# KERN **ORM 1SW**

Digital measurement of refraction index for universal application




**Date of creation: 14.11.2026**

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

| Measuring System | |
|---|---|
| Scales | Refractive index<br>Brix<br>spec. gravity<br>Salzgehalt Meerwasser<br>Chlorgehalt Meerwasser |
| Measurement temperature [Max] (°C) | 40 °C |
| Measurement temperature [Min] (°C) | 0 °C |
| Readabilites [d] | 0,0001 nD<br>0,1 %<br>0,001 sg<br>1 ‰<br>1 ‰ |
| Precision | 0,0003 nD<br>0,2 %<br>0,002 sg<br>2 ‰<br>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<br>0,0 % - 50,0 %<br>1,000 sg - 1,070 sg<br>0 ‰ - 100 ‰<br>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 |

## Approval

| | |
|---|---|
| CE mark | ✓ |

## 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

