

ProLab 2000: the multi talented ...

Multi-parameter instrument ProLab 2000:

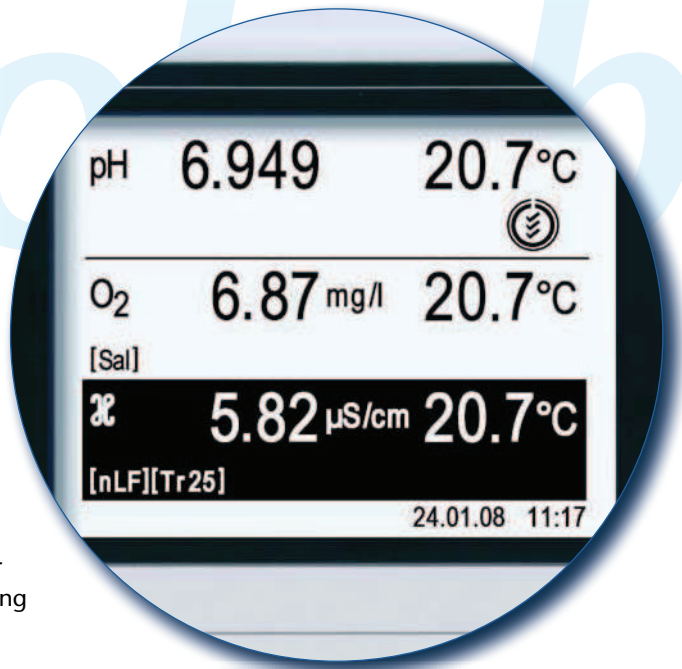
One for all

▶ Versatile

The ProLab 2000 is a true all-rounder. pH, ISE, conductivity and D.O. measuring is integrated in one single instrument. Up to 4 parameters can be measured simultaneously and displayed in the graphic display. The parameters are selected via menu.

▶ Professional

With a measuring range from -2.000 to +20.000 pH and an accuracy of 0.003 pH, the ProLab 2000 is especially suited for manifold applications in research and development. The automatic pH and ISE calibration at up to 3 points guarantees trustworthy measurements at the highest stage. The galvanic D.O. sensor and multi-pole conductivity measuring cells widen the measuring functions for most applications.

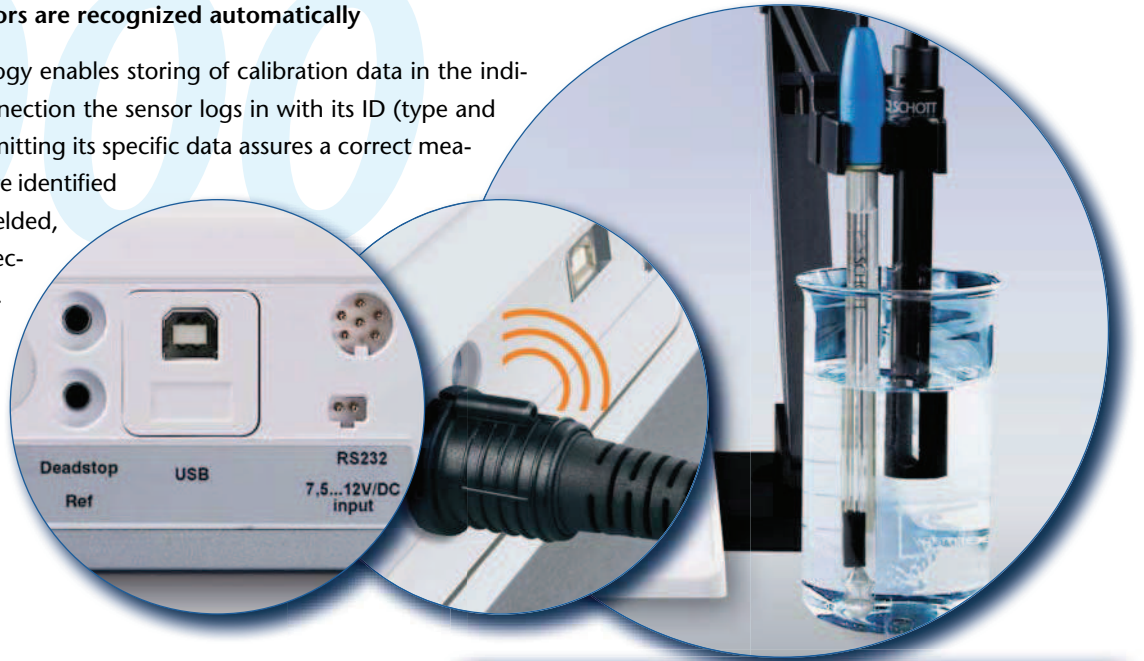


User recognition with electronic ID card



▶ Innovative - Sensors are recognized automatically

The latest microtechnology enables storing of calibration data in the individual sensor. Upon connection the sensor logs in with its ID (type and serial no.), and by transmitting its specific data assures a correct measurement. The sensors are identified unmistakably via a shielded, short-range radio connection. No input is needed. Even two sensors side by side can be identified unequivocally.



*pH combination electrode
A 161 ... ID*



*Combined conductivity cell and D.O. sensor
LFOX 1400 ID*



- ▶ **Highest safety level with measurements and calibration through:**
 - **automized user identification**
with electronic ID card through transponder technology.
 - **wireless sensor recognition**
ID electrodes and measuring instrument with automatic identification and data exchange.
- ▶ **High-precision and reliable measurement of** pH, ISE, conductivity and oxygen with sensors from SCHOTT Instruments perfectly matching the instrument
- ▶ **Safety at a glance with „CalClock“**
Sensor evaluation and calibration timer combined.
- ▶ **Scope of delivery, set**
 - Measuring instrument
 - Electrodes with integrated temperature sensor
 - Buffer solutions
 - Stand
 - Universal power supply unit
 - Cover

Advantages
ProLab 2000

Crystal-clear Benefits:

SCHOTT® Instruments ProLab 1000 / 2000

Performance black on white – technical details:

Measuring technology in detail...	ProLab 1000	ProLab 2000
pH measurement	■	■
Range / Accuracy	-2.000 ... +20.000 pH -2.00 ... +20.00 pH -2.0 ... +20.0 pH	-2.000 ... +20.000 pH -2.00 ... +20.00 pH -2.0 ... +20.0 pH
Accuracy (for each measuring area) (±1 digit)	± 0.003 pH ± 0.01 pH	± 0.003 pH ± 0.01 pH
Calibration: pre-programmed pH buffer sets	22	22
Automatic buffer recognition and display	■	■
pH calibration points max.	5	5
Dead stop function	■	–
mV measurement	■	■
Range / Accuracy	-1999.9 ... +1999.9 mV -1999 ... +1999 mV	-1999.9 ... +1999.9 mV -1999 ... +1999 mV
Accuracy (for each measuring area) (±1 digit)	± 0.2 mV ± 1 mV	± 0.2 mV ± 1 mV
AutoRange function (can be switched off)	■	■
ISE measurement		■
Range / Accuracy		0.000 ... 2000 mg/l
ISE calibration points		2 ... 3
Standard concentrations		0.01 ... 10 000 mg/l in 19 selectable concentrations
Conductivity measurement		■
Range / Accuracy		0.000 µS/cm...2000 mS/cm
TDS measurement with factor 0.4 ... 1.0		■
Salinity measurement acc. to Natural Sea Water Scale (UNESCO 1966b)		■
Accuracy in % from measuring value (± 1 digit)		0.5
Calibrated cell constant 0.450 ... 0.500 cm ⁻¹ ; 0.585 ... 0.715 cm ⁻¹ ; 0.800 ... 1.200 cm ⁻¹ (calibration with control standard) d 0.01 mol KCl:		■
Adjustable cell constant 0.250 ... 2.500 cm ⁻¹ and 0.090 ... 0.110 cm ⁻¹		■
Fixed cell constant 0.010 cm ⁻¹		■
Temperature compensation nLF / Lin (0.001 ... 3.000 %/K) / selectable		■
Temperature compensation purity water		■
Reference temperature 20°C or 25 °C selectable		■
D.O. measurement (O₂ dissolved)		■
Range / Accuracy:		
O ₂ concentration		0...20.00 mg/l / 0.01 mg/l 0...90.0 mg/l / 0.1
O ₂ saturation		0...200.0 % / 0.1 % 0...600 % / 1 %
O ₂ partial pressure		0...200.0 mbar / 0.1 mbar 0...1250 mbar / 1 mbar
Accuracy in % from measuring value (±1 digit) at an ambient temperature of 5...30 °C		0.5
Salinity correction		■
Calibration in calibration vessel with water vapor-saturated air		■
Temperature measurement	■	■
Range / Accuracy	-10.0 ... +120.0 °C	-10.0 ... +120.0 °C
Accuracy (±1 digit)	± 0.1 °C	± 0.1 °C
Selectable °C / °F (Fahrenheit)	■	■
Automatic switch-over to manual temperature input when no temperature sensor is connected	■	■

Crystal-clear Benefits:

SCHOTT® Instruments ProLab 1000 / 2000

Performance black on white – technical details:

Measuring technology in detail...	ProLab 1000	ProLab 2000
Design & Quality		
Display	black & white graphic 120 x 90 mm with lighting	black & white graphic 120 x 90 mm with lighting
Contrast adjustment via menu	■	■
Glass vision panel	■	■
Measuring value storage (manual/automatic)	1500 data sets, storage intervals from 1 s ... 60 min	1500 data sets, storage intervals from 5 s ... 60 min
USB (slave) and RS232 interface	■	■
Lower casing	metal diecast	metal diecast
Plastic foil keypad (polyester) with tactile response	■	■
Power supply: external universal power supply unit (medical approval) with country specific primary adapters, (primary: 100-240V, 50/60 Hz, secondary: 9V=1,5A)	■	■
built-in real-time clock (processor solution) battery buffered, exchangeable battery	■	■
Dimensions (W x H x D mm)	240 x 280 x 70	240 x 280 x 70
Weight	approx. 2.5 kg	approx. 2.5 kg
Compliance	CE, cETLus	CE, cETLus
Safety	protection class III, EG guidelines 73/23, EN 61010-1: 2001	protection class III, EG guidelines 73/23, EN 61010-1: 2001
Climate class	2 (VDI/VDE 3540)	2 (VDI/VDE 3540)
Complete delivery scope: - Instrument with cover, power supply unit and stand - set additionally with electrode and buffer	■	■
IQ and OQ documents available	■	■
Warranty 3 years	■	■

Type no.	Order no.	Description
Logbook ProLab 1000	285201830	for ProLab 1000 (DIN and BNC) incl. review by SCHOTT Instruments after resending the filled in documents.
ProLab 1000	285201700	Electrode recognition and user identification. Measuring parameters pH, mV, temp., microprocessor, RS 232 C and USB (slave) interface, GLP conform, DIN 19262 connection. Including cover Z 881, stand S4D Z 865 and power supply Z 850.
ProLab 1000 Set	285201710	Electrode recognition and user identification. Measuring parameters pH, mV, temp., microprocessor, RS 232 C and USB (slave) interface, GLP conform, DIN 19262 connection. Including cover Z 881, stand S4D Z 865, power supply Z 850, pH-temp. combination electrode A 161 1M-DIN-ID, calibration solutions (DIN).
ProLab 1000 BNC	285201720	Electrode recognition and user identification. Measuring parameters pH, mV, temp., microprocessor, RS 232 C and USB (slave) interface, GLP conform, BNC connection. Including cover Z 881, stand S4D Z 865 and power supply Z 850.
ProLab 1000 BNC Set	285201730	Electrode recognition and user identification. Measuring parameters pH, mV, temp., microprocessor, RS 232 C and USB (slave) interface, GLP conform, BNC connection. Including cover Z 881, stand S4D Z 865, power supply Z 850, pH-temp. combination electrode A 161 1M-BNC-ID, calibration solutions (DIN).
Logbook ProLab 2000	285201860	for ProLab 2000 (DIN and BNC) incl. review by SCHOTT Instruments after resending the filled in documents.
ProLab 2000	285201740	Electrode recognition and user identification. Measuring parameters pH, mV, ISE, conductivity, D.O. and temp., microprocessor, RS 232 C and USB (slave) interface, GLP conform, DIN 19262 connection. Including cover Z 881, stand S4D Z 865 and power supply Z 850.
ProLab 2000 Set	285201750	Electrode recognition and user identification. Measuring parameters pH, mV, ISE, conductivity, D.O. and temp., microprocessor, RS 232 C and USB (slave) interface, GLP conform, DIN 19262 connection. Including cover Z 881, stand S4D Z 865, power supply Z 850, pH-temp. combination electrode A 161 1M-DIN-ID, combined conductivity and D.O. sensor LFOX 1400 ID, calibration solutions (DIN), conductivity testing solutions.
ProLab 2000 BNC	285201760	Electrode recognition and user identification. Measuring parameters pH, mV, ISE, conductivity, D.O. and temp., microprocessor, RS 232 C and USB (slave) interface, GLP conform, BNC connection. Including cover Z 881, stand S4D Z 865 and power supply Z 850.
ProLab 2000 BNC Set	285201770	Electrode recognition and user identification. Measuring parameters pH, mV, ISE, conductivity, D.O. and temp., microprocessor, RS 232 C and USB (slave) interface, GLP conform, BNC connection. Including cover Z 881, stand S4D Z 865, power supply Z 850, pH-temp. combination electrode A 161 1M-BNC-ID, combined conductivity and D.O. sensor LFOX 1400 ID, calibration solutions (DIN), conductivity testing solutions.