

Inline and Compact REFRACTOMETER

ETRANS –PTR100 Datasheet



Precise Measurement,
Ultimate Control

Inline and Compact Refractometer MODEL PTR100



Application Areas

Water & Salt Water Networks
Food Production & Transfer Lines
Alcohol & Beverage Measurement
Chemical Fluids & Solvents
Fuel Transfer & Consumption Monitoring
Industrial Automation Integration (PLC/SCADA)

Features

- Automatic concentration control using PID controller with analog output current in the range of 4–20 mA or 0–20 mA
- Automatic temperature calibration for precise measurement of concentration
- Various output signals: analog current, relay digital outputs, Modbus RTU
- Robust against environmental electrical noises, mechanical vibration, dust and humidity (IP67)
- Robust against Clearing In Place (CIP) using acidic and alkaline substances
- Head material options: Stainless Steel AISI 316L, Titanium, PTFE
- Prism material: high reliable Sapphire
- Store and recover measured data in the last few months
- After sale services for installation, operation, and calibration

Description

Refractometers are used as an efficient tool for measuring the concentration of various substances in a solution. They can be used in laboratories to measure the concentration of sampled materials or inline for real-time monitoring of the concentration of industrial liquids. PTR100 is an inline refractometer which directly connects to the main piping. Moreover, it can be used in both clear and opaque liquids.

The head and sensor processing units of the device are separated and can be installed in different locations according to process designs. Etrans PTR100 is fully calibrated and also temperature-compensated. Measured signals are available in different units such as Brix or nD, and also, they can be sent to the central controllers such as PLCs or DCSs using analog 4-20 mA current signal or through Modbus RTU RS485 communication protocol.

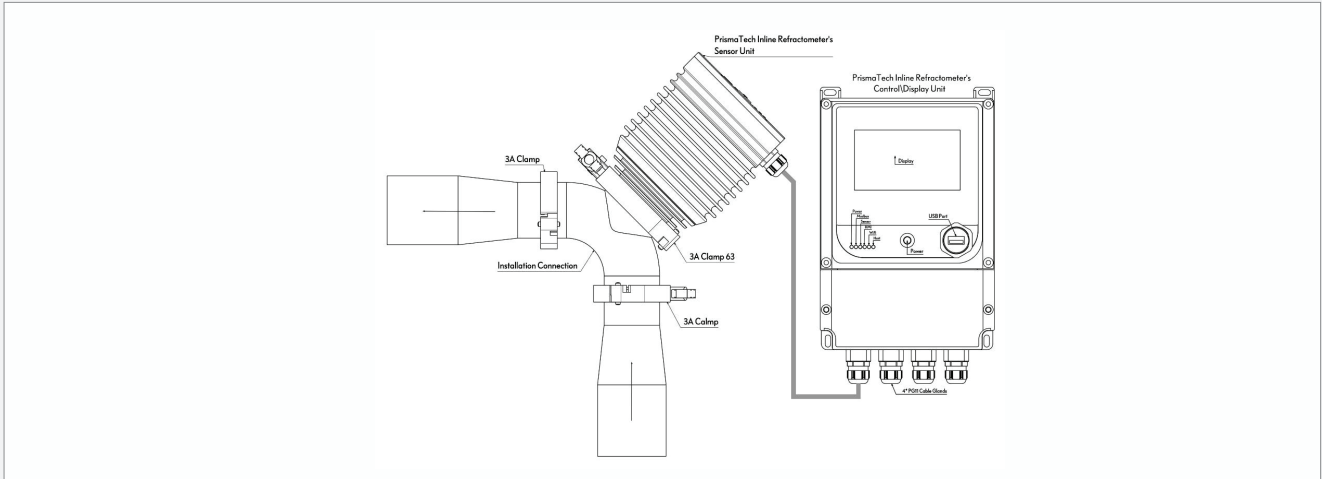


Inline
Refractometer PTR100



Compact
Refractometer CPT_PTR100

Diameters



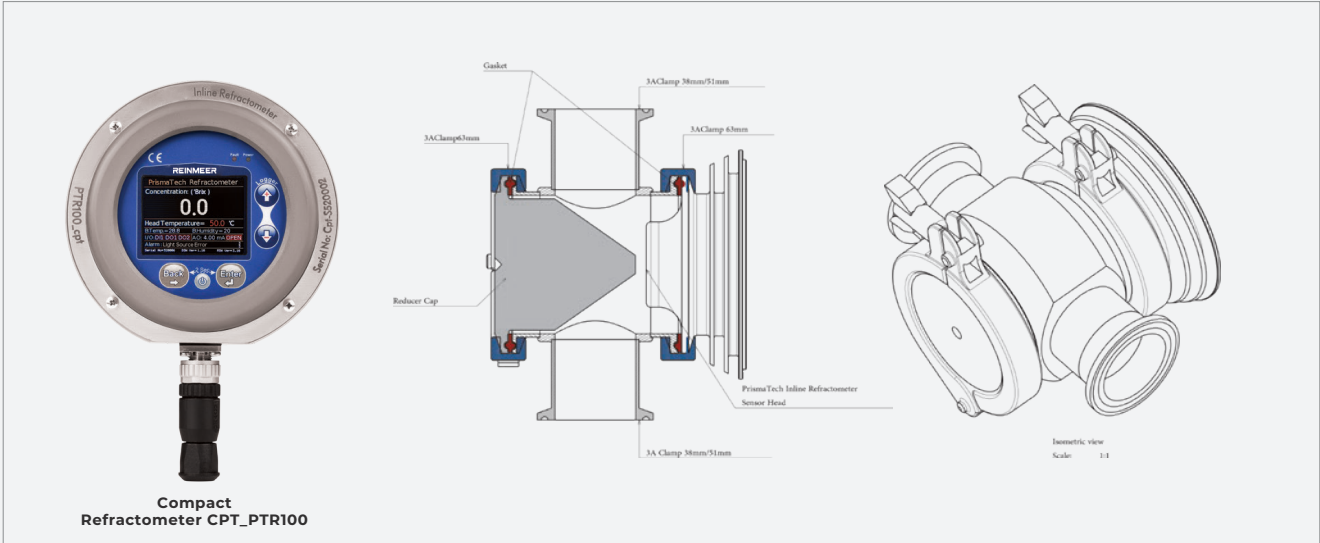
Transmitter Specifications

Product Code :RM-PTR100 (PTR100T)

Refractive Index Range	1.32500-1.5400
Brix Range	0-100° Brix
Measurement Accuracy	0.07%
Process Critical Condition	120°C, 12 Bar
Material	Sapphire
Sensor Enclosure	IP67
Wetted Parts Material	AISI316L/PTFE/Titanium
Internal Sensors	Processor Voltage and Temperature Sensor Enclosure Humidity Sensor
Installation Connections	3AClamp 63mm (others on request)
Display	4.3" Touch Screen
Outputs	Three Relay Outputs (6A) Two Analog Outputs (0–20 mA or 4–20 mA)
Inputs	Two Digital Inputs (24V)
Serial Port	RS485 / Modbus RTU
Data Logger	Up to 6000 samples with adjustable sampling intervals
Transmitter Dimension	160 * 230 * 64 mm

Inline and Compact Refractometer

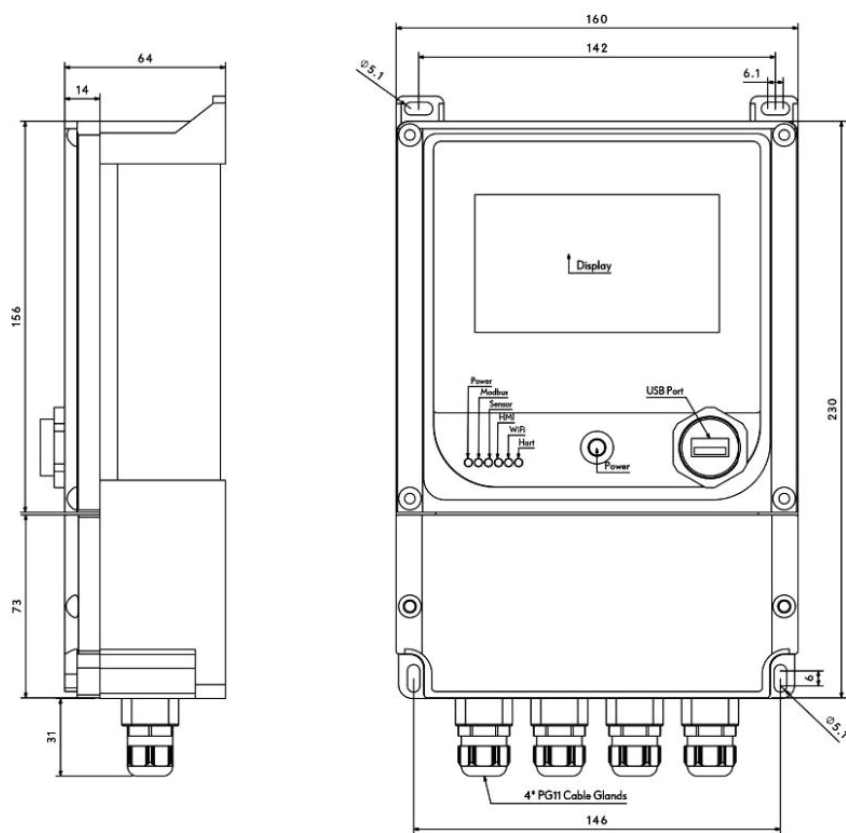
MODEL PTR100



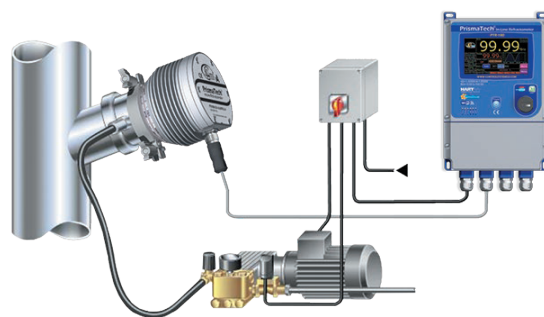
Product Code : CPT_PTR100

Refractive Index Range	1.32500-1.5400
Brix Range	0-100° Brix
Brix Measurement Accuracy	0.07%
nD Measurement Accuracy	0.0001
Max. Process Critical Condition	90°C _8 Bar
Material	Sapphire
Sensor Enclosure	IP67
Wetted Parts Material	AISI316L/PTFE/Titanium
Display	320 * 240 TFT Color LCD
Digital Input-Output	Two Digial Output One Digital Input
Analog Outputs	One port 4-20 mA or 0-20 mA
Communications	RS485 / Modbus RTU / WIFI
Optical Sensor	CCD 3648 Pixels
Power Supply	24 VDC, 500mA

Control/Display Enclosure



steam system

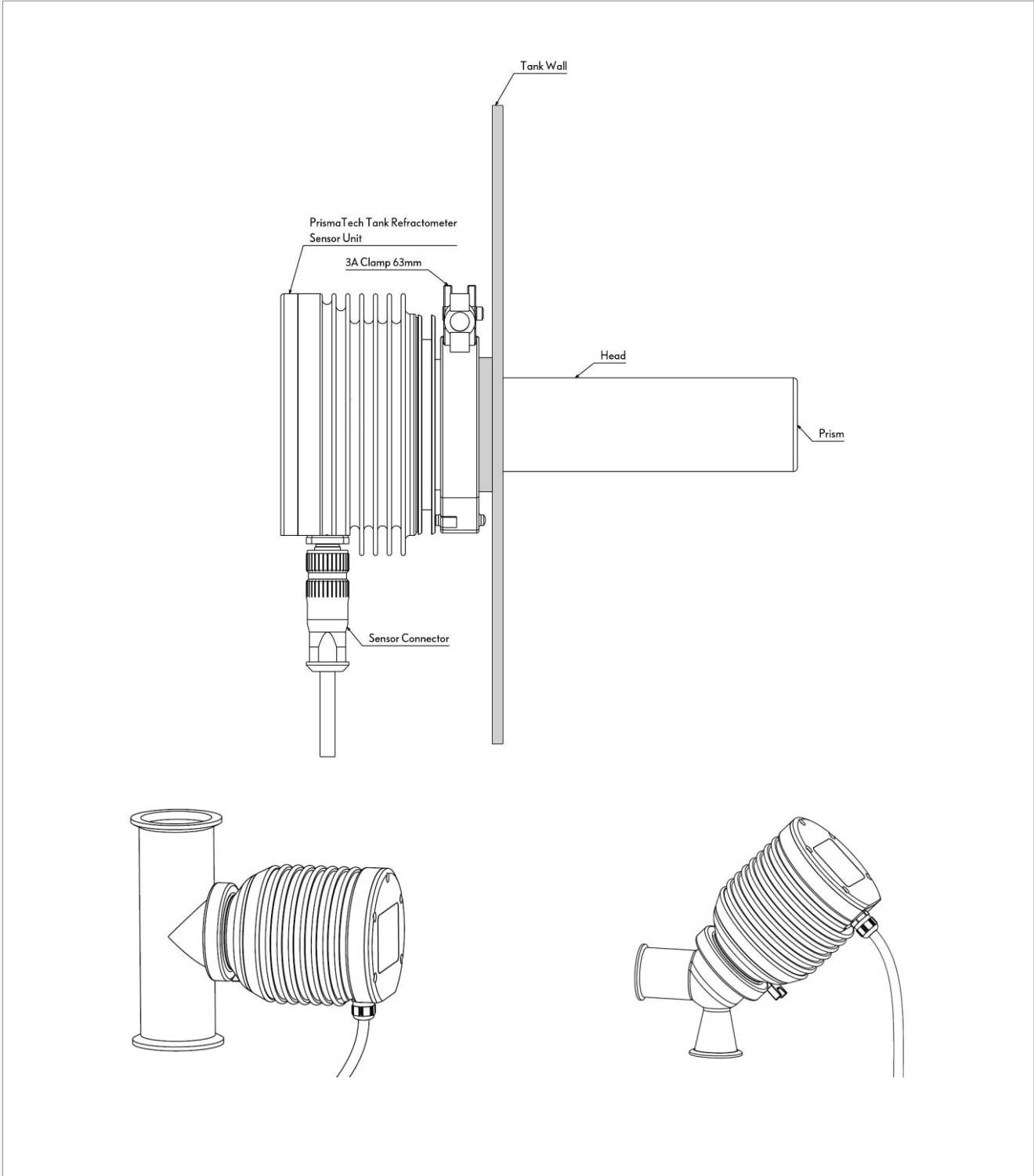


Water system

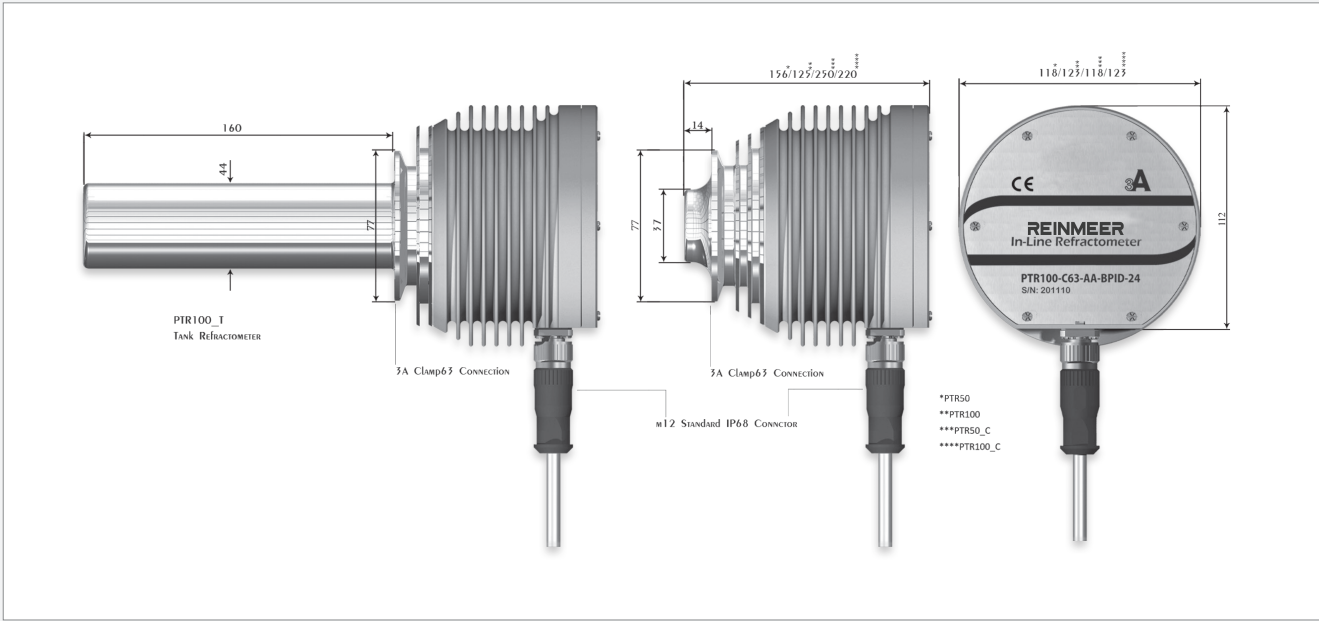
Inline and Compact Refractometer
MODEL PTR100



Diameters



Characteristics



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