



TECHNICAL SPECIFICATIONS AND STANDARDS

Ambient characteristics

Temperature Limits:

Ambient: -10°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.

Protection Category: IP65 to EN60529

Conformity to Standards and Directives

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-Electr. Discharges)
EN 61000-4-4 (1996-Bursts)
ENV 50140 (1994-Irradiated Immunity)
ENV 50141 (1994-Conducted Disturb.)

* CE mark shows conformity to listed EU Directives and standards.

* "3A" USDA approval (on request).

Connection box with Transformer(optional):

AC 115/230V ±10% 50...60Hz 10VA
Connection by means of terminal board.

Pneumatic (only when equipped with Automatic Cleaning system):

Dehumidified air 4...8bar (58...116psi).
Connection by means of Quick Coupler for 6x4 mm diameter tube.

Interfaces

Analog: 0...20mA or 4...20mA into 470Ω

Digital: RS422/485 for connection to Repeater, PC or Automation Systems.

Inputs: N°1 "Line Stop" input (HOLD).

Outputs: N°1 relay output for alarm signal or control of Cleaning System, with contact rating of 24V/500mA-DC/AC.

All the interfaces are optically decoupled from the power supply (VDE0160) and completely configurable from the keypad. All connections to be made by means of round 14 pin plastic connector.

OPERATIVE SPECIFICATIONS

Application: Measurement of liquid products in process lines in Food, Chemicals, Textiles, Petrochemical industries, etc. in continuous or batch plants.

Measurement type: Continuous refractometric measurement of Refraction Index and display in "BRIX" or "USER" scale of relative concentration, with automatic temperature compensation.

Measurement limits: 1.3330...1.5318nD (0...95Brix)

Scale Range Span: Minimum 0.0482nD (30Brix)
Maximum 0.1988nD (95Brix)

Accuracy: 0.5% of Scale Range; maximum accuracy ± 0.15Brix.

Measurement scales: "BRIX" or "USER"; the "BRIX" scale refers to the nD/Bx ICUMSA (1974) conversion tables; the "USER" scale can be configured at the time of the order.

Product temperature: -5°C...+105°C with automatic compensation of temperature measured by Pt100 Temperature Sensor in 316 AISI stainless steel, ¼", Class "B" to IEC751; for the "User" scale range compensation refers to the configured values.
Special version for temperatures up to 140°C.

Line Pressure: -1...10bar (-14.5...145psi) at 20°C
-1...8bar (-14.5...116psi) at 100°C

CONSTRUCTION FEATURES

Execution: One-piece enclosure with aluminium cover, anti-corrosion treated, Thermal isolation flange, 316 AISI stainless steel prism holder with 3" Tri-Clamp® connection for installation on process line, "3A" execution (on request).

Tank mounting version features attachment with 100mm offset.

Measur. Section: - Measurement prism in "Synthetic Sapphire" or "Optical Glass".
- Electronically compensated LED light source.
- CCD sensor element.
- "Pt100" temperature sensor to install in line or internally to unit for tank applications.

The optical section of the unit is dehumidified by means of a Molecular Sieve desiccant cartridge.

Electronic Section:- Microprocessor CPU.
- Measurement readings, program menus and error messages presented on a 128x24 point backlit graphic LCD display with "LCD Saving" function.
- Moulded keypad in scratchproof polyester with dome keys.
- Choice of 5 interface languages (English, German, French, Italian, Spanish) for the display of menus and messages.
- Temperature readings in °C or °F.

Product contact materials:
- Pt100 and Prism Holder in 316 AISI stainless steel (Hastelloy, Incoalloy on request).
- O-rings and Seals in Viton (EPDM, Silicone, Kalrez, Sanitary Rubber on request).
- Measurement prism in synthetic sapphire or glass.

Dimensions and weight:

Standard Version Ø165 (w) x 180 (275) (h) x 130 (d), ~3.3kg.
Tank Version Ø165 (w) x 180 (275) (h) x 212 (d), ~5.0kg.

GENERAL SPECIFICATIONS

Supplies

Electrical: AC 18V (12...24V) 50...60Hz 0.6A
DC 24V (18...36V) 0.6A

Connection box without Transformer (optional):
Supply as per UR20 specifications.
Connection by means of terminal board.

ACCESSORIES

- Mounting fittings for in-line or by-pass installation, made of 304 AISI stainless steel (other materials on request) with T-C connections, weldable, flanged, to DIN standards and pipelines from 1" to 4".
- Adapter flanges in 304 AISI stainless steel (other materials on request) for mounting on tanks or on angle fittings.