Measuring technology in detail...	Lab 850	Lab 860	Lab 870	Lab 960	Lab 970	ProLab 1000	ProLab 2000	ProLab 3000	ProLab 4000
pH measurement	■	■	■						
Range / Accuracy	-2.000 … +19.999 pH	-2.000 … +19.999 pH	-2.000 … +19.999 pH			■	■	■	■
	-2.00 … +19.99 pH	-2.00 … +19.99 pH	-2.00 … +19.99 pH			-2.000 … +20.000 pH	-2.000 … +20.000 pH	-2.000 … +20.000 pH	-2.000 … +20.000 pH
						-2.00 … +20.00 pH	-2.00 … +20.00 pH	-2.00 … +20.00 pH	-2.00 … +20.00 pH
						-2.0 … +20.0 pH	-2.0 … +20.0 pH	-2.0 … +20.0 pH	-2.0 … +20.0 pH
Accuracy (for each measuring area) (±1 digit)	± 0.005 pH	± 0.005 pH	± 0.005 pH			± 0.003 pH	± 0.003 pH	± 0.002 pH	± 0.002 pH
	± 0.01 pH	± 0.01 pH	± 0.01 pH			± 0.01 pH	± 0.01 pH	± 0.01 pH	± 0.01 pH
Calibration: pre-programmed pH buffer sets	16	16	16			22	22	22	22
Automatic buffer recognition and display	■	■	■			■	■	■	■
pH calibration points max.	3	New: 5	New: 5			5	5	5	5
VariCal: manual calibration with selectable buffers	–	–	–			–	–	■	■
Dead stop function	–	–	–			■	–	–	–
2-channel pH measurement (galvanically separated)	–	–	–			–	–	■	■
mV measurement	■	■	■			■	■	■	■
Range	-999.9 … +999.9 mV	-999.9 … +999.9 mV	-999.9 … +999.9 mV			-1999.9 … +1999.9 mV	-1999.9 … +1999.9 mV	-2200.0 … +2200.0 mV	-2200.0 … +2200.0 mV
	-1999 … +1999 mV	-1999 … +1999 mV	-1999 … +1999 mV			-1999 … +1999 mV	-1999 … +1999 mV	-2200 … + 2200 mV	-2200 … + 2200 mV
Accuracy (for each measuring area) (±1 digit)	± 0.3 mV	± 0.3 mV	± 0.3 mV			± 0.2 mV	± 0.2 mV	± 0.1 mV	± 0.1 mV
	± 1 mV	± 1 mV	± 1 mV			± 1 mV	± 1 mV	± 1 mV	± 1 mV
AutoRange function (can be switched off)	■	■	■			■	■	–	–
mV differential measurement	–	–	–			–	–	■	■
2-channel mV measurement (galvanically separated)	–	–	–			–	–	■	■
ISE measurement						■	■	■	■
Range / Accuracy						0.000 … 999999 mg/l	0.000 … 999999 mg/l	1.0E-40 … 9.9E39 mg/l	1.0E-40 … 9.9E39 mg/l
Display in %, ppm, mg/kg, mol/l						■	■	■	■
Two separate ISE channels (with dedicated separate temperature channels)						–	–	■	■
Methods						–	–	Std. Add., Double Std. Add., Std. Sub., Sample Add., Sample Sub., Blank Add., Blank Corr., Ref. Measurem.	Std. Add., Double Std. Add., Std. Sub., Sample Add., Sample Sub., Blank Add., Blank Corr., Ref. Measurem.
ISE calibration points						2 … 5	2 … 5	2 … 9	2 … 9
Standard concentrations						0.000 … 500000 mg/l	0.000 … 500000 mg/l	1.00E-30 … 1.00E30 mg/l can be inserted	1.00E-30 … 1.00E30 mg/l can be inserted
Conductivity measurement				■	■		■		■
Range / Accuracy				0.000 µS/cm…500 mS/cm	0.000 µS/cm…500 mS/cm		0.000 µS/cm…2000 mS/cm		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	0.5		0.5		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				■	■		■		■
Pre-programmed temperature coefficients for HCl, NaOH, NaCl and KCl									■
Determination of temperature coefficients for one or multiple standards and known or unknown concentrations at various temperatures									■
Reference temperature 20 °C or 25 °C selectable				■	■		■		■
D.O. measurement (O2 dissolved)							■		
Range / Accuracy:									
O2 concentration							0…20.00 mg/l / 0.01 mg/l 0…90.0 mg/l / 0.1		
O2 saturation							0…200.0 % / 0.1 % 0…600 % / 1 %		
O2 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	-5.0 … +120.0 °C	-5.0 … +120.0 °C	-5.0 … +120.0 °C	-5.0 … +120.0 °C	-5.0 … +120.0 °C	-10.0 … +120.0 °C	-10.0 … +120.0 °C	-35.0 … +150.0 °C	-35.0 … +150.0 °C
Accuracy (±1 digit)	± 0.1 °C	± 0.1 °C	± 0.1 °C	± 0.1 °C	± 0.1 °C	± 0.1 °C	± 0.1 °C	± 0.1 °C	± 0.1 °C
Two separated temperature channels	–	–	–	–	–	–	–	■	■
Selectable °C / °F (Fahrenheit)	■	■	■	■	■	■	■	■	■
Automatic switch-over to manual temperature input when no temperature sensor is connected	■	■	■	■	■	■	■	■	■
Design & Quality									
Display	LCD 75 x 60 mm	LCD 75 x 60 mm	LCD 75 x 60 mm	LCD 75 x 60 mm	LCD 75 x 60 mm	black & white graphic 120 x 90 mm with lighting	black & white graphic 120 x 90 mm with lighting	QVGA colour graphic display 120 x 90 mm with lighting	QVGA colour graphic display 120 x 90 mm with lighting
Contrast adjustment via menu	–	–	–	–	–	■	■	–	–
Glass vision panel	–	–	–	–	–	■	■	■	■
Vision panel integrated in keyboard plastic foil	■	■	■	■	■	–	–	–	–
Measuring value storage (manual/automatic)	New: 800 data sets, storage intervals from 5 s … 60 min	800 data sets, manual storage	–	800 data sets, storage intervals from 5 s … 60 min	–	– 1500 data sets, storage intervals from 1 s … 60 min	1500 data sets, storage intervals from 1 s … 60 min	> 10000 data sets, storage intervals from 1 s … 60 min	> 10000 data sets, storage intervals from 1 s … 60 min
caliration history						last 10 calibrations	last 10 calibrations	last 10 calibrations	last 10 calibrations
USB (slave) and RS232 interface	New : RS 232	■	■	■	■	■	■	■	■
USB host interface: plug and play connection of USB hub, USB printer, USB memory, keyboard, mouse, USB stick								■	■
Lower casing	plastic	plastic	plastic	plastic	plastic	metal diecast	metal diecast	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	■	■	■	■	■	■	■	■	■
Battery operation possible (4 mignon)	■	■	■	■	■	–	–	–	–
Battery switch-off automatic (adjustable 10 min … 24 h, default 1 h, cannot be switched off)	■	■	■	■	■	–	–	–	–
Dimensions (W × H × D mm)	240 x 190 x 80	240 x 190 x 80	240 x 190 x 80	240 x 190 x 80	240 x 190 x 80	240 x 280 x 70	240 x 280 x 70	240 x 280 x 70	240 x 280 x 70
Weight	approx. 1.0 kg	approx. 1.0 kg	approx. 1.0 kg	approx. 1.0 kg	approx. 1.0 kg	approx. 2.5 kg	approx. 2.5 kg	approx. 2.5 kg	approx. 2.5 kg
Compliance	CE, cETLus	CE, cETLus	CE, cETLus	CE, cETLus	CE, cETLus	CE, cETLus	CE, cETLus	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	protection class III, EG guidelines 73/23, EN 61010-1: 2001	protection class III, EG guidelines 73/23, EN 61010-1: 2001	protection class III, EG guidelines 73/23, EN 61010-1: 2001	protection class III, EG guidelines 73/23, EN 61010-1: 2001	protection class III, EG guidelines 73/23, EN 61010-1: 2001	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)	2 (VDI/VDE 3540)	2 (VDI/VDE 3540)	2 (VDI/VDE 3540)	2 (VDI/VDE 3540)	2 (VDI/VDE 3540)	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	■	■	■	■	■	■	■	■	■