

Multi-Meters

Portable Multi-Parameter Instruments



ProfiLine Multi 197i

The new WTW ProfiLine Multi 197i is both hose-proof (IP 66) and submersible (IP 67). With its recorder output, real-time clock and 500 data file datalogger standard, these rugged meters conform to all GLP requirements. It allows the simultaneous connection of pH, conductivity and oxygen sensors. The parameter to be measured is set in the display via the "M" function key and can then be measured or stored.

They are equipped with a carrying/support handle and carrying strap as standard.

The Multi 197i has a built-in preamplifier and is therefore suitable in combination with the WTW depth armatures for single-parameter operation at depths down to 330 ft (100 m).

Up to three depth armatures can be simultaneously connected using the adapter ADA/TA 197 pH.

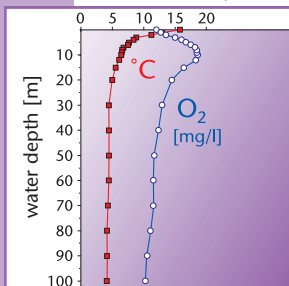
New: Powerful NiMH rechargeable batteries.

- Robust, shockproof
- Waterproof, submersible
- The multi-talent for depth measurements



Measurement of Oxygen, pH and Conductivity at Depth Profiles:

Depth armatures with integrated temperature measurement sensors, up to 330 ft (100 m) of cable with a waterproof plug (IP 67), VA 1.4571 steel armoring and screw-on protective hood, pressure resistant to max. 10 bar, suitable for small boreholes (2" diameter).



f.l.t.r.: oxygen depth armature TA 197 Oxi and battery-powered stirrer BR 325, pH depth armature TA 197 pH, 4-electrode depth measuring cell TA 197 LF
Please refer to price list for ordering information.

Technical Data

	pH measurement	Oxygen measurement	Conductivity measurement
Range/Resolution	pH: -2.00 ... +19.99 mV: -1999 ... +1999	O ₂ concentration 0.00 ... 19.99 mg/l 0.0 ... 90.0 mg/l* O ₂ saturation: 0.00 ... 19.99 % 0.0 ... 600 %* <i>*depends on oxygen sensor and medium</i>	1 μS/cm ... 500 mS/cm in 4 ranges Salinity: 0.0 ... 70.0
Accuracy (±1 digit)	pH: ± 0.01 pH, mV: ± 1 mV	±0.5 % of value	±1 % of value
Temperature compensation	Automatic 23 ... 221 °F (-5 ... +105.0 °C) Manual -4 ... 266 °F (-20 ... +130 °C)	Automatic via IMT Compensation from 32 ... 104 °F (0 ... 40 °C)	Non-linear function for ultrapure and natural waters to EN 27 888
Reference temp.	—	—	68/77 °F (20/25 °C) selectable
Calibration	1-2 point calibration with technical buffers	Automatic calibration	Automatic calibration

Ordering Information

Portable Multi-Parameter Instrument		Order No.
ProfiLine Multi 197i	Robust, waterproof, submersible multi-parameter instrument	3F30-110
Sensors and accessories see brochure "Product Details"		

Multi-Meters

Handheld Multi-Parameter Instruments

Multi 350i



NEW

- Multi-functional, High degree of Accuracy
- Flexible
- All parameters simultaneously displayed



IP 66
IP 67



UL
CUL

3 Year
Warranty

Multi 350i – compact Precision without Compromises

pH, mV, ISE, Oxygen, Conductivity: The new Multi 350i can measure all of these parameters. If desired, pH, oxygen, conductivity and temperature can be measured simultaneously: In the Laboratory using the **combined conductivity/oxygen sensor ConOx**, in the field with the multiparameter probe **MPP 350**. All current WTW pH, combination ISE's, oxygen and conductivity sensors can be additionally connected.

High resolution, high precision, simple, menu-driven operation. Even in poor lighting conditions the backlit graphics display provides clearly readable values. A data-logger, memory for 1,800 data sets and a real-time clock support GLP requirements.

Includes built-in NiMH rechargeable battery for up to 1,000 hours of continuous measurements and appropriate line adaptor.





ConOx

NEW

ConOx: Conductivity and Oxygen Measurement with fully automatic Salinity Correction.

A slender and handy sensor for three parameters: conductivity, dissolved oxygen and temperature. The oxygen module can be easily removed and works according to the time-proven galvanic principle. Immediately ready for use, little maintenance required, for all water analysis applications in laboratories and in the field. Including OxiCal® CX calibration vessel.

- Slender
- Handy
- Conductivity, dissolved oxygen and temperature at the same time

The conductivity sensor features the time-proven 4-electrode system. If desired it can also be used without the oxygen module. Precise, easy to clean, capable of accurate measurements even when used in normally electrode fouling samples. Available with cable lengths 4.9 ft, 9.8 ft, 19.7 ft, 32.8 ft, 49.2 ft, 65.6 ft (1.5 m, 3 m, 6 m, 10 m, 15 m, 20 m).

Technical Data

Electrode material	Graphite
Shaft material	Epoxy/POM
Shaft length	145 mm
Cell constant	K=0.475 cm ⁻¹
Diameter	15.3 cm
Range	1 µS/cm ... 2 S/cm
Temperature range	32...122 °F(0...50 °C)
Oxygen sensor	Galvanic sensor

Working time: 6 months
with 1 electrolyte filling, zero current free



Multi-Parameter Probe MPP 350

NEW

An all-new Multi-Parameter Probe as the perfect Probe for use with Multi 350i:

With a diameter of only 1.6 in (41.5 mm) and a length of 11.42 in (29 cm), this probe is usable in a wide range of applications. Wherever simultaneous measurement of pH, dissolved oxygen and conductivity is required, this probe is the ideal supplement to the Multi 350i.

Suitable for measurements in lakes, rivers, seawater and brackish water, in boreholes down to a maximum depth of 330 ft. (100 m), as well in groundwater and spring water. The special pH sensor SensoLyt® MPP-A (please order separately) for measurements in water provides reproducible measurement values, even at low conductivity levels.

For cable lengths greater than 20 ft. (6 m) a battery operated stirrer is included. The conductivity measuring cell with proven 4-pole-measurement technology has a measuring range of 1 µS/cm to 2 S/cm. The MPP 350 is available with 8 different cable lengths up to 330 ft (100 m). Accessories include specialized calibration vessels. Two field sets are available including case, Multi 350i meter, accessories and MPP either with 20 ft. (6 m) or 81 ft. (25 m) cable length.

- pH, conductivity, dissolved oxygen and temperature at the same time
- For all areas of application in surface waters and 2 inch boreholes
- Depth measurement up to 330 ft (100 m)

Techn. Data

Range	pH: 4 ... 12 O ₂ : 0 ... 600% LF: 1 µS/cm ... 2 S/cm Temp.: 32...122 °F (0...50 °C)
Dimensions, Weight	Diameter 41,5 mm, Length approx. 290 to 410 mm (depends on special accessories), approx. 700 g
Materials	POM, Stainless steel 1.4571 (additional weight), PVC (Cable)

Handheld Multi-Parameter Instruments

Technical Data

	pH measurement	Oxygen measurement	Conductivity measurement
Range/Resolution	pH: -2 ... 20.000 -2.00 ... 20.00 mV: -999.9 ... +999.9 -2000 ... +2000 Conc.: 0.01 ... 2000 mg/l Temp.: 23 ... 221 °F (0.0 ... 105.0 °C)	O ₂ conc.: 0.00 ... 20.00 mg/l (19.9 mg/l*) 0.0 ... 90.0 mg/l (90 mg/l*) O ₂ saturation: 0.00 ... 200.0% (200%*) 0.0 ... 600 % O ₂ part. press.: 0.0 ... 200.0 mbar (200 mbar*) 0.0 ... 1250 mbar Temp.: 32 ... 122 °F (0.0 ... 50.0 °C) <i>*if DurOx® oxygen sensor is used</i>	0.0 µS/cm ... 2000 mS/cm in 5 ranges in AutoRange mode additional: 0.00 µS/cm ... 20.00 µS/cm (K=0.1 cm ⁻¹) 0.000 µS/cm ... 2.000 µS/cm (K=0.01 cm ⁻¹) Temp.: 23 ... 221 °F (-5.0 ... +105.0 °C) Salinity: 0.0 ... 70.0 TDS: 0 ... 2000 mg/l Spec. resistivity: 0.00 ... 2000 MOhm
Accuracy (±1 digit)	pH: ± 0.004 pH, ± 0.01 pH mV: ± 0.2 mV, ± 1 mV	O ₂ conc.: ±0.5% of value O ₂ saturation: ± 0.5% of value O ₂ part. press.: ±0.5% of value	Cond: ±0.5% of value
Temperature compensation	Automatic 23 ... 221 °F (-5 ... +105.0 °C) Manual -4 ... 266 °F (-20 ... +130 °C) NTC 30 kOhm: ± 0.1 K Pt 1000: ± 0.1 K	32 ... 122 °F (0 °C ... 50 °C) (on ambient temperature 41 ... 86 °F / 5 ... 30 °C) <2% at 32 ... 104 °F (0 ... +40 °C) Temperature: ±0.1 K	23 ... 212 °F (-5.0 ... 100 °C) • Linear and non-linear function for ultrapure and natural waters to EN 27 888 • Linear comp. from 0.01 % ... 3.00 %/K • Compensation can be switched off NTC 30 kOhm: ± 0.1 K Pt 1000: ± 0.1 K
Air pressure compensation	—	Automatic with built-in pressure sensor (500 ... 1100 hPa)	—
Salinity correction	—	Automatic or manual	—
Ref. temperature	—	—	68 °F/77 °F (20 °C/25 °C) selectable
Call constants	—	—	Fixed 0.01 cm ⁻¹ , Freely selectable 0.090 ... 0.110 cm ⁻¹ , 0.250 ... 25.000 cm ⁻¹ Calibrable 0.450 ... 0.500 cm ⁻¹ , 0.800 ... 1.200 cm ⁻¹

Ordering Information

Handheld Multi-Parameter SET		Order No.
Multi 350i SET	Robust and waterproof pocket multi-parameter instrument with data logger and serial interface, including SenTix® 41-3 and ConOx-3, NiMH batteries and battery charger, PC communication package, professional case and accessories	2F40-114B0E
ConOx-3	Combined conductivity-oxygen-probe with 9.8 ft (3 m) cable and accessories	401 020
MPP 350-3	pH/oxygen/conductivity sensor without pH electrode, with 9.8 ft (3 m) cable and accessories	401 120
SensoLyt® MPP-A	armored pH electrode for MPP 350	401 152
SensoLyt® MPP-A Pt	armored ORP electrode for MPP 350	401 152
A 325/S	Stainless steel armoring for ConOx and CellOx®	903 831
SK-325	Protective hood suitable for A 325/S	201 580

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