Analyzer connects, via telecommunications fiber optics, to the Field Units, which are installed up to 3 km (2 miles) away, close to the process.
- Up to 8 Field Units can be connected to one Main Analyzer.

Intrinsically Safe

- The Field Unit uses no electricity, and contains no moving parts. This 100% optical probe requires no explosion proof housing or analyzer shelter.
- The Field Unit is certified under the ATEX Directive 94/9/EC (EN 60079-28:2007).

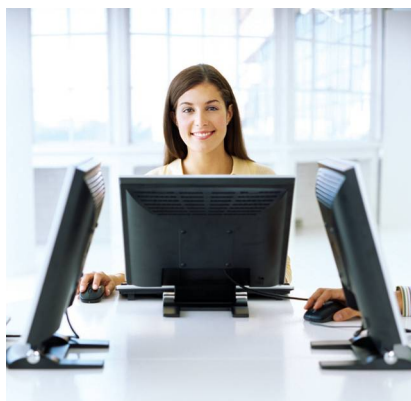
The new Beacon 3000 represents a breakthrough in NIR process analyzer design. The intrinsically safe probe and low system cost result from a combination of innovative optics and the patented application of standard, optical, fiber technology to NIR analysis.



Beacon 3000 Specification and Benefits

MEASURED PROPERTIES

- Motor Octane
- Research Octane
- Total Aromatics
- Total Ole%
- ortho Xylene fins
- Distillation Points
- Oxygenates
- API Gravity
- Cloud Point
- Viscosity
- Flash Point
- Pour Point
- Cetane index
- Reid Vapor Pressure
- % para Xylene
- PIONA
- Chemical Composition%
- Benzene
- % meta Xylene
- % MTBE and more ...



Applications

- Gasoline and Diesel on-line blending
- Continuous catalyst regeneration
- Crude distillation unit optimization
- Solvents extraction complex on-line analysis
- Catalytic cracking unit optimization
- Reformer streams on-line analysis
- HF Alkylation acid analysis

Performance Specification

Cycle time: 10-30 sec / stream

Main Analyzer Unit to Field Units maximum distance:
3 km

Multiplexing Capability: up to 8 Field Units

Outputs:

- Modbus RS 485
- TCP/IP Ethernet Communication
- Optional AO/AI/DI/DOs

SERVICES AVAILABLE

- Technical Support
- Installation and Setup
- Maintenance
- Application Support
- Hardware Support
- Guaranteed Warranty

Field Unit Operating Conditions

Ambient Temperature: -40°C to +70 °C

Maximum Sample Temperature: up to 160 °C

Sample Conditioning Requirement: Haze-free

Maximum Inlet Pressure: 550 psi (40 bars)

Flow Rate Requirement: 1 l/min to 3 l/min

Sample phase: Liquid

Weight: Approximately 7 kg (15 lb.)

Dimensions: H 30 cm - D 38 cm - W 16 cm

Routine Maintenance: None

Area Classification: Zone 1 (EN 60079 EN 6007928:2007)

Spectrometer Operation Conditions

Ambient Temperature: 0°C - 45°C (32°F - 113°F)

Relative Humidity: 30% - 90% non-condensing

Supply Voltage: 100/120/220/VAC, 50/60 Hz (3 A max.)

Via on-line UPS

Weight: Approximately 8 kg

Dimensions: Single 2U, 19" Rack Unit, 353 mm deep

Routine Maintenance: Replacement of light source every 6 months

Area Classification: General Purpose

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