# HORIBA



Distribuciones Industriales y Científicas S.L.

ciencia e innovación

# LAQUA

LAQUA 200 Series Handheld Water Quality Meters



рН	ORP	Dissolved Oxygen	Conductivity
Resistivity	Salinity	Total Dissolved Solids	Turbidity





www.horiba-laqua.com





# Eco-Friendly, Shock & Scratch Resistant & Non-slip

Apart from their high impact strength, the polycarbonate and TPE materials are also long-lasting and recyclable. The TPE provides non-slip grip and is not easily damaged by abrasion.



### Backlit, Large LCD Screen

All models have scratch-resistant monochrome digital LCD with white LED backlight for easy viewing of readings even in dark locations.



#### **IP67 Waterproof and Dustproof**

Fully protected from dust and capable of withstanding water immersion up to 1 meter depth for 30 mins.<sup>1</sup>

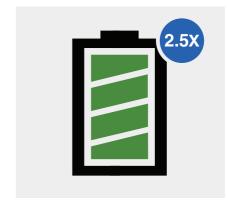
<sup>1</sup> With electrodes connected and communication port sealed



#### **Built-in Electrode Holder**

Two grooves on the meter serve as electrode holders.

Electrode adapter provides secure attachment for two electrodes so they can be easily placed in solutions.



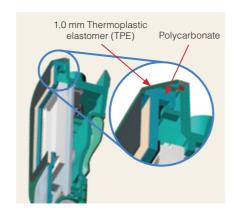
### **High Battery Capacity**

AA batteries have greater power capacity than AAA batteries. Battery life is increased by 2.5x.



#### 9-Button Keypad Minimal Matrix

Operation buttons are reduced to the bare minimum.



#### **Ergonomic Design**

The black meter housing is made of polycarbonate material covered with a layer of TPE material. It is lightweight, comfortable to touch, and suitable for field applications.



# Integrated Foldable Meter Stand

A collapsible meter stand is integrated at the back of the meter for convenient usage and storage.



#### **PC / Printer Communications**

The 220 models are GLP-compliant, recording calibration and measurement data with date and time stamps. Connect to a PC via USB cable<sup>2</sup> to transfer data or to a HORIBA printer via RS232 cable<sup>2</sup> to print.

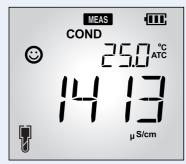
<sup>2</sup> Cables and printer are sold separately

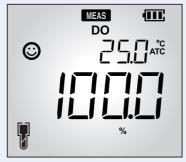
< Meter shown in actual size

#### **Easy-to-Read Display**

Electrode condition, reading stability, parameter, and temperature in one screen can be checked at a glance.







Conductivity Display

Dissolved Oxygen Display

#### **Electrode Status Indicator**

The electrode icon indicates the condition of the electrode after each calibration.





Good

### **Calibration Data**

Simply press CAL button and then DATA button to view the latest calibration data.

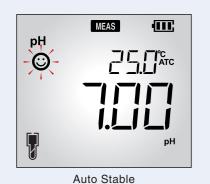






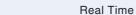
#### Measurement Modes: Auto Stable, Auto Hold, Real Time

Measurement Modes	Readings	©	HOLD
Auto Stable (AS)	Meter shows live readings	Blinks until reading is stable	Inactive
Auto Hold (AH)	Meter locks stable readings	Blinks until reading is stable	Lights up
Real Time	Meter shows live readings	Inactive	Inactive









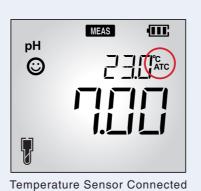






#### **Temperature Sensor Indicator**

When the temperature sensor is connected to the meter, ATC is displayed. Otherwise MTC is displayed.





Temperature Sensor Disconnected

#### **Diagnostic Messages**

Self-diagnosing meters display measurement and meter issues for fast fault finding and troubleshooting.



#### **Rugged Carrying Case**

The durable case keeps your meter, electrodes, solutions, and accessories secured, organized, and protected during quick field testing on the go or storage.



8 Conductivity Electrode

DO Electrode Cable Winder (up to 5.0m)

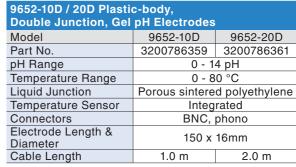
12 DO Electrode

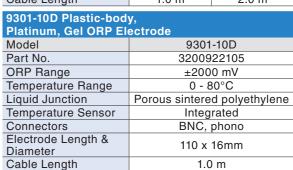
 Electrode Cable Compartment 10 LAQUA 200 Series

- 1 User Manual and Notes 7 pH Electrode Compartment
- 2 Clear Sleeve for Quick Guide
- 3 DO Replacement Tip
- 4 Electrode Adapter
- 5 2 x AA Batteries
- 6 Calibration Solutions

### **Electrodes**

IP67 waterproof and dustproof







9552-20D / 50D Galva	nic DO Probes	
Model	9552-20D	9552-50D
Part No.	3200780939	3200780941
DO Range	0 - 20.0	00 mg/L
Temperature Range	0 - 50 °C	
Temperature Sensor	Integrated	
Connectors	BNC, phono	
Electrode Length & Diameter	165 x 30mm	
Cable Length	2.0 m	5.0 m
Replacement DO Tip / Part No.	5402 / 32	00781553



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# LAQUA TB220

Turbidity Meter

ISO 7027, DIN EN 27027 Compliant

# Up to 4 **Calibration Points**

0.02, 20, 100, 800 NTU Styrene Divinylbenzene (SDVB) polymer solution standards



Software Upgradeable

# **Large Memory**

Up to 2000 data with date and time stamp

**PC and Printer** Compatible

# **Meter Kit Components**





Carrying Case



Vials for sample measurement



Instruction and **Quick Manuals** 









Cloth



Silicone Oil

### **Turbidity Meter Specifications**

Model	TB220
Turbidity Range	0.00 to 2000 NTU
Resolution	0.00–19.99 NTU, 20.0–199.9 NTU, 200–2000 NTU
Accuracy	0.00–1000 NTU: ±0.02 NTU or ±2%, 1001–2000 NTU: ±3%
Repeatability	±0.02 NTU or ±2%
Calibration Points	Up to 4 (0.02, 20, 100, 800 NTU)
Calibration Standards	Styrene divinylbenzene (SDVB) polymer solution
Principle	Ratiometric turbidity measurement using nephelometric light scatter and transmitted light signals
Compliance	ISO 7027, DIN EN 27027
Light Source	Infrared light emitting diode (860 nm)
Detector	Silicone photodiode
Sample Volume	10 ml
Memory	2000
Real-Time Clock	Yes
Date & Time Stamp	Yes
Auto Shut-Off	Off, 1 to 30 mins
Diagnostic Messages	Yes
Software Upgrade <sup>1</sup>	Yes, PC (USB) cable required
PC Communication <sup>1</sup>	Yes, PC (USB) cable required
Printer Communication <sup>2</sup>	Yes, Printer (RS232) cable required
Display	Custom LCD with backlight (50 x 40 mm)
Housing	IP67 (Except for inside of sensor unit), shock & scratch resistant, non-slip
Power Requirement	4 x AA batteries
Battery Life	> 2000 measurements
Meter Dimensions	210 (L) x 110 (W) x 55 (H) mm
Meter Weight	Approx. 510 g (with batteries) / 410 g (without batteries)

### **Ordering Information**

	Meter Kit
3201073569	TB220-K TB220 Turbidity Meter Kit  TB220 Meter  0.02, 20, 100 & 800 NTU standards (10ml each)  Silicone oil Cloth  4 sample vials Carrying case Instruction & Quick Manual

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# LAQUA PH210 & PH220

pH/ORP/Temperature (°C/°F) Meters



# USA, NIST & DIN pH Buffer Groups

pH Buffer Group	pH Buffer Values (25° C)
USA	1.68, 4.01, 7.00, 10.01, 12.45
NIST	1.68, 4.01, 6.86, 9.18, 12.45
DIN	1.09, 3.06, 4.65, 6.79, 9.23, 12.75



Allows 1-point ORP Calibration

Shows Offset & Average Slope Data

# **Meter Kit Components**



### **pH Meters Specifications**

Model	PH210	PH220
pH Range	-2.00 to 16.00 pH	
Resolution	0.01 pH	
Accuracy	±0.01 pH	
Calibration Points	USA & NIST (Up	o to 5), DIN (Up to 6)
pH Buffer Groups	USA,	NIST, DIN
ORP Range	±20	000 mV
Resolution	0.1 mV (< ±1000 m	vV), 1 mV (≥ ±1000mV)
Accuracy	±0.3 mV (< ±1000 mV), 0	0.3% of reading (≥ ±1000mV)
Calibration Option		Yes
Temperature Range	-30.0 to 130.0 °C	C / -22.0 to 266.0 °F
Resolution	0.1	°C / °F
Accuracy	± 0.5 °C	C/±0.9 °F
Calibration Option	Yes	
Memory	500	1000
Auto Data Log	<b>Ø</b>	<b>⊘</b>
Real-time Clock	-	<b>⊘</b>
Date & Time Stamp	_	<b>⊘</b>
Auto Hold / Auto Stable / Real Time	<b>Ø</b>	<b>⊘</b>
Offset & Average Slope Display	<b>Ø</b>	<b>⊘</b>
Calibration Alarm (1 to 90 days)	<b>Ø</b>	<b>⊘</b>
Auto Shut-Off (1 to 30 mins.)	<b>Ø</b>	<b>⊘</b>
Electrode Status	<b>Ø</b>	<b>Ø</b>
Diagnostic Messages	<b>Ø</b>	<b>⊘</b>
PC Communication <sup>1</sup>	-	<b>⊘</b>
Printer Communication <sup>2</sup>	_	<b>⊘</b>
Meter Inputs	BNC	C, phono
Display	Custom LCD with backlight (50 x 50 mm)	
Housing	IP67, shock & scratch resistant, non-slip	
Power Requirement	2 x AA batteries	
Battery Life	> 500 hours	
Meter Dimensions	160 (L) x 80 (W) x 40.60 (H) mm	
Meter Weight	Approx. 260 g (with batter	ries) / 216 g (without batteries)

<sup>&</sup>lt;sup>1</sup>Via PC (USB) cable PN 3201025022 <sup>2</sup>Via Printer (RS232) cable PN 3200779638

### **Ordering Information**

	Meter Kits <sup>^</sup>		
3200779526	PH210-K Waterproof pH/ORP/Temperature Handheld Meter Kit  PH210 Meter  9652-10D Gel pH electrode  4.01, 7.00, 10.01 pH Buffers (60 ml each)  2 x AA Batteries  Carrying case  Manual & Quick Guide		
3200779527	PH220-K Waterproof pH/ORP/Temperature Handheld Meter Kit  PH220 Meter  9652-10D Gel pH electrode  4.01, 7.00, 10.01 pH Buffers (60 ml each)  2 x AA Batteries  Carrying case  Manual & Quick Guide		

 ${}^{\smallfrown}\text{Meter}$  kit with NIST pH buffers is available upon request. Add 'N' suffix to order code.

# LAQUA EC210 & EC220

Conductivity/Resistivity/TDS/Salinity/Temperature (°C/°F) Meters



**Allows 1-point** Salinity Calibration



Allows Auto and **Manual Calibrations** 

Linear, EN27888, 442, NaCl TDS Curves

# **Meter Kit Components**















standards

Manual & Quick Guide



9383-10D Ti/Pt Conductivity electrode

2 X AA Batteries

### **Conductivity Meters Specifications**

Model	EC210	EC220
Conductivity Range	µS/cm to 20	00.0 mS/cm (k=1.0)
Resolution	0.05% full scale	
Accuracy	±0.6% full scale, ±1.5% full scale > 18.0 mS/cm	
Reference Temperature	15	i to 30 °C
Temperature Coefficient	0.00	) to 10.00%
Cell Constants	0.1	, 1.0, 10.0
Calibration Points	Up to 4 (Auto	) / Up to 5 (Manual)
Units	S/cm, S/n	n (Auto Ranging)
Total Dissolved Solids (TDS) Range	ppm to 100	ppt (TDS factor=0.5)
Resolution	0.01 ppm (n	ng/L) / 0.1 ppt (g/L)
Accuracy		% full scale
TDS Curves	Linear (0.40 to 1.0	00), EN27888, 442, NaCl
Resistivity Range	0.000 Ω•ci	m to 20.0 MΩ•cm
Resolution	0.05	% full scale
Accuracy	±0.6% full scale, ±1.5	5% full scale > 1.80 MΩ•cm
Salinity Range	0.0 to 100.0 p	opt / 0.00 to 10.00 %
Resolution	•	opt / 0.01%
Accuracy	±0.2	% full scale
Salinity Curves	NaCl, Seawater	
Calibration Option	Yes	
Temperature Range	-30.0 to 130.0 °C / -22.0 to 266.0 °F	
Resolution	0.1 °C / °F	
Accuracy	± 0.5 °C / ± 0.9 °F	
Calibration Option	Yes	
Memory	500	1000
Auto Data Log	<b>Ø</b>	<b>⊘</b>
Real-time Clock	_	<b>Ø</b>
Date & Time Stamp	-	<b>⊘</b>
Auto Hold / Auto Stable/ Real Time	<b>Ø</b>	<b>⊘</b>
Auto Shut-Off (1 to 30 mins.)	<b>Ø</b>	<b>Ø</b>
Electrode Status	<b>Ø</b>	<b>⊘</b>
Diagnostic Messages	<b>Ø</b>	<b>Ø</b>
PC Communication <sup>1</sup>	_	<b>⊘</b>
Printer Communication <sup>2</sup>	-	<b>Ø</b>
Meter Inputs	BN	IC, phono
Display	Custom LCD with backlight (50 x 50 mm)	
Housing	IP67, shock & scratch resistant, non-slip	
Power Requirement		AA batteries
Battery Life	> 5	500 hours
Meter Dimensions	160 (L) x 80	(W) x 40.60 (H) mm
Meter Weight	Approx. 260 g (with batteries) / 216 g (without batteries)	

### **Ordering Information**

Meter Kits		
3200779528	<ul> <li>EC210-K Waterproof Conductivity/TDS/Res/Sal/Temperature Handheld Meter Kit</li> <li>EC210 Meter</li> <li>9383-10D Ti/Pt Conductivity electrode (k=1.0)</li> <li>84 μS/cm, 1413 μS/cm, 12.88 mS/cm, &amp; 111.8 mS/cm Conductivity standards (60 ml each)</li> <li>2 x AA Batteries</li> <li>Carrying case</li> <li>Manual &amp; Quick Guide</li> </ul>	
3200779529	EC220-K Waterproof Conductivity/TDS/Res/Sal/Temperature Handheld Meter Kit  EC220 Meter  9383-10D Ti/Pt Conductivity electrode (k=1.0)  84 μS/cm, 1413 μS/cm, 12.88 mS/cm, & 111.8 mS/cm Conductivity standards (60 ml each)  2 x AA Batteries  Carrying case  Manual & Quick Guide	

<sup>&</sup>lt;sup>1</sup>Via PC (USB) cable PN 3201025022 <sup>2</sup>Via Printer (RS232) cable PN 3200779638

# LAQUA DO210 & DO220

Dissolved Oxygen/Temperature (°C/°F) Meters

Compatible with Galvanic DO Probes

Compensates Salinity,

Temperature and Atmospheric Pressure



Allows up to 2 Calibration Points

Measures DO concentration in ppm (mg/L) and % saturation

# **Meter Kit Components**





Carrying Case



9552-20D or 9552-50D Galvanic DO probe



Manual & Quick Guide



2 X AA Batteries

### **DO Meters Specifications**

Model	DO210	DO220
Dissolved Oxygen (DO) Range	0.0 to 20.00 mg/L, 0.0 to 200.0%	
Resolution	0.01 mg/L, 0.1%	
Accuracy	±0.1	mg/L
Salinity Compensation	0.0 to 4	10.0 ppt
Barometric Pressure Compensation	Ye	es
DO Probe Type	Galvanic integrated wi	th temperature sensor
Calibration Points	Up	to 2
Temperature Range	-30.0 to 130.0 °C	/ -22.0 to 266.0 °F
Resolution	0.1 °C	C/°F
Accuracy	± 0.5 °C	/ ± 0.9 °F
Calibration Option	Ye	es
Memory	500	1000
Auto Data Log	<b>Ø</b>	<b>Ø</b>
Real-time Clock	-	<b>Ø</b>
Date & Time Stamp	_	<b>Ø</b>
Auto Hold / Auto Stable / Real Time	<b>Ø</b>	<b>Ø</b>
Auto Shut-Off (1 to 30 mins.)	<b>Ø</b>	<b>⊘</b>
Electrode Status	<b>⊘</b>	<b>Ø</b>
Diagnostic Messages	<b>⊘</b>	<b>Ø</b>
PC Communication <sup>1</sup>	-	<b>Ø</b>
Printer Communication <sup>2</sup>	_	<b>Ø</b>
Meter Inputs	BNC,	phono
Display	Custom LCD with backlight (50 x 50 mm)	
Housing	IP67, shock & scratch resistant, non-slip	
Power Requirement	2 x AA batteries	
Battery Life	> 500 hours	
Meter Dimensions	160 (L) x 80 (W) x 40.60 (H) mm	
Meter Weight	Approx. 260 g (with batterie	s) / 216 g (without batteries)

<sup>&</sup>lt;sup>1</sup>Via PC (USB) cable PN 3201025022 <sup>2</sup>Via Printer (RS232) cable PN 3200779638

#### **Ordering Information**

Meter	Kits with Galvanic DO probe, 2m Cable
3200779530	DO210-K Waterproof DO/Temperature Handheld Meter Kit DO210 Meter 2 x AA Batteries Carrying case Manual & Quick Guide 9552-20D Galvanic DO probe, 2m cable
3200779531	DO220-K Waterproof DO/Temperature Handheld Meter Kit DO220 Meter 2 x AA Batteries Carrying case Manual & Quick Guide 9552-20D Galvanic DO probe, 2m cable

Meter Kits with Galvanic DO probe, 5m Cable		
4000009167	DO210-K05 Waterproof DO/Temperature Handheld Meter Kit DO210 Meter 2 x AA Batteries Carrying case Manual & Quick Guide 9552-50D Galvanic DO probe, 5m cable	
4000009168	DO220-K05 Waterproof DO/Temperature Handheld Meter Kit DO220 Meter 2 x AA Batteries Carrying case Manual & Quick Guide 9552-50D Galvanic DO probe, 5m cable	

# LAQUA PC210 & PC220

pH/ORP/Conductivity/Resistivity/TDS/Salinity/Temperature (°C/°F) Meters

Accepts up to 6 **Calibration Points** 

**USA, NIST & DIN pH Buffer Groups** 

pH Buffer Group	pH Buffer Values (25° C)
USA	1.68, 4.01, 7.00, 10.01, 12.45
NIST	1.68, 4.01, 6.86, 9.18, 12.45
DIN	1.09, 3.06, 4.65, 6.79, 9.23, 12.75

**Allows 1-point ORP Calibration** 

**Shows Offset & Average Slope Data** 



Accepts up to 5 **Calibration Points** 

**Allows 1-point Salinity Calibration** 

**Allows Auto and Manual Calibrations** 

Linear, EN27888, 442, NaCI TDS Curves

#### **Meter Kit Components**





Carrying Case

9652-10D Gel pH

electrode









standards

Manual & Quick Guide



9383-10D Ti/Pt Conductivity electrode

2 X AA Batteries

### **Multi-Parameters Meters Specifications**

Model	PC210	PC220	
pH Range	-2.0	00 to 16.00 pH	
Resolution	0.01 pH		
Accuracy		±0.01 pH	
Calibration Points	USA & NIST	(Up to 5), DIN (Up to 6)	
pH Buffer Groups		SA, NIST, DIN	
ORP Range		±2000 mV	
Resolution	0.1 mV (< ±100	0 mV), 1 mV (≥ ±1000mV)	
Accuracy		/), 0.3% of reading (≥ ±1000mV)	
Calibration Option	( 222	Yes	
Conductivity Range	uS/cm to	200.0 mS/cm (k=1.0)	
Resolution		05% full scale	
Accuracy	±0.6% full scale. ±	-1.5% full scale > 18.0 mS/cm	
Reference Temperature	•	15 to 30 °C	
Temperature Coefficient		00 to 10.00%	
Cell Constants		0.1, 1.0, 10.0	
Calibration Points		uto) / Up to 5 (Manual)	
Units		S/m (Auto Ranging)	
Total Dissolved Solids (TDS) Range		0 ppt (TDS factor=0.5)	
Resolution		(mg/L) / 0.1 ppt (g/L)	
Accuracy		0.1% full scale	
TDS Curves		1.00), EN27888, 442, NaCl	
Resistivity Range		•cm to 20.0 MΩ•cm	
Resolution		05% full scale	
Accuracy	±0.6% full scale, ±1.5% full scale > 1.80 MΩ•cm		
Salinity Range	0.0 to 100.0 ppt / 0.00 to 10.00 %		
Resolution	0.1 ppt / 0.01%		
Accuracy	±0.2% full scale		
Salinity Curves	NaCl, Seawater		
Calibration Option	Yes -30.0 to 130.0 °C / -22.0 to 266.0 °F  0.1 °C / °F  ± 0.5 °C / ± 0.9 °F		
Temperature Range			
Resolution			
Accuracy			
Calibration Option		Yes	
Memory	500	1000	
Auto Data Log	•	<b>Ø</b>	
Real-time Clock	_	Ø	
Date & Time Stamp	_		
Auto Hold / Auto Stable / Real Time	<b>Ø</b>	Ø	
Offset & Average Slope Display	•		
Calibration Alarm (1 to 90 days)	•		
Auto Shut-Off (1 to 30 mins.)	•		
Electrode Status	o de la companya de l	o de la companya del companya de la companya del companya de la co	
Diagnostic Messages	<u> </u>	Ø	
PC Communication <sup>1</sup>	_		
Printer Communication <sup>2</sup>	_		
Meter Inputs	F	BNC, phono	
Display	Custom LCD with backlight (50 x 50 mm)		
Housing	IP67, shock & scratch resistant, non-slip		
Power Requirement	•	x AA batteries	
Battery Life		> 500 hours	
Meter Dimensions		0 (W) x 40.60 (H) mm	
INICIOI DIIIIOIOIO	Approx. 260g (with ba	ο (**, λ. το.οο (ει) ιιιιι	

<sup>1</sup>Via PC (USB) cable PN 3201025022 <sup>2</sup>Via Printer (RS232) cable PN 3200779638

#### **Ordering Information**

Meter Kits <sup>^</sup>		
PC210-K Waterproof pH/ORP/Conductivity/TDS/Sal/Res/Temperature Handhe  PC210 Meter 9652-10D Gel pH electrode 9383-10D Ti/Pt Conductivity electrode (k=1.0) 4.01 & 7.00 pH Buffers (60 ml each) 1413 μS/cm & 12.88 mS/cm Conductivity standards (60 ml each)		<ul><li>2 x AA Batteries</li><li>Electrode Adapter</li><li>Carrying case</li></ul>
3200779533	<ul> <li>PC220-K Waterproof pH/ORP/Conductivity/TD</li> <li>PC220 Meter</li> <li>9652-10D Gel pH electrode</li> <li>9383-10D Ti/Pt Conductivity electrode (k=1.0)</li> <li>4.01 &amp; 7.00 pH Buffers (60 ml each)</li> <li>1413 μS/cm &amp; 12.88 mS/cm Conductivity standards (60 ml each)</li> </ul>	S/Sal/Res/Temperature Handheld Meter Kit  2 x AA Batteries Electrode Adapter Carrying case Manual & Quick Guide

^Meter kit with NIST pH buffers is available upon request. Add 'N' suffix to order code.

# LAQUA PD210 & PD220

pH/ORP/Dissolved Oxygen/Temperature (°C/°F) Meters

Accepts up to 6 **Calibration Points** 

**USA, NIST & DIN pH Buffer Groups** 

pH Buffer Group	pH Buffer Values (25° C)
USA	1.68, 4.01, 7.00, 10.01, 12.45
NIST	1.68, 4.01, 6.86, 9.18, 12.45
DIN	1.09, 3.06, 4.65, 6.79, 9.23, 12.75

**Allows 1-point ORP Calibration** 

**Shows Offset & Average Slope Data** 



Allows up to 2 **Calibration Points** 

**Measures DO** concentration in ppm (mg/L) and % saturation

Compatible with **Galvanic DO Probes** 

Compensates Salinity, **Temperature and Atmospheric Pressure** 

#### **Meter Kit Components**





Carrying Case





9652-20D Gel pH

electrode









Adapter

pH Buffers Manual & Quick Guide

9552-20D Galvanic DO probe

2 X AA Batteries

#### **Multi-Parameters Meters Specifications**

Model	PD210	PD220	
pH Range	-2.00 to 16.00 pH		
Resolution	0.01 pH		
Accuracy	±(	0.01 pH	
Calibration Points	USA & NIST (U	p to 5), DIN (Up to 6)	
pH Buffer Groups	USA, NIST, DIN		
ORP Range	±2	000 mV	
Resolution	0.1 mV (< ±1000 n	nV), 1 mV (≥ ±1000mV)	
Accuracy	±0.3 mV (< ±1000 mV), (	0.3% of reading (≥ ±1000mV)	
Calibration Option		Yes	
Dissolved Oxygen (DO) Range		20.00 mg/L to 200.0%	
Resolution	0.01 r	mg/L, 0.1%	
Accuracy	±0	).1 mg/L	
Salinity Compensation	0.0 to	o 40.0 ppt	
Barometric Pressure Compensation	Yes		
DO Probe Type	Galvanic integrated	with temperature sensor	
Calibration Points	Up to 2		
Temperature Range	-30.0 to 130.0 °	°C / -22.0 to 266.0 °F	
Resolution	0.1 °C / °F		
Accuracy	± 0.5 °C / ± 0.9 °F		
Calibration Option		Yes	
Memory	500	1000	
Auto Data Log	<b>Ø</b>	<b>Ø</b>	
Real-time Clock	<u> </u>	<b>⊘</b>	
Date & Time Stamp	_	<b>②</b>	
Auto Hold / Auto Stable / Real Time	<b>Ø</b>	<b>②</b>	
Offset & Average Slope Display	<b>Ø</b>	<b>②</b>	
Calibration Alarm (1 to 90 days)	<b>Ø</b>	<b>⊘</b>	
Auto Shut-Off (1 to 30 mins.)	<b>Ø</b>	<b>⊘</b>	
Electrode Status	<b>⊘</b>	<b>⊘</b>	
Diagnostic Messages	<b>Ø</b>	<b>⊘</b>	
PC Communication <sup>1</sup>	_	<b>⊘</b>	
Printer Communication <sup>2</sup>	_	<b>⊘</b>	
Meter Inputs	BNC, phono		
Display	Custom LCD with backlight (50 x 50 mm)		
Housing	IP67, shock & scratch resistant, non-slip		
Power Requirement	2 x AA batteries		
Battery Life	> 5	00 hours	
Meter Dimensions	160 (L) x 80 (W) x 40.60 (H) mm		
Meter Weight Approx. 260 g (with batteries) / 216 g (without batteries)		ries) / 216 g (without batteries)	

<sup>1</sup>Via PC (USB) cable PN 3201025022 <sup>2</sup>Via Printer (RS232) cable PN 3200779638

## **Ordering Information**

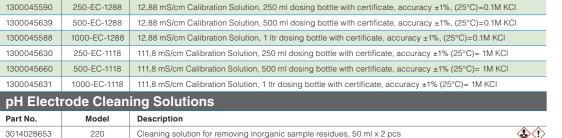
Meter Kits <sup>^</sup>		
3200779534	<ul> <li>PD210-K Waterproof pH/ORP/DO/Temperato</li> <li>PD210 Meter</li> <li>9652-20D Gel pH electrode, 2m cable</li> <li>9552-20D Galvanic DO probe, 2m cable</li> <li>4.01, 7.00, 10.01 pH Buffers (60 ml each)</li> </ul>	ure Handheld Meter Kit  2 x AA Batteries Electrode Adapter Carrying case Manual & Quick Guide
3200779535	<ul> <li>PD220-K Waterproof pH/ORP/DO/Temperate</li> <li>PD220 Meter</li> <li>9652-20D Gel pH electrode, 2m cable</li> <li>9552-20D Galvanic DO probe, 2m cable</li> <li>4.01, 7.00, 10.01 pH Buffers (60 ml each)</li> </ul>	ure Handheld Meter Kit  2 x AA Batteries Electrode Adapter Carrying case Manual & Quick Guide

^Meter kit with NIST pH buffers is available upon request. Add 'N' suffix to order code.

# Accessories & Solutions

Ordering Information

pH Buffers				
Part No.	Model	Description		
3200043642	101-S	pH6,86 (500 ml), pH4 (250 ml) and pH9,18 (250 ml) buffer Solution / Reference Electrode Internal Solution #300 (250 ml) / Dropper		
3200043639	100-2	pH 1,68 buffer Solution (500 ml)		
3200043637	100-7	pH 6.86 Standard Solution (500 ml)		
3200043636	100-9	pH 9,18 buffer Solution (500 ml)		
1300045600	250-PH-4	pH 4,01 buffer solution, 250 ml in dosing bottle, NIST Traceable with certificate, accuracy ± 0,01 @ 25°C		
1300045602	500-PH-4	pH 4,01 buffer solution, 500 ml in dosing bottle, NIST Traceable with certificate, accuracy ± 0,01 @ 25°C		
1300045599	1000-PH-4	pH 4,01 buffer solution, 1 ltr in dosing bottle, NIST Traceable with certificate, accuracy ± 0,01 @ 25°C		
1300045607	250-PH-7	pH 7,00 buffer solution, 250 ml in dosing bottle, NIST Traceable with certificate, accuracy ± 0,01 @ 25°C		
1300045608	500-PH-7	pH 7,00 buffer solution, 500 ml in dosing bottle, NIST Traceable with certificate, accuracy ± 0,01 @ 25°C		
1300045606	1000-PH-7	pH 7,00 buffer solution, 1 ltr in dosing bottle, NIST Traceable with certificate, accuracy ± 0,01 @ 25°C		
1300045604	250-PH-10	pH 10,01 buffer solution, 250 ml in dosing bottle, NIST Traceable with certificate, accuracy ± 0,02 @ 25°C		
1300045605	500-PH-10	pH 10,01 buffer solution, 500 ml in dosing bottle, NIST Traceable with certificate, accuracy ± 0,02 @ 25°C		
1300045603	1000-PH-10	pH 10,01 buffer solution, 1 ltr in dosing bottle, NIST Traceable with certificate, accuracy ± 0,02 @ 25°C		
<b>ORP Sol</b>	utions			
Part No.	Model	Description		
1300045637	250-ORP-200	200 mV Redox / ORP solution, 250 ml round brown bottle, accuracy ± 5mV @ 25°C		
1300045636	250-ORP-475	475 mV Redox / ORP solution, 250 ml dosing bottle, accuracy ± 5mV @ 25°C		
1300045635	500-ORP-475	475 mV Redox / ORP solution, 500 ml dosing bottle, accuracy ± 5mV @ 25°C		
1300045634	500-ORP-650	650 mV Redox / ORP solution, 500 ml dosing bottle, accuracy ± 5mV @ 25°C		
Conductivity Standards		ards		
Part No.	Model	Description		
1300045609	250-EC-84	84 uS/cm Calibration Solution, 250 ml dosing bottle with certificate, accuracy±1%, KCl		
1300045632	500-EC-84	84 uS/cm Calibration Solution, 500 ml dosing bottle with certificate, accuracy±1%, KCl		
1300045633	1000-EC-84	84 uS/cm Calibration Solution, 1 ltr dosing bottle with certificate, accuracy±1%, KCl		
1300051602	250-EC-147	147 uS/cm Calibration Solution, 250 ml dosing bottle with certificate, accuracy±1%, KCl		
1300045595	250-EC-1413	1,413 uS/cm Calibration Solution, 250 ml dosing bottle with certificate, accuracy±1%, (25°C)=0.01M KCl		



1,413 uS/cm Calibration Solution, 500 ml dosing bottle with certificate, accuracy±1%, (25°C)=0.01M KCI

Cleaning solution for removing inorganic and organic sample residues, Solution A (30 ml) & Solution B (100 ml)

1,413 uS/cm Calibration Solution, 1 ltr dosing bottle with certificate, accuracy±1%, (25°C)=0.01M KCl

	3200366771	250	Cleaning solution for removing proteins, 400 ml
	Turbidity Solutions		
	Part No.	Model	Description
3201063378		550-TBP-4	Standard solution set (0.02, 20, 100 & 800 NTU), 50ml each
	3201063380	550-TBP-2L	Standard solution set (0.02 & 20 NTU) , 50ml each
	3201063381	550-TBP-21	H Standard solution set (100 & 800 NTU) , 50ml each









550-TBP-4 Standard solution set 0.02, 20, 100 & 800 NTU (50ml each)

#### Electrodes\*

Part No.	Model	Description
3200786359	9652-10D	3-in-1 Plastic-body, gel-filled pH electrode (1m cable)
3200786361	9652-20D	3-in-1 Plastic-body, gel-filled pH electrode (2m cable)
3014046710	9300-10D	3-in-1 Glass-body, platinum, refillable ORP electrode (1m cable)
3200922105	9301-10D	3-in-1 Plastic-body, platinum, gel-filled ORP electrode (1m cable)
3200780927	9383-10D	Plastic-body, Ti/Pt black, k=1.0 conductivity cell with thermistor (1m cable)
3200780939	9552-20D	Galvanic DO probe with thermistor (2m cable)
3200780941	9552-50D	Galvanic DO probe with thermistor (5m cable)
3200781553	5402	Replacement DO tip for 9552-20D and 9552-50D



5402 Replacement DO Tip



Digital Simulator



X-52 Digital Simulator



Printer



25-pin D-Sub Printer (RS232) cable (Meter to Printer)



Electrode Adapter



PC (USB) cable (Meter to Computer)



**CLOTH SET** Set of silicone oil and cloth



TB220-SILICONE OIL, TB220-VIAL COVER Vial cover for TB220



TB220-VIAL 4SET Set of 4 sample vials

# Accessories

	Part No.	Wodei	Description
	3014028368	X-51	Digital simulator for pH, mV, Ion, DO & temperature
	3014028370	X-52	Digital simulator for conductivity & temperature
	3014030146	-	Printer for GLP / GMP compliance, 120V US version (printer cable is sold separately)
	3014030147	-	Printer for GLP / GMP compliance, 230V EU version (printer cable is sold separately)
	3200779638	-	25-pin D-Sub Printer (RS232) cable (meter to printer), 1.5m
	3014030149	_	Printer paper, 20 rolls
	3014030150	_	Printer ink ribbon, 5pcs/pack
	3200775948	_	Electrode adapter
	3201025022	-	PC (USB) cable to connect meter and computer, 1.5m
	3201067504	TB220-SILICONE OIL, CLOTH SET	Set of silicone oil and cloth
	3201067927	TB220-VIAL 4SET	Set of 4 sample vials
	3201068357	TB220-VIAL COVER	Vial cover for TB220

1300045638

1300045591

3200530494

500-EC-1413

1000-EC-1413

#### Water Quality Instruments



With over 75 years of engineering excellence, HORIBA's innovative and diverse range of water quality analyzers, electrodes and solutions are ideal for everyday needs in the laboratory and field through to the most demanding of applications.

Visit our website for a wealth of useful information and water quality measurement tips to help you obtain the best results in your work.







#### **Benchtop Meters**

Developed using extensive feedback from users, our new LAQUA bench top meters deliver the best solution for water quality analysis. The complete solution for every lab, whether it is at school, quality assurance lab or pharmaceutical industry, we have the right instrument at the right budget for you.

Consult our website or electrode brochure to select the electrode most suitable for your application.







#### Handheld Meters

In the field, in the lab or anywhere you need it. From easy to use, single parameter to highly sophisticated digital multi parameter to Sonde type

The LAQUA Handheld meters are designed for one hand use with an IP67 waterproof rating and shock-resistant casing. Meters can be used for long periods, even in dark places, making it ideal for field measurements in rivers and lakes.







#### LAQUAtwin meters and Kits

Analyzing water quality is simplified when using our LAQUAtwin range of meters. An unique flat surface sensor technology enables to measure even

Designed to produce accurate and reliable results. Anyone, anywhere, at any time can measure samples easily with a LAQUAtwin meter. Use the LAQUAtwin 4M carrying case to conveniently store and transport up to 7 meters, a true lab on the go. See just how good they are at our website.



#### **Flectrodes**

Various electrodes to match any application. A wide range for both benchtop and portable systems are available, including easy and reliable standard models, application-focused models for small samples or large containers, and special electrodes for specific sample characteristics.

#### Check out our application notes.





Available **Online** 



#### Solutions

A complete range of high quality calibration, buffer, filling and cleaning solutions is available for pH, conductivity, ORP and ion selective measurements.

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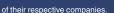
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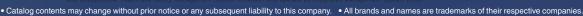


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