



**TECHNICAL SPECIFICATIONS AND STANDARDS**

**Ambient Characteristics**

Temperature Limits:

Ambient: + 5 °C...+45°C  
Storage: -20°C...+70°C

Humidity Limits:

Ambient: + 5 %...+95% (R.H. non-condensing)  
Storage: + 5 %...+95% (R.H. non-condensing)

Altitude Limits: <2000 m a.s.l.

Pollution Category: "2" to IEC664

Protection category: IP65 to EN60529

**Conformity to Standards and Directives**

CLASS I equipment in accordance with IEC536.

LVD: EU 73/23, 93/68 and amendments;  
EN 61010-1 (1994)

EMC: EU 89/336, 93/68 and amendments;  
EN 50081-2 (1994-Generic Emission)  
EN 50082-2 (1995-Generic Immunity)  
EN 61000-4-2 (1996-Electrost. Discharges)  
EN 61000-4-4 (1996-Bursts)  
ENV 50140 (1994-Irradiated Immunity)  
ENV 50141 (1994-Cond. Disturbances)

\*CE mark shows conformity to listed EU Directives and Standards.

\*Year 2000 compliant in accordance with BSI DISC PD2000-1:1998.

**OPERATIVE SPECIFICATIONS**

Application: Measurement of liquid products in laboratories in the Food, Chemicals, Textile, Petrochemical industries, wineries, etc.

Measurement type: Refractometric measurement in laboratory of the Refraction Index and display in the selected scale of the relative concentration with automatic temperature compensation.

Measurement Limits: 1,3330...1,5177nD (0...90Brix).

Accuracy: ±0.0004nD (± 0.03Brix).

Measurement Scales: N°10 measurement scales selectable from the keypad:  
- nD  
- BRIX; the "BRIX" scale refers to the nD/Bx ICUMSA (1974) conversion tables.  
- HFCS42 and HFCS55 with adjustable Zero value.  
- N°3 "BRIX" scales with personalizable Zero and Span values.  
- N°3 "USER" scales totally configurable from the keypad.

Product temperature: +5°C...+45°C with automatic compensation of measured temperature by means of ceramic "Pt1000" sensor, Class "B" according to IEC751; compensation for "User" scale ranges refers to the values set on the keypad.

Quantity of analyzed sample:  
~3cc per analysis.

**GENERAL SPECIFICATIONS**

**Supplies**

LR-01: DC 5V 5W - connection to external power supplier via 5-pin male circular connector.

Power supp.: AC 115/230V ± 10% 50...60Hz 7VA  
Connection via cable with SP7748 (CEE-7) 10A/250V plug for EU versions and with P620 15A/125V plug for US versions.

Water: Water for thermostat control, max. press. 1 bar.  
Inlet/outlet connection by means of hose fitting inserts for reinforced hoses with ID of 10mm.

**Interfaces**

Serial: RS232 for connection to a PC; connection via male 9-pin D-connector.

Parallel: CENTRONICS for printer; connection via female 25-pin D-connector.

Inputs: N°1 input for measurement "external START".

Outputs: N°1 multi-function output optically decoupled from the power supply (VDE0160) configurable from the keyboard with contact rating of 24V/2A.

The input and output connection is made via a female 15-pin D-connector which also carries the connection for the optional external Pt1000 temperature sensor.

**CONSTRUCTION FEATURES**

**Execution:** One-piece 304 AISI stainless steel enclosure.

Measur. Section:  
- Synthetic sapphire measurement prism.  
- Electronically compensated LED light source.  
- CCD sensor element.  
- Internal Pt1000 temperature sensor (option for connection to Pt1000 external temperature sensor).  
- Analysis bowl in 316 AISI stainless steel, with internal water circulation cooling circuit.

The optical section of the unit is dehumidified by means of a molecular sieve desiccant cartridge.

Electronic section:  
- Microprocessor CPU.  
- Measurement readings and menus presented on backlit alphanumeric 2x16 character LCD display.  
- Moulded keypad in scratchproof polyester with dome keys.  
- Voice synthesizer in four languages (English, French, Italian, Spanish).  
- Automatic zero calibration.  
- Temperature readings in °C or in °F.  
- Overcurrent protection with 5x20mm fuse.

**Product contact materials:**

- Analysis bowl in 316 AISI stainless steel.  
- Synthetic sapphire measurement prism.  
- Silicone coated fibreglass fabric.

**Dimensions:** 262 (w) x 125 (h) x 261 (d)

**Weight:** ~4.8kg

**ACCESSORIES**

- Sampling system comprising Flow Cell and Peristaltic Pump.  
- Graphic or continuous reel printer.