



Densimetry Sensor DP-10

Density measurement of liquid de-icing agents

The density meter DP-10 developed by SOMMER Messtechnik helps to detect the concentration of NaCl, CaCl or MgCl in water when producing brine. As a measuring method oscillating transducers are employed. Brine stations and salt mixing stations are typical implementation examples for the DP-10.

Features and advantages

- Real-time measurement
- Device facilitates automated mixing processes
- Different, suitable system for all requirements
- Robust construction for applications in demanding environmental conditions
- Easy installation and operation

Density measurement made easy

Liquid de-icing agents are considered to be an ideal solution to cope with icy roads since a long time. The density meter DP-10 was especially developed for the requirements of winter road services when it comes to mixing the brine. Other than the conventional, manual density measurement using a spindle, it's the DP-10's advantage that - via a bypass - the measurement can be done in process condition and therefore in real-time. Depending on the individual requirements, different product variations can be selected: The standard version with analogue output for further data processing, an enhanced version with internal LED-display (DP-10/A) as well as a system solution with integrated mixing controller and LED-display (DP-10/MR).

Technical details

- **Measuring principle** oscillating U-tube principle

- **Measuring range** 1.000 – 1.400 g/cm³
- **Resolution** 0.001 g/cm³
- **Functions** determination of concentration of NaCl, CaCl, MgCl in water (switchable for NaCl, CaCl and MgCl)
- **Interface (analogue)** concentration, specific density; signal: 0 ... 10 V
- **Interface (digital)**
 - service-interface RS 232
 - transfer rate: 9.6 kBd
 - protocol: ASCII
- **Power supply** 20 ... 30 V DC/AC
- **Power consumption** 80 mA
- **Operating temperature** -25 °C ... +50 °C
- **Medium-temperature** -30 °C ... +30 °C
- **Dimensions housing (mm)** 150 x 340 x 100 (width x height x depth)
- **Material measuring pipe** stainless steel corrosion resistant DIN 1.4439
- **Medium-connection pipe** diameter 10 mm
- **Weight** approx. 2 kg
- **Protection** IP 65