KERN **ORM 1SW**

Digital measurement of refraction index for universal application



Date of creation: 24.10.2026

Category	
Brand	Optics
Product category	Refractometer
Product group	Digital refractometer
Product family	ORM-SW

Measuring System	
Scales	Refractive index Brix spec. gravity Salzgehalt Meerwasser Chlorgehalt Meerwasser
Measurement temperature [Max] (°C)	40 °C
Measurement temperature [Min] (°C)	0 °C
Readabilites [d]	0,0001 nD 0,1 % 0,001 sg 1 ‰ 1 ‰
Precision	0,0003 nD 0,2 % 0,002 sg 2 ‰ 2 ‰
Appropriate calibration liquid	0 % (distilled water)
Measuring method	Total reflection
Automatic temperature compensation (ATC)	✓
Measuring range refractive index [Min]	1,3330 nD
Measuring range refractive index [Max]	1,4200 nD
Readout refractive index	0,0001 nD
Accuracy refractive index	±0,0003 nD
Measuring range chlorine content of seawater [Min]	0 ‰
Measuring range chlorine content of seawater [Max]	57 ‰
Readout chlorine content of seawater	1 ‰
Accuracy chlorine content of seawater	±2 ‰
Scale for Refractive index	✓
Scale for chlorine content of seawater	✓
Measuring range salinity of sea water [Min]	0 ‰
Measuring range salinity of sea water [Max]	100 ‰
Readout salinity of sea water	1 ‰
Accuracy salinity of sea water	±2 ‰
Measuring range salinity (spec. weight) [Min]	1,000
Measuring range salinity (spec. weight) [Max]	1,070
Readout salinity (spec. weight)	0,001
Accuracy salinity (spec. weight)	±0,002
Scale salinity of sea water	✓
Scale salinity (spec. weight)	✓
Measuring ranges	1,3330 nD - 1,4200 nD 0,0 % - 50,0 % 1,000 sg - 1,070 sg 0 ‰ - 100 ‰ 0 ‰ - 57 ‰
Area of application	Salt
Accuracy Brix	±0,2 %
Readout Brix	0,1 %
Measuring range Brix [Min]	0 %
Measuring range Brix [Max]	50 %
Brix scale	✓

Construction	
Dimension (W×D×H)	121×58×25 mm
Refractometer type	Handheld refractometer
Scale - Display type	Digital
Prism lid	✓
Material prism	ZLaF3 lanthanum flint glass nd=1.85544

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Functions

IP protection - complete device	IP65
Auto-off interval(s) in battery mode/rechargeable battery mode	60 sec
Averaging measurement	✓
Averaging measurement amount	15

Power Supply

Supplied power supply	Battery
Power supply cable removable	removable
Battery / accumulator type	Alkali(-Manganese)
Battery connection	Pad + Spring
Battery capacity	1.300 mAh
Battery voltage	1,5 V
Battery – Number of cells	1
Battery – Individual weight	11,5 g
Battery – Total weight	11,5 g
Battery – Construction	Individual cells
Battery capacity (Wh)	1,95 Wh
Battery – Lithium content	0 g
Battery/Accu connected	not connected, enclosed

Environmental conditions

Storage temperature [Min]	-5 °C
Storage temperature [Max]	40 °C

Services (optional)

Article number for factory calibration	961-290

Packing & Shipping

Dimensions transport container (W×D×H)	170×110×50 mm
Delivery time	1 d
Dimensions packaging (W×D×H)	170×110×50 mm
Shipping method	Parcel service
Net weight approx.	0,15 kg
Gross weight approx.	0,35 kg
Shipping weight	0,31 kg
Shipping volume weight	0,2 kg

Product information

GTIN/EAN number	4045761335554
Trade number	90275000
Warranty Time	24 mon
REACH classification	no prohibited substances

Pictograms

STANDARD



OPTION

