



The art of analysing

process refractometer

CR100



***The process refractometer
CR100 is the ideal
instrument for in-line
measuring of
concentrations, dilutions,
densities, percentages of
dissolved solids, acids,
solvents, hydrocarbons and
other liquids in general.***

The measuring is not affected by emulsion, suspended solids, colour or opaqueness that are characteristic of the product.

The CR100 adopts many technological refinements such as: high resistance synthetic sapphire prism, a long life HE LED diode light source, a high resolution camera device CCD for the measuring system. Moreover the instrument has a graphic backlight LCD display and a multilevel menu from which is possible a completely personalization and configuration of the analyser. CR100 refractometer is an reliable automation device for industrial processes of concentration, jams production, dairy, canning, oenological and spirits production.

It's also used in petrochemical industries on processes where safety constitutes an important factor. In chemical industry a wide range of chemicals and other liquid phase products are generally controlled by CR100.

It's available in standard version >CR100, in low Brix version >CRK100, in tank-boule with thick walls or double wall >CRL100. Each of these versions is available with extended temperature range (CRHT100, CRKHT100, CRLHT100)

A special range of accessories allows the tester to be easily inserted in-line on the plant.

CR100 – TECHNICAL SPECIFICATIONS

Measuring limits		Material in contact with product	
CR100/CRL100	1.3330...1.5318 R.I. 0...95 Brix		AISI 316 stainless steel Viton ® Teflon® (on demand)
CRK100	1.3330...1.4200 R.I. 0...50 Brix	CR100/CRL100	Synthetic sapphire
Maximum range		CRK100	Tempered optical glass
CR100/CRL100	0.1710 R.I. = 85 Brix	Connection to process	Tri-camp® 3"
CRK100	0.0870 R.I. = 50 Brix	Keyboard	Polycarbonate with membrane keys
Minimum range		Display	128x64px LCD graphic
CR100/CRL100	0.0540 R.I. = 20 Brix	Language	English (Italian, French, Spanish, German, on demand)
CRK100	0.0870 R.I. = 10 Brix	Programming menu	Friendly multilevel menu for a complete personalization of parameters, ranges, scales, data storage.
Resolution	0.1 o 0.01°Brix 0.0001 R.I.	Dehumidification	Silica bag gel 20gr
Accuracy		Temperature probe	External PT100 with ¼" connection AISI 316 stainless steel
CR100/CRL100	0.5 % of measuring range	Light source	LED HE
CRK100	0.3% of measuring range	Measuring sensor	CCD 2048 pixel
Repeatability	see accuracy	Allarms	Two programmable signal relays max. 24V 2A (only with TB220)
Range type	Brix and % configurable on demand	Ref directives:	2002/96/CE 2006/95/CE and subsequent changes 2004/108/CE and subsequent changes
Pressure	-1...+10 bar (-14,5...+145 psi) Special versions for higher pressure	Standard	CEI EN 60529/1997-06
Process temperature		FITTINGS	- Flow cells for in-line or by-pass installing on pipes from 1"(DN25) to 4" (DN100) provided by connections to sold, DIN, Tri-clamp® . Made in stainless steel AISI316 - Adapters for tank-boule installing. Made in stainless steel AISI316 - Adapters suitable for installation on old flow cells. Made in stainless steel AISI316 - Special adapters and flow cells on demand - Connectors for power and signal cables - Power supply box with transformer and terminal block (TB220) for power 110/220Vac
CR100/CRL100/CRK100	- 5 ... 110°C (23,4 ... 230°F)		
CRHT100/CRLHT100/ CRKHT100	- 5... 125°C (23,4...257°F)		
Ambient temperature	- 5 ... 50°C (23,4 ... 122°F)		
Optimal product's speed	> 1,5 m/s (5 ft/s)		
Power suppli	12...24 VDC or VAC – 10W 110...220 VAC (optional with external box)		
Analogical output	4 20mA 500 ohm		
Serial output	RS232 or RS485		

CR100 – DESIGN FEATURE

Structure	AISI 304 stainless steel Water proof IP 65 - Nema 4X
Weight	5 kg

AN INDISPENSABLE ANALYSIS PROCESS INSTRUMENT FOR:

FOOD INDUSTRIES

Tomato, Milk, Beer, Beverages, Juices, Coffee, Candied fruit, Jelly, Yeast, Liquorice, Natural extracts, Honey, Fruit juices, Grape must, Wine, Sugar, etc.

CHEMICAL INDUSTRIES

Acids, Cleansings, Oils, Caustic soda solutions, Paper treatments, Cellulose, Soaps and fat soaps, Lubricant oils, Emulsified oils, Phenol processes, DMF, By-products of petroleum, Fertilizers, Explosives, Polymer processes, etc.

TEXTILE INDUSTRIES

Textile fibres, Man-made fibres, Synthetic leathers, Synthetic wool, Cotton manufacture, etc.



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