

ProfiLine

Single Parameter Instruments

Data-logging

Mobile Lab

Measurements

Communication

Communication Surface waters

Ground Water

Quality

Fishfarming

Wastewater

Measurements

Mobile Lab

pH

Cond

D.O.

3110 Series: Functional and easy-to-use

Easy-to-clean

For people who want a reliable, simple and easy-to-use portable pH meter, the **pH3110** is the right choice.

- Robust meter housing plus 100 % waterproof and easy-to-clean keypad
- Keys with tactile feedback for error-free operation
- Built-in calibration timer for reliable results

For conductivity measurement the **Cond3110** is available with a 2- or 4-electrode cell for general purpose applications.

Ease-of-use guarantees dependable results whether measuring surface water or the chemical process.



Robust sealed silicone keypad - 100% waterproof



Technical Data

(all values ± 1 digit)

Instrument	3110/3205	3210	3310/3320
Calibration memory	current calibration	current calibration	up to 10 calibrations
Celsius/Fahrenheit	yes	yes	yes
AutoRead	automatic	automatic/manual selectable	automatic/manual selectable
Display	Customized LCD, 3205: LCD graphic display, backlit	LCD graphic display, backlit	LCD graphic display, backlit
Data memory	-	manual 200	manual 200/5000 automatic
Logger	-	manual	manual/time controlled
Interface	-	-	USB 1.1
Power supply	4 x 1.5 V AA oder 4 x 1.2 V NiMH-rechargeable battery	4 x 1.5 V AA oder 4 x 1.2 V NiMH-rechargeable battery	4 x 1.5 V AA oder 4 x 1.2 V NiMH-rechargeable battery
Continuous operation time	up to 3000 hours (pH 3110) to 1000 hours/800 hours (Cond 3110/Oxi 3205: 100 hours with backlit)	up to 100 hours/800 hours w/o backlit	up to 100 hours/800 hours w/o backlit
Protection class	IP 67	IP 67	IP 67

Model	pH 3110	pH 3210	pH 3310, pH/ION 3310, pH/Cond 3320, Multi 3320
pH	-2.0...20.0 ± 0.1 pH -2.00...20.00 ± 0.01 pH -2.000...19.999 ± 0.005 pH	-2.0...20.0 ± 0.1 pH -2.00...20.00 ± 0.01 pH -2.000...19.999 ± 0.005 pH	-2.0...20.0 ± 0.1 pH -2.00...20.00 ± 0.01 pH -2.000...19.999 ± 0.005 pH
mV	± 1200.0 ± 0.3 mV ± (2000 ± 1) mV	± 1200.0 ± 0.3 mV ± (2500 ± 1) mV	± 1200.0 ± 0.3 mV ± (2500 ± 1) mV
ISE (mg/l, µmol/l, mg/kg, ppm, %)	-	-	0.000...9.999 (Not pH 3310) 10.00...99.99 100.0...999.9 1000...999999
Temperature	-5.0...105.0 °C ± 0.1 °C	-5.0...105.0 °C ± 0.1 °C	-5.0...105.0 °C ± 0.1 °C
CMC	-	yes	yes
Calibration	1-, 2-, 3 point WTW Technical and NIST Buffer	1-, 2-, 3-, 4-, 5 point WTW Technical NIST and 20 additional buffer sets	1-, 2-, 3-, 4-, 5 point WTW Technical NIST and 20 additional buffer sets pH/ION 3320, pH/Cond 3320, Multi 3320: ISE: 2-7 point

Model		Oxi 3205/Oxi 3210	Oxi 3310
Dissolved Oxygen Concentration*		0.00...20.00 mg/l ± 0.5 % of val. 0...90 mg/L ± 0.5 % of val.	0.00...20.00 mg/l ± 0.5 % of val. 0...90 mg/L ± 0.5 % of val.
Saturation*		0.0...200.0% ± 0.5 % of val. 0...600 % ± 0.5 of val.	0.0...200.0% ± 0.5 % of val. 0...600 % ± 0.5 of val.
Partial pressure*		0...200.0 hPa, 0...1250 hPa, ± 0.5 % of val.	0...200.0 hPa, 0...1250 hPa, ± 0.5 % of val.
Temperature		-5.0...50.0 °C ± 0.1 °C	-5.0...50.0 °C ± 0.1 °C
Calibration		CellOx®/DurOx® with calibration vessels	CellOx®/DurOx® with calibration vessels versus external standard
Built-in barometric sensor		yes	yes

* depending

Model	Cond 3110	Cond 3210	Cond 3310
Conductivity	0.0...1000 mS/cm ± 0.5 % of val.	0.0...1000 mS/cm ± 0.5 % of val.	0.0...1000 mS/cm ± 0.5 % of val.
additionally		0.000...1.999 µS/cm. K=0.01 cm ⁻¹ 0.00...19.99 µS/cm. K=0.1 cm ⁻¹	0.000...1.999 µS/cm. K=0.01 cm ⁻¹ 0.00...19.99 µS/cm. K=0.1 cm ⁻¹
Specific resistance	-	0.00...20 MΩ cm	0.00...20 MΩ cm
Cell constants	fixed: 0.475 cm ⁻¹ , 0.880 cm ⁻¹ . calibratable: 0.450...0.500 cm ⁻¹ . 0.800...0.880 cm ⁻¹	fixed: 0.010 cm ⁻¹ . calibratable: 0.450...0.500 cm ⁻¹ . 0.800...0.880 cm ⁻¹ . adjustable: 0.090...0.110 cm ⁻¹ . 0.250...25.000 cm ⁻¹	fixed: 0.010 cm ⁻¹ . calibratable: 0.450...0.500 cm ⁻¹ . 0.800...0.880 cm ⁻¹ . adjustable: 0.090...0.110 cm ⁻¹ . 0.250...25.000 cm ⁻¹
Salinity	0.0...70.0 (acc. IOT)	0.0...70.0 (acc. IOT)	0.0...70.0 (acc. IOT)
TDS	-	0...1999 mg/l. 0 bis 199.9 g/l	0...1999 mg/l. 0 bis 199.9 g/l
Temperature	-5.0...105.0 °C ± 0.1 °C	-5.0...105.0 °C ± 0.1 °C	-5.0...105.0 °C ± 0.1 °C
T _{ref}	20 °C/25 °C	20 °C/25 °C	20 °C/25 °C
Temperature Compensation	nLF	none. nLF. 0.000...3.000 %/K	none. nLF. 0.000...3.000 %/K