

iPR B⁴

Basic Inline Process Refractometer

Our entry-level process refractometer with wide measuring range for various applications in food, pharma and more



Specifications

Basic Inline Process Refractometer

Measurement principle	Total internal reflection refractometer
Measuring scales	Sucrose (Brix) (already included) Up to 4 scales freely definable
Measuring range	1.32000 - 1.51000 RI / 0 - 85 Brix
Accuracy	± 0.00011 RI / ± 0.08 Brix at 25 °C
Reproducibility	0.00005 RI / 0.035 Brix
Resolution	0.00001 RI / 0.01 Brix
Process temperature	- 10 to + 90 °C (CIP/SIP up to 150 °C for 30 minutes)
Ambient temperature	- 10 to + 55 °C
Temperature sensor accuracy	± 0.1 °C
Temperature measurement	NTC sensor for measurement of sample temperature placed inside the prism
Process pressure	0 - 10 bar (up to 30 bar with APV connection)
Interfaces standard	2 insulated 4 - 20 mA active analog outputs ($\leq 500 \Omega$) 2 digital output switch (up to 1 A) 1 serial output (RS232)
Interface optional	1 serial output (RS485 or USB)
Mechanical interfaces standard	VariVent type N 1.4404 Stainless steel
Mechanical interface optional	APV 1.4404 Stainless steel
Dimensions	245 mm x Ø 136 mm
Weight	5300 g
IP class	IP69K
Light source, wavelength	LED, 589 nm
Power supply	24 V DC
Current consumption	< 120 mA (20 - 28 V)
Wetted parts	Sapphire, 1.4404 Stainless steel
Housing material	1.4404 Stainless steel
Available immersion depths	0 - 90 mm

Refractometer applications

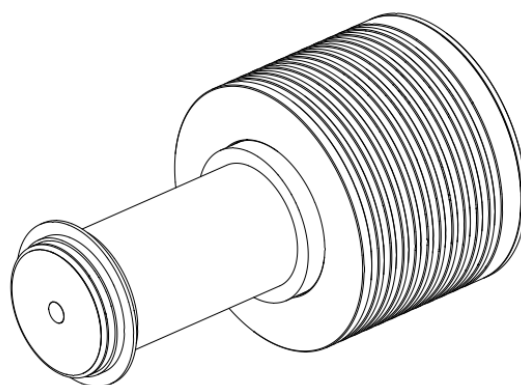
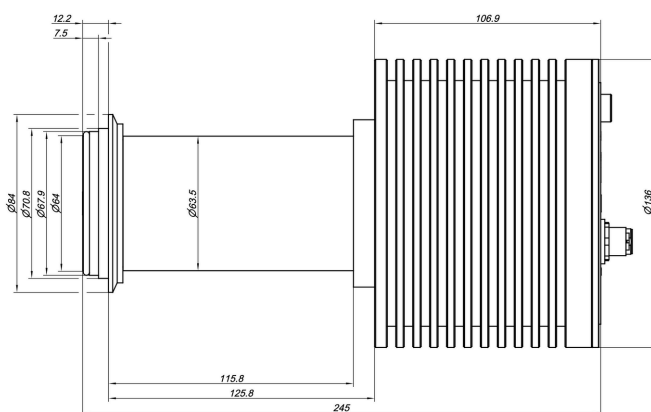
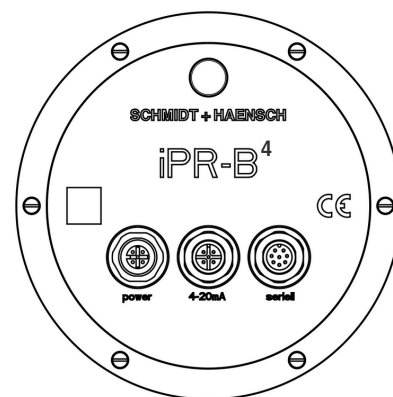
The applications of Refractometers are highly diverse.

Applications often used

- Determination of refractive index
- Determination of dry substance
- Determination of mass percent
- Brix measurement
- Standard scales (Brix, Oechsle, Zeiss, Fat, Honey)
- with automatic temperature compensation
- Qualitative analysis – identification of samples
- Interface detection
- Quantitative analysis of dissolved solids in water or other solvents
- Quantitative analysis of sugars, solves, glycol, fat, oechsle

Typical industries of the model

- Sugar industry
- Beverages
- Food (oil from palm, corn, sunflower, soya)
- Essential oil
- Chemical industry



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