



Solutions for
Analysis
of
Liquids



> REFRACTOMETERS SERIES **CR**

The CR100 digital refractometer 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 **CR100** digital refractometer adopts many technological re-nements: High resistance synthetic sapphire prism, a long life HE LED diode light source, a high resolution camera device CCD for the measure system. The instrument's front cover has a graphic backlight LCD display and an input keyboard from which is possible a completely personalization and con-guration of the analyser.

The measuring is not affected by emulsion, suspended solids, colour or opaqueness that are characteristic of the product. The CR100 digital 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 digital refractometer.

It 'available in the standard version> CR100, in the version for low values of Brix and high precision> CRK100, in the version for tank containers and boules with thick walls> CRL100. Each of these versions can be supplied with extended temperature range (CRHT100, CRKHT100, CRLHT100). A wide range of accessories allows for easy insertion analyzer in the line of a pipe or directly on container, tank or boule.



FOOD INDUSTRIES

Tomato, Milk, Beverage, Beer, Juices, Coffee, Candied fruit, Molasses, Jam, Jelly, Licorice, Natural flavours, Honey, Fruit and Vegetables, Grape must, 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, Polymers,etc...

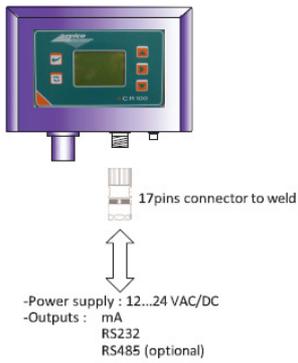


TEXTILE INDUSTRIES

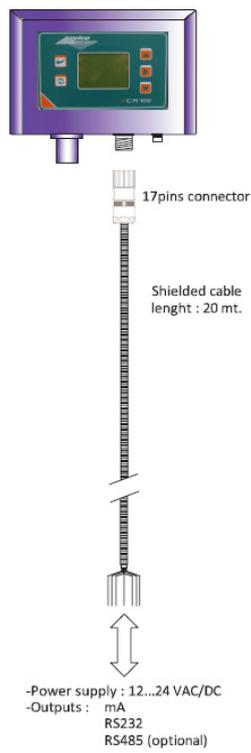
Textile fibres, Man-made fibres, Synthetic leathers, Cotton manufacture, Synthetic wool, Etc...



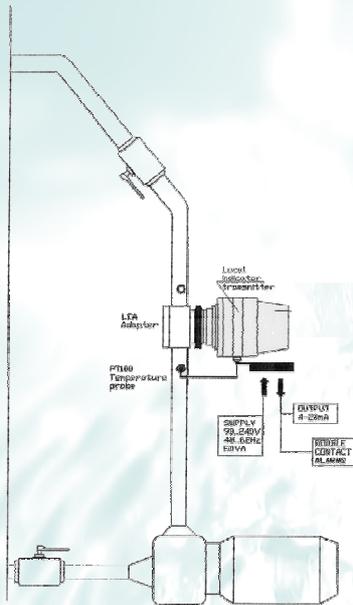
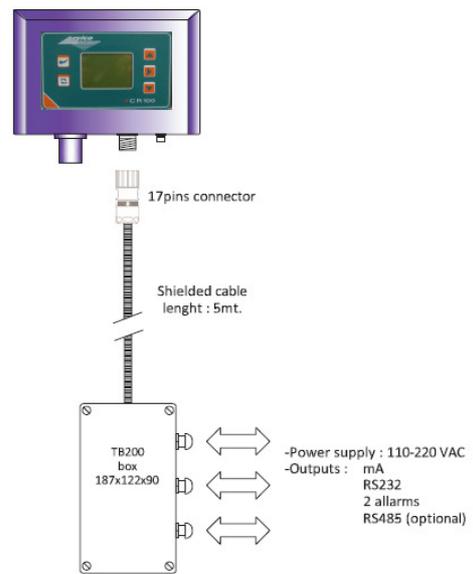
CR100 with 17pins female connector (standard)



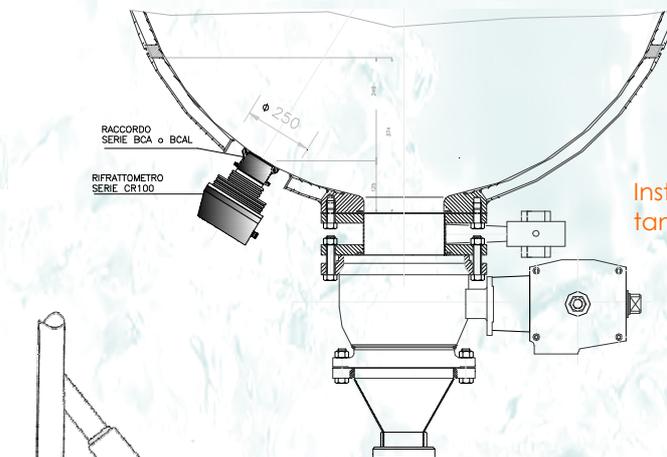
CR100 with CAV20CON17 cable+connector (optional)



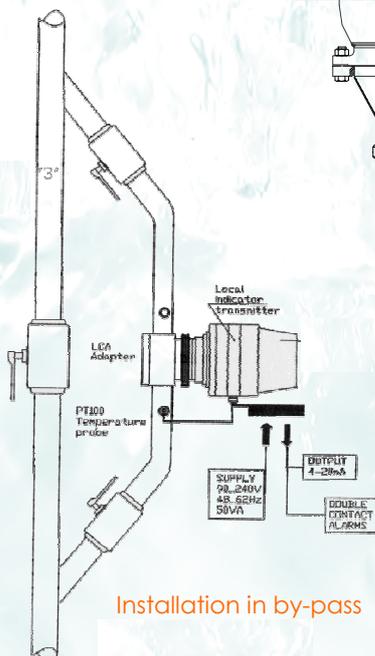
CR100 with TB220 power supply box (optional)



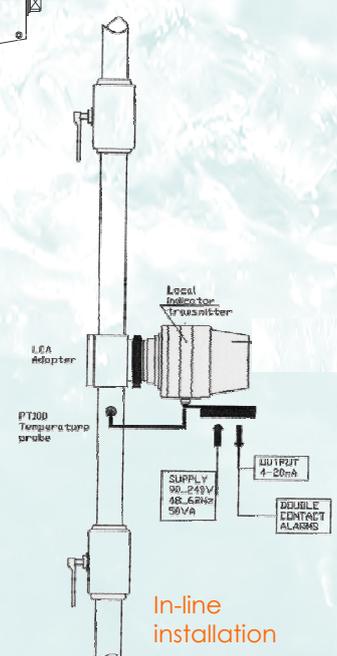
Installation with dedicated pump



Installation on boule or tank



Installation in by-pass



In-line installation

TECHNICAL SPECIFICATIONS

Measuring limits	1.3300...1.5300 R.I. 0...95 °Brix
Version K	1.3300...1.4200 R.I. 0...50 °Brix
Range max	0.1740 R.I. = 85 Brix
Version K	0.0700 R.I. = 40 Brix
Range min	0.0300 R.I. = 20 Brix
Version K	0.0150 R.I. = 10 Brix
Resolution	0.1 o 0.01 °Brix 0.0001 R.I.
Accuracy	0.5% of measuring range
Version K	0.3% of measuring range
Repeatability	see Accuracy
Process pressure	-1...+10 bar (-14,5...145 PSI) Special versions for high pressures
Process temperature	+10...95 °C
Version HT	+10...140 °C
Ambient temperature	-5...+50 °C
Optimal product's speed	>1,5 mt./s (5 ft/s)
Power supply	12...24 VDC o VAC - 10W 110...220 VAC - 10W (with external power supply box)
Analogical outputs	4...20 mA 500ohm
Serial outputs	RS232 or RS485

Connection to process Keyboard

Tri-Clamp® 3"
Polycarbonate with membran keys

Display Menu languages

128X64px LCD graphic
English (italian, french, spanish, german on demand)

Programming menu

Multilevel menu, simple and intuitive to customize parameters, measuring range, limits and data

Internal dehumidification Temperature probe

SM40 molar
PT100 external conn. 1/4"
AISI 316 stainless steel

Light source Camera device Alarms

LED HD
CCD 2048 pixels
2 relè - 24V 2A
(only with TB220)

Standards

2002/96/CE
2006/95/CE e suc.modifiche
2004/108/CE e suc. modifiche
CEI EN 60529/1997-06

FITTINGS

- Flow cells to install in line or by-pass on pipes from 1" (DN25) to 4" (DN100) with connections to weld, DIN, Tri-Clamp, AISI 316 stainless steel.
- Adapters to install on tank/boule in AISI 316 stainless steel.
- Adapters to install on old flow cells in AISI 316 stainless steel.
- Special adapters and flow cells on demand
- Connectors+cable for power supply and signals
- Power supply box with feeder and terminal board on 110/220 VAC

CONSTRUCTION

Structure	AISI 304 stainless steel - TECAMID® IP65 - Nema 4X
Weight	3 Kg.
Parts in contact with product	AISI 316L stainless steel - Viton® Teflon® (on demand) Synthetic sapphire Crown® tempered glass
Version K	

In-Line processes



> CR100

Boule or tank



> CRL100

High accuracy applications



> CRK100

