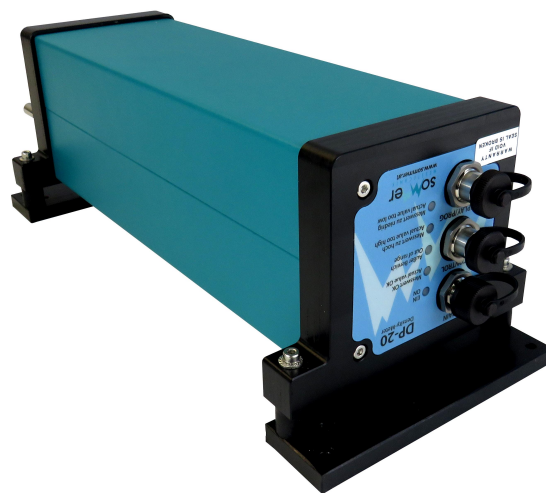


DP-20

Density meter



The DP-20 determines the concentration of salt solutions by measuring their densities with a highly precise oscillating U-tube. With three predefined media – NaCl, CaCl₂ and MgCl₂ – the DP-20 is ready for continuous monitoring directly in the liquid stream or in a bypass.

With highly corrosion resistant stainless steel tubing and PE-HD housing the DP-20 can be used in highly aggressive environments. A switchboard mountable LCD-display (available as an optional accessory) provides easy visual control of salt concentration and medium density.

In the M-version the DP-20 enables direct mixing of the salt solution with an integrated PD-controller and switch outputs.

Versions

Art	Version
21861	DP-20 density meter bundle for brine production
21885	DP-20MR density meter bundle with mixing controller for brine production

Scope of delivery

Qty	Art	Name
1	21399	DP-20 density meter for NaCl, CaCl ₂ , MgCl ₂
1	21737	MAIN cable for DP-20, 5 m, 8 pins
1	21734	CONTROL cable for DP-20, 5 m, 8 pins (DP-20MR only)
1	18349	USB-stick incl. software and manual

Accessories

Art	Accessories
21862	Display for DP-20 density meter, incl. 5-m cable
21832	Parametrization cable for DP-20, USB to RS485, pre-assembled

Specifications

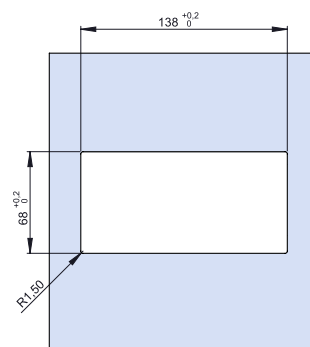
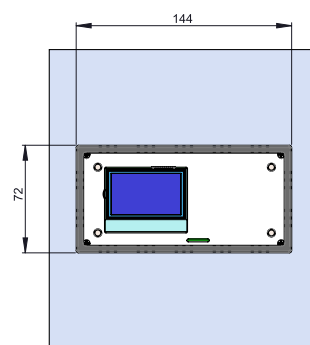
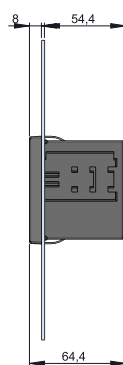
Sensor	
Principle	Oscillating U-tube
Media	NaCl, CaCl ₂ , MgCl ₂
Measurement range	0.5000 ... 2.0000 g/cm ³
Resolution	0.002 g/cm ³
Medium temperature	-20°C ... +50°C
Measurement lag	<1 second
Medium selection	Via digital input or setup (NaCl, CaCl ₂ , MgCl ₂)
Configuration	PC or optional LCD-display

Power	
Power supply	10 ... 30 VDC; reverse voltage protection, overvoltage protection
Power consumption at 12 VDC	120 mA

Interfaces	
Inputs	4x digital input for medium selection and external mixing control (high 6 ... 24 VDC, low 0 ... 5 VDC); requires surge protection
Outputs	4x open-collector (pull down) output, 0.25 A @ 24 VDC 1x analog 4 ... 20 mA (medium temperature) 1x analog 4 ... 20 mA, 0 ... 20 mA or 0 ... 10 VDC (density or concentration) 2x RS-485 Sommer bus protocol, Modbus, SDI-12

Physical and environmental

Material oscillating U-tube	Acid-proof stainless steel 1.4539, highly corrosion-resistant (application in chemical, food and pharmaceutical industries, marine environments)
U-tube volume	60 cm ³
Flow rate	0.3 ... 6.0 l/min
Max. pressure	20 bar
Housing material	ABS (housing profile), PE-HD (housing covers)
Process connection	Blank tube outer-Ø10 mm, inner-Ø8 mm, (other fittings on request)
Operating temperature	-30 ... +60°C
Size L x W x H	429 x 148 x 133 mm
Weight	2580 g



Dimensions

