



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.

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-Emission)
EN 50082-2 (1994-Immunity)
IEC 1000-4-2 (1995-Elect. Discharges)
ENV 50140 (1994-Irradiated Immunity)
IEC 1000-4-4 (1995-Burst)

* CE Mark shows conformity to listed EU Directives and Standards.

* Year 2000 compliant.

Application:

Measurement of regular (diet on request) beverages in process lines.

Measurement Type:

Continuous refractometric measurement of the Refraction Index and display in selected "BRIX" or "% Standard" scale of relative concentration with automatic temperature compensation.

Measurement Limits:

- 0...20 Brix for "Regular" scale.
- 0...2000 mBrix for "Diet" scale.

Accuracy:

- 0.1% of Scale Range; maximum accuracy ± 0.02 Brix with $\pm 10^\circ\text{C}$ variation for "Regular" scale.
- 0.3% of Scale Range; maximum accuracy ± 0.006 Brix with $\pm 2.5^\circ\text{C}$ variation for "Diet" scale.

Measurement Scales:

"BRIX" or "% STANDARD"; the "BRIX" scale refers to nD/Bx ICUMSA (1974) conversion tables.

Product Temperature:

0°C...+95°C with automatic compensation of temperature measured by Pt1000 temperature sensor in 316 AISI stainless steel, 3/8", Class "A" to IEC751.

Line Pressure:

1...10bar (14.5...145psi) at 20°C.

GENERAL SPECIFICATIONS

Supplies

Electrical: AC 18V (12...24V) 50...60Hz 30VA
DC 24V (18...36V) 30W

Connection box with Transformer (optional):

AC 115/230V $\pm 10\%$ 50...60Hz 80VA
Connections made on terminal board.

Interfaces

Analog: N°2 channels 0...20mA or 4...20mA into 470 Ω .
Up to 8 "mA" scales with configurable "Zero and Full Scale" values, relative to measurement limits

(e.g. scale 1: 4mA=2Bx, 20mA=8Bx) and selectable at any time.

Serial:

- RS232 for connection to Remote Repeater/Display, PC, or serial Printer.
- RS422/485 for connection to "QM20" Data Acquisition and Processing System "QM20", PC with RS422 interface and "Labtech" data acquisition software packages or equivalent, PC with RS485 interface (Optomux Protocol).

Inputs:

N°4 inputs for acquisition of "Line Stopped" status and remote selection of personalized "mA scales".

Outputs:

N°1 relay output for System or Process Alarm signalling, with contact rating of 24V/500mA-DC/AC.
N°3 optional relay outputs.

All interfaces are optically decoupled from the power supply (VDE0160) and fully configurable from the keypad.

Connections to unit by means of two miniature circular multiple connectors, preassembled and complete with 5 m of cable each; connections made by means of supplied "Connection Box" (IP55) in polycarbonate with prewired connection cables to unit. All external connections are made by means of terminal board in connection box.

CONSTRUCTION FEATURES

Execution:

One-piece 304 AISI stainless steel enclosure, installation on process line by means of mounting fitting with 3/4" Tri-Clamp connections. The unit requires a supporting tube of diameter 1 1/2"...2".

Meas. Section:

- Measurement Prism in Optical Glass.
- Light source with incandescent lamp.
- CCD sensor element.
- "Pt1000" temperature sensor with 3/8" threaded connection, installed on Mounting Fitting + circular "Pt1000" temperature sensor internal to unit.

The optical section of the unit is dehumidified by means of a Molecular Sieve Desiccant Cartridge.

Electronic Section:- microprocessor CPU.

- Measurement readings and program menus presented on 256x64 pixel backlit graphic LCD display.

- Keypad in polyester with dome keys and flashing LEDs signalling "RUN", "ALARM" and "HOLD" status.

The keypad also features 4 "Quick Function" keys for fast access to the following menus:

- Alarm set and inhibit;
- Measurement scale display change;
- "Zero" adjustment;
- Check menu.

- Possibility of choosing from 5 interface languages (English, French, German, Italian, Spanish) for display of menus and messages.

- Overcurrent protection by means of 5x20mm fuse.

Product contact materials:

- Mounting Fitting in PETP.
- O-rings and Seals in EPDM.
- Measurement prism in Optical Glass.

Dimensions and weight:

Appliance 370 (w) x 176 (h) x 284 (d), ~14kg
With Mounting Fitting 468 (w) x 320 (h) x 393 (d), ~15kg
Interconnection Box 170 (w) x 170 (h) x 90 (d), ~2kg