



# LAQUA

LAQUA 200 Series Handheld Water Quality Meters







www.horiba-laqua.com

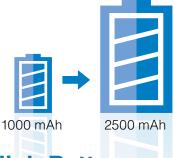




Two grooves on the meter serve as electrode holders.

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** 

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.

**Design** 

1.0 mm Thermoplastic

elastomer (TPE)

Polycarbonate

# Integrated Foldable Meter Stand

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

# IP67 Waterproof and Dustproof

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

## **PC / Printer Communications**



The 220 models are GLP-compliant: calibration and measurement data are captured with date and time stamp. Connect any 220 model to a computer using a PC (USB) cable¹ to transfer data via data acquisition software or to upgrade² meter software or connect to a HORIBA printer using a printer (RS232) cable¹ to print data.

- 1 Cables and printer are sold separately
- <sup>2</sup> Also applicable to 210 models

## **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



### **Calibration Data**

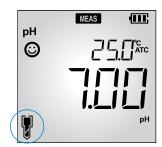
Simply press CAL button and then DATA button to view the latest calibration data.





## Diagnostic Messages

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



## **Electrode Status Indicator**

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









Temperature sensor connected



Temperature sensor disconnected

## Temperature Sensor Indicator

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

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

**Auto Stable (AS) mode** - the meter shows live readings; ② annunciator blinks until the reading is stable.

**Auto Hold (AH) mode** - the meter locks the stable reading; ② annunciator blinks until reading is stable and then HOLD lights up.

**Real Time** - the meter shows live readings; Both ② and HOLD annunciators are inactive.



Visit the **HORIBA LAQUA Singapore** Channel on YouTube and subscribe to see more of our videos.













Real Time





9652-10D / 20D Plastic-body, Double Junction, Gel pH Electrodes		
Model	9652-10D	9652-20D
Part No.	3200786359	3200786361
pH Range	0 - 14 pH	
Temperature Range	0 - 80 °C	
Liquid Junction	Porous sintered polyethylene	
Temperature Sensor	Integrated	
Connectors	BNC, phono	
Electrode Length & Diameter	150 x 16 mm	
Cable Length	1.0 m	2.0 m

to 5.0m)

9383-10D Plastic-body, Titanium/Platinum Black Conductivity Cell		
Model	9383-10D	
Part No.	3200780927	
Cell Constant	1 cm <sup>-1</sup>	
Conductivity Range	1 μS/cm to 200 mS/cm	
Temperature Range	0 - 80 °C	
Temperature Sensor	Integrated	
Connectors	BNC, phono	
Electrode Length & Diameter	150 x 16 mm	
Cable Length	1.0 m	

-			
9552-20D / 50D Galvanic DO Probes			
Model	9552-20D	9552-50D	
Part No.	3200780939	3200780941	
DO Range	0 - 20.00 mg/L		
Temperature Range	0 - 50 °C		
Temperature Sensor	Integrated		
Connectors	BNC, phono		
Electrode Length & Diameter	164 x 30 mm		
Cable Length	2.0 m	5.0 m	
Replacement DO Tip / Part No.	5402 / 3200781553		



Calibration Option Yes Memory 500 1000 Auto Data Log Real-time Clock Date & Time Stamp Auto Hold / Auto Stable / Real Time Offset & Average Slope Display Calibration Alarm (1 to 90 days) Auto Shut-Off (1 to 30 mins.) Electrode Status Diagnostic Messages Software Upgrade<sup>1</sup> PC Communication<sup>1</sup> Printer Communication<sup>2</sup> Meter Inputs BNC, phono Display Custom LCD with backlight Housing IP67, shock & scratch resistant, non-slip Power Requirement 2 x AA batteries

> PH210-K Waterproof pH/ORP/Temp Handheld Meter Kit (3200779526) 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

#### PH220-K Waterproof pH/ORP/Temp Handheld Meter Kit (3200779527)

PH220 Meter

> 500 hours

160 (L) x 80 (W) x 40.60 (H) mm

Approx. 260 g (with batteries) / 216 g (without batteries)

- 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

Battery Life

Meter Weight

Meter Kit\*

Meter Dimensions

<sup>\*</sup>Meter kit with NIST pH buffers is available upon request. Add 'N' suffix to order code <sup>1</sup>Via PC (USB) cable PN 3200779639 <sup>2</sup>Via Printer (RS232) cable PN 3200779638

#### Conductivity Meters **EC210 EC220** Conductivity Range ..uS/cm to 200.0 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 to 30 °C Temperature Coefficient 0.00 to 10.00% Cell Constants 0.1, 1.0, 10.0 Up to 4 (Auto) / Up to 5 (Manual) Calibration Points Units S/cm, S/m (Auto Ranging) Total Dissolved Solids (TDS) Range ppm to 100 ppt (TDS factor=0.5) 0.01 ppm (mg/L) / 0.1 ppt (g/L) Resolution ±0.1% full scale Accuracy **TDS Curves** Linear (0.40 to 1.00), EN27888, 442, NaCl Resistivity Range 0.000 Ω•cm to 20.0 MΩ•cm Resolution 0.05% full scale ±0.6% full scale, Accuracy ±1.5% full scale > 1.80 MΩ•cm Salinity Range 0.0 to 100.0 ppt / 0.00 to 10.00 % 0.1 ppt / 0.01% Resolution Accuracy ±0.2% full scale Salinity Curves NaCl, Seawater Calibration Option Yes -30.0 to 130.0 °C / -22.0 to 266.0 °F Temperature Range Resolution 0.1 °C / °F Accuracy $\pm 0.5 \, ^{\circ}\text{C} \, / \pm 0.9 \, ^{\circ}\text{F}$ Calibration Option Yes Memory 500 1000 Auto Data Log Real-time Clock Date & Time Stamp Auto Hold / Auto Stable/ Real Time Auto Shut-Off (1 to 30 mins.) Electrode Status Diagnostic Messages Software Upgrade<sup>1</sup> PC Communication<sup>1</sup> Printer Communication<sup>2</sup> BNC, phono Meter Inputs Custom LCD with backlight Display Housing IP67, shock & scratch resistant, non-slip Power Requirement 2 x AA batteries > 500 hours Battery Life 160 (L) x 80 (W) x 40.60 (H) mm Meter Dimensions Approx. 260 g (with batteries) / 216 g (without batteries) Meter Weight EC210-K Waterproof EC/TDS/Res/Sal/Temp EC220-K Waterproof EC/TDS/Res/Sal/Temp Handheld Meter Kit (3200779528) Handheld Meter Kit (3200779529) EC210 Meter EC220 Meter 9383-10D Ti/Pt Conductivity electrode (k=1.0) 9383-10D Ti/Pt Conductivity electrode (k=1.0) $84 \mu S/cm$ , $1413 \mu S/cm$ , 12.88 m S/cm, & 111.8Meter Kit 84 µS/cm, 1413 µS/cm, 12.88 mS/cm, & 111.8 mS/cm Conductivity standards (60 ml each) mS/cm Conductivity standards (60 ml each) 2 x AA Batteries 2 x AA Batteries Carrying case Carrying case

Manual & Quick Guide

Manual & Quick Guide

DO Meters			
	A COMPANY OF THE PARTY OF THE P		
Model	DO210	DO220	
		p (°C/°F) .00 mg/L	
Dissolved Oxygen (DO) Range		200.0%	
Resolution	0.01 mg	y/L, 0.1%	
Accuracy	±0.1	mg/L	
Salinity Compensation	0.0 to 4	10.0 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	•	•	
Real-time Clock	_	•	
Date & Time Stamp	_	•	
Auto Hold / Auto Stable / Real Time	•	•	
Auto Shut-Off (1 to 30 mins.)	•	•	
Electrode Status	•	•	
Diagnostic Messages	•	•	
Software Upgrade <sup>1</sup>	•	•	
PC Communication <sup>1</sup>	_	•	
Printer Communication <sup>2</sup>	_	•	
Meter Inputs	BNC, phono		
Display	Custom LCD with backlight		
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 batteries) / 216 g (without batteries)		
Meter Kit	DO210-K Waterproof DO/Temp Handheld Meter Kit (3200779530)  DO210 Meter  S552-20D Galvanic DO probe, 2 m cable  2 x AA Batteries  Carrying case  Manual & Quick Guide	DO220-K Waterproof DO/Temp Handheld Meter Kit (3200779531)  DO220 Meter  9552-20D Galvanic DO probe, 2 m cable  2 x AA Batteries  Carrying case  Manual & Quick Guide	



<sup>\*</sup>Meter kit with NIST pH buffers is available upon request. Add 'N' suffix to order code 'Via PC (USB) cable PN 3200779639

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

Available Not available

Multi-Parameter Meters		
Model	PD210	PD220
		/Temp (°C/°F)
pH Range		16.00 pH
Resolution		01 pH
Accuracy Calibration Points		01 pH to 5), DIN (Up to 6)
pH Buffer Groups		VIST, DIN
ORP Range		00 mV
Resolution		V), 1 mV (≥ ±1000mV)
Accuracy		0.3% of reading (≥ ±1000mV)
Calibration Option	•	/es
Dissolved Oxygen (DO) Range	0.0 to 20.00 mg/L	
		200.0%
Resolution		g/L, 0.1%
Accuracy Salinity Compensation		mg/L
Barometric Pressure	0.0 to	40.0 ppt
Compensation	Y	⁄es
DO Probe Type	Galvanic integrated v	vith temperature sensor
Calibration Points		to 2
Temperature Range	-30.0 to 130.0 °C	C / -22.0 to 266.0 °F
Resolution	0.1 °	°C / °F
Accuracy	± 0.5 °C / ± 0.9 °F	
Calibration Option		/es
Memory	500	1000
Auto Data Log	•	•
Real-time Clock	_	•
Date & Time Stamp	_	•
Auto Hold / Auto Stable / Real Time	•	•
Offset & Average Slope Display		•
Calibration Alarm (1 to 90 days)	•	•
Auto Shut-Off (1 to 30 mins.) Electrode Status		
	•	•
Diagnostic Messages Software Upgrade <sup>1</sup>		
PC Communication <sup>1</sup>	_	
Printer Communication <sup>2</sup>	_	
Meter Inputs	BNC	nhono
Display	BNC, phono  Custom LCD with backlight	
Housing	IP67, shock & scratch resistant, non-slip	
Power Requirement		batteries
Battery Life	> 500 hours	
Meter Dimensions	160 (L) x 80 (W) x 40.60 (H) mm	
Meter Weight		es) / 216 g (without batteries)
Meter Kit*	PD210-K Waterproof pH/ORP/DO/Temp Handheld Meter Kit (3200779534)  PD210 Meter  9652-20D Gel pH electrode, 2 m cable  9552-20D Galvanic DO probe, 2 m cable  4.01, 7.00, 10.01 pH Buffers (60 ml each)  2 x AA Batteries  Electrode Adapter  Carrying case  Manual & Quick Guide	PD220-K Waterproof pH/ORP/DO/Temp Handheld Meter Kit (3200779535)  PD220 Meter  9652-20D Gel pH electrode, 2 m cable  9552-20D Galvanic DO probe, 2 m cable  4.01, 7.00, 10.01 pH Buffers (60 ml each)  2 x AA Batteries  Electrode Adapter  Carrying case  Manual & Quick Guide
*Meter kit with NIST pH buffers is available upon rec	Manual & Quick Guide	

<sup>\*</sup>Meter kit with NIST pH buffers is available upon request. Add 'N' suffix to order code. 'Via PC (USB) cable PN 3200779639 ²Via Printer (RS232) cable PN 3200779638

10000001101			
pH Buffers			
Part No.	Model	Description	
3999960015	501-S	NIST pH Buffers Kit (pH 4.01, 6.86, 9.18 buffers & 3.33 M KCl, 250 ml each)	
3999960016	502-S	USA pH Buffers Kit (pH 4.01, 7.00, 10.01 buffers & 3.33 M KCl, 250 ml each)	
3999960028	500-2	pH 1.68 Buffer at 25 °C, 500 ml	
3999960029	500-4	pH 4.01 Buffer at 25 °C, 500 ml	
3999960030	500-686	pH 6.86 Buffer at 25 °C, 500 ml	
3999960031	500-7	pH 7.00 Buffer at 25 °C, 500 ml	
3999960032	500-9	pH 9.18 Buffer at 25 °C, 500 ml	
3999960033	500-10	pH 10.01 Buffer at 25 °C, 500 ml	
3999960034	500-12	pH 12.46 Buffer at 25 °C, 500 ml	
ORP Powd	ers		
Part No.	Model	Description	
3200043618	160-51	89 mV at 25 °C for 250 ml (10 sachets/pack)	
3200043617	160-22	258 mV at 25 °C for 250 ml (10 sachets/pack)	
	ty Standard	, , ,	
Part No.	Model	Description	
3999960017	503-S	Conductivity Standards Kit (84 µS/cm, 1413 µS/cm, 12.88 mS/cm & 111.8 mS/cm, 250 ml each)	
3999960035	500-21	84 µS/cm Conductivity Standard at 25 °C, 500 ml	
3999960036	500-21	1413 µS/cm Conductivity Standard at 25 °C, 500 ml	
3999960037	500-22	12.88 mS/cm Conductivity Standard at 25 °C, 500 ml	
3999960038	500-24	111.8 mS/cm Conductivity Standard at 25 °C, 500 ml	
	de Cleaning	•	
Part No.	Model	Description	
		Cleaning solution for removing inorganic	
3014028653	220	sample residues, 50 ml x 2 pcs  Cleaning solution for removing inorganic and organic sample	
3200530494	230	residues, Solution A (30 ml) & Solution B (100 ml)	
3200366771	250	Cleaning solution for removing proteins, 400 ml	
Electrodes	*		
Part No.	Model	Description	
3200786359	9652-10D	Plastic-body, gel-filled pH electrode with integrated temperature sensor and 1 m cable	
3200786361	9652-20D	Plastic-body, gel-filled pH electrode with integrated temperature sensor and 2 m cable	
3014046710	9300-10D	ORP electrode with flat platinum tip and temperature sensor	
3200780927	9383-10D	Plastic-body, Titanium / Platinum black (k=1.0) conductivity cell with integrated temperature sensor and 1 m cable	
3200780939	9552-20D	Galvanic DO probe with integrated temperature sensor and 2 m cable	
3200780941	9552-50D	Galvanic DO probe with integrated temperature sensor and 5 m cable	
3200781553	5402	Replacement DO tip for 9552-20D and 9552-50D	
Accessorie	es		
Part No.	Model	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), 1.5 m	
3014030149	-	Printer paper, 20 rolls	
3014030150	-	Printer ink ribbon, 5pcs/pack	
3200779640	-	Electrode adapter	
3200779639	-	PC (USB) cable with free data acquisition software in USB flash drive to connect meter and computer, 1.5 m	
*Flactrodes sorr. C.	month warranty again	et manufacturing defects	

<sup>\*</sup>Electrodes carry 6-month warranty against manufacturing defects.



502-S USA pH Buffers Kit









X-51 Digital Simulator

X-52 Digital Simulator



Printer





PC (USB) cable (Meter to Computer)

Electrode Adapter







Replacement DO tip 5402

With over 60 years of engineering excellence, HORIBA's diverse range of water quality analyzers and electrodes are ideal for everyday laboratory needs 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 meters deliver the best solution for water quality analysis. Our LAQUA website features an online 'Selection Guide' to enable you to find the perfect LAQUA meter and electrode for your needs.



#### **Pocket Meters**

Analyzing water quality is simplified when using our LAQUAtwin range of meters. Designed to produce accurate and reliable results. Anyone, anywhere, at any time can measure samples easily with a LAQUAtwin meter. See just how good they are at our website.



#### **Electrodes**

Various electrodes to match any application. A wide range of products 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.





#### **Application Notes**

LAQUAtwin pocket meters offer quick and convenient alternative to analyze important parameters with high accuracy. Several application notes are available at (http://goo.gl/znwE6j) detailing the use of LAQUAtwin and the results achieved for the respective applications. Additional application notes will be added when available.



Distribuciones Industriales y Científicas S.L.

ciencia e innovación