

HORIBA
Scientific


BIOING

LAQUA



Water Quality Instruments

Since 1950

HORIBA – Pionering electro chemistry



1950

Dr. Masao Horiba pioneered and launched **Asia's first pH meter** in Kyoto, Japan. The pH meter was extremely well received by the market. Before he realized, Masao HORIBA was already famous as pH meters manufacturer.



1977

HORIBA has introduced, worldwide, the first pH meter with **LCD display**.



1980

The world's **first** instrument capable of measuring **pH at 0.001** resolution includes an integral computer with automatic calibration and a self-diagnostic function.



1987 - **First flat sensor**
Miniaturising a pH sensor paving the way for unique **ion selective** portable meters.



2003

World's first pH meter with **colour display**.



1993

World's first **wireless** pH meter.



Today

A complete line of instruments for the laboratory and field water testing.

2019

First digital multiparameter instrument with **Wi-Fi**.



Index

	Page
LAQUAtwin pocket meters	3 - 4
LAQUA 200 series economical portable meters	5 - 6
LAQUA 300 series portable meters with digital sensors	7 - 8
LAQUA U-50 series portable sonde type meters	9 - 10
LAQUA 1500 series basic bench top meters	11 - 12
LAQUA 2000 series research bench top meters	13 - 14
LAQUA D & F series high level touch screen bench top meters	15 - 16
pH and ORP electrodes	17
Conductivity cells	18
Ion Selective Electrodes	19
WQ-300 Digital Sensors	20
Calibration Solutions	21 - 22



Since the 50's, HORIBA has developed into a leading Japanese manufacturer of precision instruments for measurement and analysis.

Obtaining a prominent position in the development and production for the **automotive, semiconductor, scientific, medical, environmental** and **process** industry.

Working with 9.000 employees worldwide and a revenue close to € 2 billion, we thrive to achieve the best customer experience.

LAQUAtwin



Your lab in your pocket.

Employing the same test principle as laboratory electrodes, LAQUAtwin compact meters provide a reliable and accurate measurement. Select your meter that best suits your application from 13 colourful models.

Model	pH			CONDUCTIVITY & TDS			pH-33
	pH-11	pH-22	pH-33	EC-11	EC-22	EC-33	
Part Number	3999960122	3999960123	3999960124	39999601245	3999960126	3999960127	3999960128
Measurement Principle	Glass Electrode			2 Electrode Bipolar AC			
Min Sample Volume	0.1ml (0.05ml with Sampling Sheet B)			0.12ml			
Range	0.0 - 14.0pH	0.00 - 14.00pH		0 to 199 µS/cm 200 to 1999 µS/cm 2.00 to 19.99 mS/cm			0.0 to 19.99 mS/cm
Resolution	0.1 pH	0.01 pH 1 mV		20.00 to 199.9 mS/cm			0.1 mS/cm
Accuracy	±0.1 pH	±0.01 pH		±2% full scale (0 to 19.99 mS/cm)			±2%
Calibration Points	2	3	5	2	3	3	3
Temperature Display			*			*	

- Simple and easy to use
- 13 different instruments
- 9 parameters
 - pH, Conductivity, TDS, Salinity, Nitrate, Sodium, Potassium, Calcium and ionized Calcium
- Replaceable sensor
- Backlit display
- Unique sensor design – Flat ion selective and pH sensors
- Automatic temperature compensation
- Automatic calibration standard recognition
- IP67 waterproof
- 2 years warranty



SALINITY		SODIUM	POTASSIUM	NITRATE	CALCIUM	Ionized Calcium
Salt-11	Salt-22	Na-11	K-11	NO3-11	CA-11	CA-11C
999996 0128	3200689158	3200689159	3200689160	3200689162	3200689161	1300084982
Ion Selective Electrode						
0 to 100.0 g/L (ppt)	0.3ml 0.01 to 25%	2 to 9900 ppm 0.1 to 430 mmol/L	0.3ml (0.05ml with sampling sheet B) 4 to 9900 ppm 0.1 to 250 mmol/L 2 to 5000 kg/10a	6 to 9900 ppm 1.4 to 2200 ppm (mg/L) (NO3-N) 0.7 to 1100 kg/10a	4 to 9900 ppm 0.1 to 250 mmol/L	> 0.3ml 0.1 to 5.0 mmol/L
0.00 to 10.00%	by weight					
1 g/L / 0.01%	< 0.99%: 0.01% 1.0 to 9.9%: 0.1% > 10 : 1%	0 to 99 ppm: 1 ppm 100 to 990 ppm: 10 ppm 1000 to 9900 ppm: 100 ppm				0.1 mmol/L 0.01 mmol/L
2% full scale	± 10% of value	± 10% of actual value			± 20% of actual value	
2	2	2	2	2	2	2
0 to 50.0 °C / 0.1 °C						

LAQUA-200 series

pH	Conductivity	Salinity	Dissolved Oxygen
ORP	TDS	Resistivity	



- Rugged and simple
- 10 different instruments
- Single and dual channel input
- Internal memory (500 or 1000 places)
- Large 50 x 50 mm backlit display
- Stability indicator 😊
- Electrode quality indicator
- Calibration alarm
- Built in electrode holders
- Automatic temperature compensation
- Automatic calibration standard recognition
- Built in barometer
- Salinity compensation for DO
- Intuitive 9 key keypad
- IP67 waterproof
- 3 years warranty

Parameters, features and models

	pH / ORP	Conductivity	Dissolved Oxygen	Memory	PC / Printer communication	Time & Date / GLP
PH210	●			500		
PH220	●			1000	●	●
EC210		●		500		
EC220		●		1000	●	●
DO210			●	500		
DO220			●	1000	●	●
PC210	●	●		500		
PC220	●	●		1000	●	●
PD210	●		●	500		
PD220	●		●	1000	●	●

Specifications

	Range	Resolution	Accuracy	Calibration points
pH	-2.00 to 16.00 pH	0.01 pH	±0.01 pH	USA & NIST (Up to 5), DIN (Up to 6)
ORP	±2000 mV	< ±1000mV: 0.1mV ≥ ±1000mV: 1 mV	< ±1000mV: ±0.3mV ≥ ±1000mV: 0.3%	1
Dissolved Oxygen	0.0 to 20.00 mg/L 0.0 to 200.0%	0.01 mg/L, 0.1%	±0.1 mg/L	2
Conductivity	..µS/cm to 200.0 mS/cm (k=1.0)	0.05% full scale	±0.6% full scale, ±1.5% full scale > 18.0 mS/cm	Up to 4 (Auto) / Up to 5 (Manual)
TDS	..ppm to 100 ppt (TDS factor=0.5)	0.01 ppm (mg/L) 0.1 ppt (g/L)	±0.1% full scale	Up to 4 (Auto) / Up to 5 (Manual)
Salinity	0.0 to 100.0 ppt / 0.00 to 10.00 %	0.1 ppt / 0.01%	±0.2% full scale	1
Temperature	-30.0 to 130.0 °C / -22.0 to 266.0 °F	0.1 °C / °F	± 0.5 °C / ± 0.9 °F	1



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LAQUA-300 series

pH	Conductivity	Salinity	Dissolved Oxygen
ORP	TDS	Resistivity	Ion



- Advanced with digital sensors
- Single, dual or triple parameter display, measurement and calibration
- Choose any parameter in any combination
- 3 different instruments, over 100 combinations
- Replaceable sensor cartridge, save material and cost
- Optical dissolved oxygen sensor
- Large (70 x 52 mm) backlit color display
- Sensor stability indicator
- Sensor quality indicator
- Calibration alarm

- Automatic temperature compensation
- Automatic calibration standard recognition
- Large GLP compliant memory (10.000 places)
- Datalogging options
- Wireless data transfer
- USB for data transfer and software update
- Multilanguage options
- Battery and USB powered
- IP67 waterproof
- 3 years warranty



Instrument options:

	Measurement channels
WQ-310	Single channel
WQ-320	Dual channel
WQ-33	Triple channel

Specifications

	Range	Resolution	Accuracy	Calibration points
pH	-2.000 to 20.000 pH	0.01 / 0.001pH	±0.01 / ±0.005 pH	Up to 6
ORP	±2000 mV	<±1000.0mV: 0.1mV ≥1000.0mV: 1 mV	<±1000.0 mV: ±0.1 ≥1000.0 mV: ±1mV	1
Ion Selective	0 to 99900 mg/L, mmol/L	0.001 minimum, 3 significant digits	±0.1 mV	Up to 5
Dissolved Oxygen	0.00 to 20.00 mg/L 0.0 to 200.0%	0.01 mg/L, 0.1%	±0.2 mg/L, ±2 %	2
Conductivity	..µS/cm to 2000.0 mS/cm	up to 4 significant digits	±0.5% full scale, ±1.5% full scale > 20.0 mS/cm	Up to 4 (Auto) / Up to 5 (Manual)
TDS	0.01 mg/L to 200,000 mg/L	0.01 minimum, 4 significant digits	± 0.5% or ± 0.1 mg/L, whichever is greater	Up to 4 (Auto) / Up to 5 (Manual)
Salinity	0.00 to 80.00 ppt / 0.000 to 8.000 %	0.01 ppt, 0.001%	± 0.5% or ± 0.1 mg/L	1
Resistivity	0.1 to 200.0 MΩ/cm	up to 4 significant digits	±0.5% full scale, ±1.5% full scale > 20.0 mS/cm	1
Temperature	-30.0 to 130.0 °C / - 22.0 to 266.0 °F	0.1 °C / °F	± 0.5 °C / ± 0.9 °F	1



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LAQUA-U50 series

pH	Conductivity	Salinity	Dissolved Oxygen
ORP	TDS	Seawater	Turbidity




- Rugged outdoor design
- Measure and display 11 parameters simultaneously
- GPS module on selected items
- 2, 10 or 30 meter cable length
- Sonde type sensor
- One hand operation
- Large GLP compliant memory (10.000 sets)
- USB data transfer
- Datalogging
- Water depth
- Multilanguage



- Auto-calibration feature provides hassle free calibration of pH, dissolved oxygen, conductivity, turbidity and depth.
- Calibrate all parameters with one solution
- Large backlit display

Parameters and models



	U-51	U-52	U-52G	U-53	U-53G	U-54	U-54G
pH	•	•	•	•	•	•	•
ORP	•	•	•	•	•	•	•
Dissolved Oxygen	•	•	•	•	•	•	•
Conductivity	•	•	•	•	•	•	•
Salinity	•	•	•	•	•	•	•
TDS	•	•	•	•	•	•	•
Seawater specific gravity	•	•	•	•	•	•	•
Temperature	•	•	•	•	•	•	•
Turbidity LED 30°		•	•				
Turbidity LED 90°				•	•		
Turbidity Tungsten 90°						•	•
Water depth			•	•	•	•	•
GPS			•		•		•

Specifications

	Range	Resolution	Accuracy	Calibration points
pH	0.00 to 14.00 pH	0.01 pH	±0.01 pH	2
ORP	±2000 mV	1 mV	±15 mV	1
Dissolved Oxygen	0.00 to 50.00 mg/L	0.01 mg/L	±0.2 <20mg/L >±0.5	2
Conductivity	..µS/cm to 100mS /cm	up to 4 digits	±1% full scale	Up to 4
TDS	0 to 100 g/L	0.1% full scale	± 5 g/L	Conversion
Salinity	0.00 to 70.00 ppt	0.1 ppt	± 3 ppt	Conversion
Seawater specific gravity	0 σt to 50 σt	0.1 σt	±5 σt	Conversion
Turbidity LED 30°	0 to 800 NTU	0.1 NTU	±5% or ±1 NTU	Up to 4
Turbidity LED 90°	0 to 1000 NTU	0.01 NTU	5% or 1 NTU	Up to 4
Turbidity Tungsten 90°	0 to 1000 NTU	0.01 NTU	<10 NTU: ±0.5% >10NTU:3% or 1 NTU	Up to 4
Water depth	0 to 30 m	0.05 m	±0.3 m	1
Temperature	-10°C to 55°C	0.01 °C	± 0.3 °C	1

LAQUA-1500 series

pH	Conductivity	Salinity
ORP	TDS	Resistivity

- Great value for money: no fancy bells and whistles which sounds good but are rarely used
- Ideal for student training and routine applications.
- Choice of 3 instruments
- Large display, 85 x 104 mm
- Small footprint, 160 x 150 mm
- Electrode quality indicator
- Stability indicator
- PC and printer connection
- Data logging options
- Large memory for 1000 data sets
- Electrode arm can be mounted left and right
- Electrode holder can move up and down and turns 360°
- Easy to operate 9 button keypad



Specifications

	Range	Resolution	Accuracy	Calibration points
pH	-2.00 to 16.00 pH	0.01 pH	±0.01 pH	Up to 6
ORP	±2000 mV	0.1<±1000mV>1	±0.3< ±1000mV>0.3%	1
Conductivity	..µS/cm to 200.0 mS/cm (k=1.0)	0.01	±0.6% full scale, ±1.5% full scale > 18.0 mS/cm	Up to 5
TDS	..ppm to 100 ppt	0.01 / 0.1 / 1 ppm; 0.01 / 0.1 ppt	±0.1% full scale	Conversion
Salinity	0.0 to 100.0 ppt / 0.00 to 10.00 %	0.1 ppt / 0.01%	±0.2% full scale	1
Resistivity	0.000 Ω/cm to 20.0 MΩ/cm	0.5% full scale	±0.6% full scale, ±1.5% full scale > 18.0MΩ/cm	Conversion
Temperature	-30.0 to 130.0 °C /-22.0 to 266.0 °F	0.1 °C / °F	± 0.5 °C / ± 0.9 °F	1

Parameters and models

	PH1500	EC1500	PC1500
pH	•		•
ORP	•		•
Conductivity		•	•
TDS		•	•
Salinity		•	•
Resistivity		•	•
Temperature	•	•	•

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LAQUA-2000 series

pH	Conductivity	Salinity	
ORP	TDS	Resistivity	Ion

- Ideal for the most demanding applications
- Choice of 4 instruments
- Large backlit display, 85 x 104 mm
- Small footprint, 160 x 150 mm
- High resolution and accuracy
- Measure ions in $\mu\text{g/L}$, mg/L , g/L , ppm, ppt, mmol/L or mEq/L
- Electrode quality indicator
- Calibration alarm
- Stability indicator with sound
- PC and printer connection
- Data logging options
- Large GLP compliant memory for 2000 data sets
- On screen time and date
- Electrode arm can be mounted left and right
- Electrode holder can move up and down and turns 360°
- Easy to operate 11 button keypad
- Password protection
- Upgradeable internal software
- Easy to clean flat surface
- IP54 dust proof
- 3 year warranty



Specifications

	Range	Resolution	Accuracy	Calibration points
pH	-2.00 to 16.00 pH	0.01 pH	±0.01 pH	Up to 6
ORP	±2000 mV	0.1<±1000mV>1	±0.3< ±1000mV>0.3%	1
Conductivity	..µS/cm to 200.0 mS/cm (k=1.0)	0.01	±0.6% full scale, ±1.5% full scale > 18.0 mS/cm	Up to 5
TDS	..ppm to 100 ppt	0.01 / 0.1 / 1 ppm; 0.01 / 0.1 ppt	±0.1% full scale	Conversion
Salinity	0.0 to 100.0 ppt / 0.00 to 10.00 %	0.1 ppt / 0.01%	±0.2% full scale	1
Resistivity	0.000 Ω/cm to 20.0 MΩ/cm	0.5% full scale	±0.6% full scale, ±1.5% full scale > 18.0MΩ/cm	Conversion
Temperature	-30.0 to 130.0 °C / -22.0 to 266.0 °F	0.1 °C / °F	± 0.5 °C / ± 0.9 °F	1

Parameters and models

	PH2000	EC2000	ION2000	PC2000
pH	●		●	●
ORP	●		●	●
ION			●	●
Conductivity		●		●
TDS		●		●
Salinity		●		●
Resistivity		●		●
Temperature	●	●	●	●



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LAQUA-D&F series

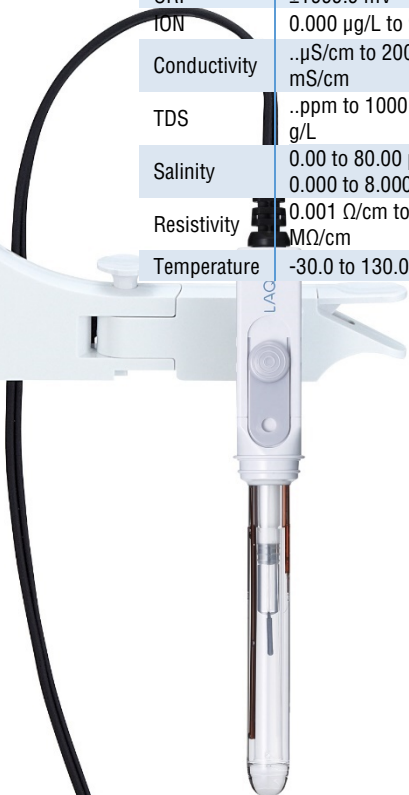
pH	Conductivity	Salinity	
ORP	TDS	Resistivity	Ion

- Advanced research bench top meter series
- Choice of 4 instruments
- Large color touch screen display
- High resolution and accuracy
- 21 CFR part 11 available
- Pre-programmed ion selective curves
- Electrode quality indicator
- Calibration alarm
- Stability indicator with sound
- PC and printer connection
- Data logging options
- Large GLP compliant memory for 2000 data sets
- On screen time and date
- Electrode holder can move up and down and turns 360°
- Password protection
- Upgradeable internal software
- Easy to clean flat surface
- IP54 dust proof
- 3 year warranty



Specifications

	Range	Resolution	Accuracy	Calibration points
pH	-2.000 to 20.000 pH	0.001 pH	±0.003 pH	Up to 5
ORP	±1999.9 mV	0.1	±0.2	1
ION	0.000 µg/L to 9999 g/L	4 digits	± 0.3% full scale	Up to 5
Conductivity	..µS/cm to 2000 mS/cm	0.05% full scale	±0.6% full scale, ±1.5% full scale > 18.0 mS/cm	Up to 4
TDS	..ppm to 1000 ppt or g/L	0.01 mg/L	±0.1% full scale	Conversion
Salinity	0.00 to 80.00 ppt / 0.000 to 8.000 %	0.01 ppt / 0.001%	±0.2% full scale	1
Resistivity	0.001 Ω/cm to 1.999 MΩ/cm	0.05% full scale	±0.6% full scale, ±1.5% full scale > 1.80MΩ/cm	Conversion
Temperature	-30.0 to 130.0 °C	0.1 °C / °F	± 0.4 °C	1



Parameters and models

	F-72	F-73	F-74	DS-72
Channels	Single	DUAL	DUAL	Single
pH	●	●	●	
ORP	●	●	●	
ION	●	●	●	
Conductivity			●	●
TDS			●	●
Salinity			●	●
Resistivity			●	●
Temperature	●	●	●	●



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pH and ORP electrodes

General purpose sealed pH electrode

Model / Part Number	9625-10D / 3200360505
Description	For measurement of tap water and drinking water.
Junction	Ceramic liquid junction
Temperature Range	0 to 100 °C
Dimensions	150 x ø16 mm, 1 meter cable with BNC
Body Material	Plastic body

Extra strong, refillable pH electrode

Model / Part Number	9615S-10D / 3200585428
Description	Perfect for preparing pH buffers and other aqueous test solutions.
Junction	Ceramic liquid junction
Temperature Range	0 to 100 °C
Dimensions	198 x ø12 mm, 1 meter cable with BNC
Material	Extra strong glass

Sleeve, refillable pH electrode

Model / Part Number	9681S-10D / 3200585463
Description	High viscous samples, samples containing non-aqueous solvents.
Junction	Moveable sleeve liquid junction
Temperature Range	0 to 60 °C
Dimensions	151 x 12mm, 1 meter cable with BNC
Body Material	Extra strong glass

Micro, refillable pH electrode

Model / Part Number	9618S-10D / 3200585447
Description	Measure samples as small as 50µL
Junction	Ceramic liquid junction
Temperature Range	0 to 60 °C
Dimensions	151 x 3 mm, 1 meter cable with BNC
Body Material	Extra strong glass

Long, refillable pH electrode

Model / Part Number	9680S-10D / 3200585428
Description	The long, thin body is perfect for large containers and test tubes.
Junction	Ceramic liquid junction
Temperature Range	0 to 100 °C
Dimensions	251 x 8 mm, 1 meter cable with BNC
Body Material	Extra strong glass

Flat surface, refillable pH electrode

Model / Part Number	6261-10C / 3014081807
Description	Perfect for measuring samples in shallow containers or surface.
Junction	Sleeve liquid junction
Temperature Range	0 to 50 °C
Dimensions	150 x 12 mm, 1 meter cable with BNC
Body Material	Standard glass

Glass ORP electrode

Model / Part Number	9300-10D / 3014046710
Description	Platinum / Glass, flat tip ORP electrode
Temperature Range	0 to 60 °C
Dimensions	150 x 12 mm, 1 meter cable with BNC
Body Material	Glass body

Plastic ORP electrode

Model / Part Number	9301-10D / 3200922105
Description	Platinum / Glass, flat tip ORP electrode
Temperature Range	0 to 60 °C
Dimensions	150 x 12 mm, 1 meter cable with BNC
Body Material	Polycarbonate Plastic body



Conductivity electrode cells

Low Conductivity – Pure and Ultra Pure water

Model	9371-10
Part Number	3200878882
Cell constant	1.00×0.1 cm ⁻¹ (1.00×10 m ⁻¹)
Conductivity Range	0.01 μS/cm to 500 μS/cm (1 μS/m to 50 mS/m)
Temperature Range	0 to 70 °C (Up to 100 °C for the sensor cartridge only)
Temperature Sensor	Built in
Dimensions	160 x ø16 mm, 1 meter cable with BNC
Body Material	SS-316 Stainless Steel

General Purpose

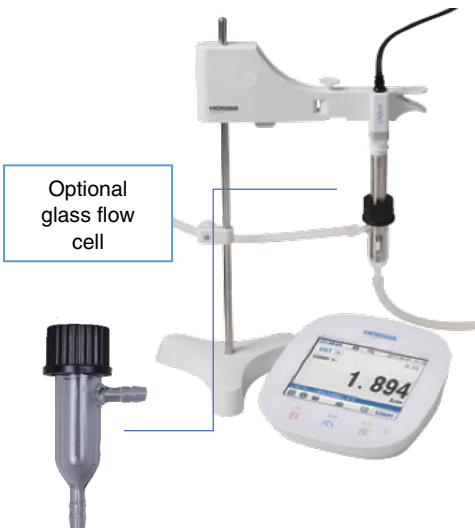
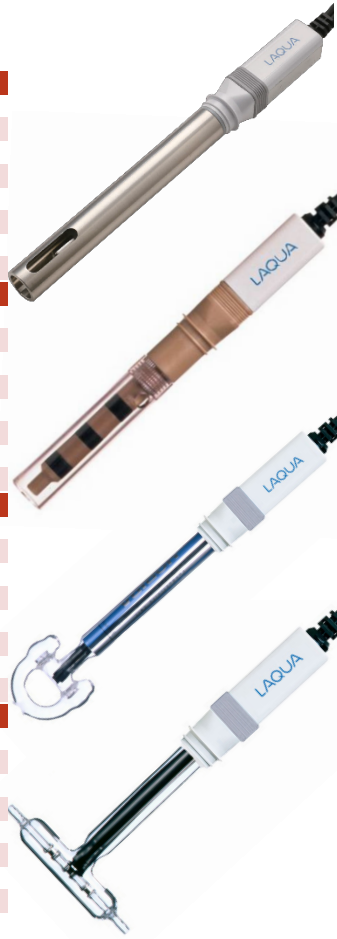
Model	9382-10D
Part Number	3014046709
Cell constant	K=1.0 cm ⁻¹
Conductivity Range	1μS/cm-100mS/cm
Temperature Range	0 to 80 °C
Temperature Sensor	Built in
Dimensions	150 x ø16 mm, 1 meter cable with BNC
Material	Plastic body with Titanium coated with platinum black cell

High Conductivity

Model	3553-10D
Part Number	3014081714
Cell constant	K=10.0 cm ⁻¹
Conductivity Range	10 μS/cm - 1 S/cm
Temperature Range	0 to 60 °C
Temperature Sensor	Built in
Dimensions	175 x 28mm, 1 meter cable with BNC
Body Material	Glass body with Platinum / Platinum Black cell

Small Volume - 0.25 ml

Model	3574-10C
Part Number	3014082592
Cell constant	
Conductivity Range	10 μS/cm - 100 mS/cm
Temperature Range	0 to 60 °C
Temperature Sensor	None
Dimensions	136 x 66 mm
Body Material	Glass body with Platinum / Platinum Black cell



Flow Cell

Model	300-2C-C
Part Number	3200844642
Applicable tube	Soft tube
Inner tube diameter	5 to 6 mm
Temperature Range	0 to 100 °C
Dimensions	101 x ø33 mm
Body Material	Glass

Ion Selective Combination Electrodes

Ammonia ion (NH₃) electrode	
Model / Part Number	5002S-10C / 3200698386
Measurement Range	0.01 - 18,000 mg/L NH ₄ ⁺ (5 x 10 ⁻⁷ to 1 mol/L NH ₄ ⁺)
Included consumables	3 membrane caps, 2 x 50ml standard solution, 1 x 50 ml filling solution
Temperature Range	0 to 50 °C
Dimensions	150 x ø15 mm, 1 meter cable with BNC
Calcium ion (Ca²⁺) electrode	
Model / Part Number	6583S-10C / 3200697410
Measurement Range	0.4 - 40,080 mg/L Ca ²⁺ (10 ⁻⁵ to 1 mol/L Ca ²⁺)
Included consumables	2 electrode tips, 2 x 50ml standard solution, 1 x 50ml filling solution 1 x 50ml ISA
Temperature Range	0 to 50 °C
Dimensions	150 x ø15 mm, 1 meter cable with BNC
Chloride ion (Cl⁻) electrode	
Model / Part Number	6560S-10C / 3200697407
Measurement Range	0.35 - 35,000 mg/L Cl ⁻ (10 ⁻⁵ to 1 mol/L Cl ⁻)
Included consumables	electrode tip, 2 x 50ml standard solution
Temperature Range	0 to 50 °C
Dimensions	150 x ø16 mm, 1 meter cable with BNC
Fluoride ion (F⁻) electrode	
Model / Part Number	6561S-10C / 3200693774
Measurement Range	0.02 - 19,000 mg/L F ⁻ (10 ⁻⁶ to 1 mol/L F ⁻)
Included consumables	electrode tip, 2 x 50ml standard solution, 1 x 50ml filling solution, 1 x 50ml ISA
Temperature Range	0 to 50 °C
Dimensions	150 x ø16 mm, 1 meter cable with BNC
Nitrate ion (NO₃⁻) electrode	
Model / Part Number	6581S-10C / 3200697408
Measurement Range	0.62 - 62,000 mg/L NO ₃ ⁻ (10 ⁻⁵ to 1 mol/L NO ₃ ⁻)
Included consumables	2 x electrode tip, 2 x 50ml standard solution, 1 x 50ml filling solution, 1 x 50ml ISA
Temperature Range	0 to 50 °C
Dimensions	150 x ø15 mm, 1 meter cable with BNC
Potassium ion (K⁺) electrode	
Model / Part Number	6582S-10C / 3200697409
Measurement Range	0.39 - 39,000 mg/L K ⁺ (10 ⁻⁵ to 1 mol/L K ⁺)
Included consumables	2 x electrode tip, 2 x 50ml standard solution, 1 x 50ml filling solution, 1 x 50ml ISA
Temperature Range	0 to 50 °C
Dimensions	150 x ø15 mm, 1 meter cable with BNC



NH₃ electrode membrane caps Part number 3200705774



F⁻ electrode tip - 7661S Part number 3200693605



Ca²⁺ electrode tip - 7683S Part number 3200697414



NO₃⁻ electrode tip - 7683S Part number 3200697412



Cl⁻ electrode tip - 7660S Part number 3200697411



K⁺ electrode tip - 7682S Part number 3200697413

WQ-300 series sensors



pH Sensor Cartridge - General purpose sealed pH electrode	
Model / Part Number	300-P-C / 3200786363
Description	For measurement of tap water and drinking water.
Junction	Porous sintered polyethylene
Temperature Range	0 to 80 °C
Dimensions	110 x ø16 mm
Body Material	Polycarbonate, glass bulb



Low Conductivity Sensor Cartridge - Pure and Ultra Pure water – 2 Cell electrode	
Model / Part Number	300-2C-C / 3200820579
Cell constant	1.00x0.1 cm ⁻¹ (1.00x10 m ⁻¹)
Conductivity Range	0.01 µS/cm to 500 µS/cm (1 µS/m to 50 mS/m)
Temperature Range	0 to 100 °C
Temperature Sensor	Built in
Dimensions	110 x ø16 mm
Body Material	SS-316 Stainless Steel



Conductivity Sensor Cartridge - Normal water – 4 Cell electrode	
Model / Part Number	300-4C-C / 3200780928
Cell constant	1.00x 0.172 cm ⁻¹
Conductivity Range	10 µS/cm to 2000 mS/cm
Temperature Range	0 to 100 °C
Temperature Sensor	Built in
Dimensions	110 x ø16 mm
Body Material	Epoxy, carbon



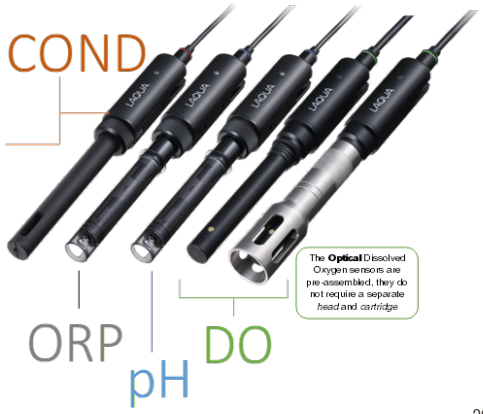
ORP Sensor Cartridge	
Model / Part Number	300-O-C / 3200922104
ORP Range	-2000 to + 2000 mV
Electrode type	Platinum / Glass
Temperature Range	0 to 80 °C
Temperature Sensor	Built in
Dimensions	110 x ø16 mm
Body Material	Polycarbonate Plastic body



Dissolved Oxygen Sensor	
Model / Part Number	300-D-2 / 3200780940 (2m cable) 300-D-5 / 3200780942 (5m cable)
Description	Optical dissolved oxygen sensor with cable
Range	0.00 to 20.00 mg/L / 0.0 to 200.0 %
Temperature Range	-30.0 to 130.0 °C
Dimensions	200 x 16 mm (excluding sensor guard)
Features	Built in barometer
Body Material	ABS / Polycarbonate

Smart Sensor Heads

Part No.	Model	Parameter	Cable Length
3200812206	300PH-2	pH	2 meter
3200812207	300PH-5	pH	5 meter
3200812204	300-O-2	ORP	2 meter
3200923561	300-O-5	ORP	5 meter
3200784468	300-C-2	EC/TDS/RES/SAL	2 meter
3200812202	300-C-5	EC/TDS/RES/SAL	5 meter
3200812203	300-I-2	Ions	2 meter
3200923560	300-I-5	Ions	5 meter



The **Optical** Dissolved Oxygen sensors are pre-assembled, they do not require a separate head and cartridge

Smart Sensor Cartridges / Systems

Part No.	Model	Parameter	Note
3200786363	300-P-C	pH	Plastic body
3200822104	300-O-C	ORP	Plastic body
3200780928	300-4-C-C	EC/TDS/RES/SAL	4 Cell
3200820579	300-2C-C	EC/TDS/RES/SAL	2 Cell
3200780940	300-D-2	Optical DO	2-meter cable
3200780942	300-D-5	Optical DO	5-meter cable

Premium LAQUA Calibration Solutions

pH Buffer Solutions		
Part No.	Model	
1300045600	250-PH-4	pH 4,01, 250 ml *, NIST Traceable with certificate, accuracy $\pm 0,01$ at 25°C
1300045607	250-PH-7	pH 7,00, 250 ml *, NIST Traceable with certificate, accuracy $\pm 0,01$ at 25°C
1300045604	250-PH-10	pH 10,01, 250 ml *, NIST Traceable with certificate, accuracy $\pm 0,02$ at 25°C
1300045602	500-PH-4	pH 4,01, 500 ml *, NIST Traceable with certificate, accuracy $\pm 0,01$ at 25°C
1300045608	500-PH-7	pH 7,00, 500 ml *, NIST Traceable with certificate, accuracy $\pm 0,01$ at 25°C
1300045605	500-PH-10	pH 10,01, 500 ml *, NIST Traceable with certificate, accuracy $\pm 0,02$ at 25°C
1300045599	1000-PH-4	pH 4,01, 1 ltr *, NIST Traceable with certificate, accuracy $\pm 0,01$ at 25°C
1300045606	1000-PH-7	pH 7,00, 1 ltr *, NIST Traceable with certificate, accuracy $\pm 0,01$ at 25°C
1300045603	1000-PH-10	pH 10,01, 1 ltr *, NIST Traceable with certificate, accuracy $\pm 0,02$ at 25°C



ORP / Redox Standard Solutions		
1300045637	250-ORP-200	200 mV Redox/ORP solution, 250 ml round bottle, accuracy ± 5 mV / 25°C
1300045636	250-ORP-475	475 mV Redox/ORP solution, accuracy ± 5 mV / 25°C, 250 ml *
1300045635	500-ORP-475	475 mV Redox/ORP solution, 500 ml *, accuracy ± 5 mV at 25°C
1300045634	500-ORP-650	650 mV Redox/ORP solution, 500 ml *, accuracy ± 5 mV at 25°C



Conductivity Standard Solutions		
1300045609	250-EC-84	84 uS/cm, 250 ml * with certificate, accuracy $\pm 1\%$, KCl
1300045632	500-EC-84	84 uS/cm, 500 ml * with certificate, accuracy $\pm 1\%$, KCl
1300045633	1000-EC-84	84 uS/cm, 1 ltr * with certificate, accuracy $\pm 1\%$, KCl
1300051602	250-EC-147	147 uS/cm, 250 ml * with certificate, accuracy $\pm 1\%$, KCl
1300045595	250-EC-1413	1,413 uS/cm, 250 ml * with certificate, accuracy $\pm 1\%$, (25°C)=0.01M KCl
1300045638	500-EC-1413	1,413 uS/cm, 500 ml * with certificate, accuracy $\pm 1\%$, (25°C)=0.01M KCl
1300045591	1000-EC-1413	1,413 uS/cm, 1 ltr * with certificate, accuracy $\pm 1\%$, (25°C)=0.01M KCl
1300045590	250-EC-1288	12,88 mS/cm, 250 ml * with certificate, accuracy $\pm 1\%$, (25°C)=0.1M KCl
1300045639	500-EC-1288	12,88 mS/cm, 500 ml * with certificate, accuracy $\pm 1\%$, (25°C)=0.1M KCl
1300045588	1000-EC-1288	12,88 mS/cm, 1 ltr * with certificate, accuracy $\pm 1\%$, (25°C)=0.1M KCl
1300045630	250-EC-1118	111,8 mS/cm, 250 ml * with certificate, accuracy $\pm 1\%$ (25°C)= 1M KCl
1300045660	500-EC-1118	111,8 mS/cm, 500 ml * with certificate, accuracy $\pm 1\%$ (25°C)= 1M KCl
1300045631	1000-EC-1118	111,8 mS/cm, 1 ltr * with certificate, accuracy $\pm 1\%$ (25°C)= 1M KCl



pH Electrode Cleaning Solutions		
3014028653	220	Cleaner for pH Electrode (50mlx2pcs) for removing inorganic sample residues from glass electrodes and cleaning liquid junctions
3200530494	230	Cleaner for pH Sensor (400ml) for removing inorganic and organic sample residues from the responsive glass membrane only
3200366771	250	Cleaner for pH Sensor (400ml) for removing protein containing sample residues from glass electrodes and cleaning liquid junctions

Easy 4-step calibration with no contamination of the solution!



Step 1:
Prepare the electrode and open the standard solution bottle.



Step 2:
Gently squeeze the bottle to fill the calibration chamber with standard solution.



Step 3:
Insert the electrode into the calibration chamber of the standard solution bottle.



Step 4:
Dispose off the used solution from the calibration chamber.

Ion Solutions & Accessories

Ion Standard Solutions

Part No.	Model	Description
3200697171	500-NH4-SH	1000 mg/L Ammonium Ion Standard Solution, 500ml
3200697172	500-NH4-SL	100 mg/L Ammonium Ion Standard Solution, 500ml
3200697175	500-CA-SH	1000 mg/L Calcium Ion Standard Solution, 500ml
3200697176	500-CA-SL	100 mg/L Calcium Ion Standard Solution, 500ml
3200697167	500-CL-SH	1000 mg/L Chloride Ion Standard Solution, 500ml
3200697168	500-CL-SL	100 mg/L Chloride Ion Standard Solution, 500ml
3200697163	500-F-SH	1000 mg/L Fluoride Ion Standard Solution, 500ml
3200697164	500-F-SL	100 mg/L Fluoride Ion Standard Solution, 500ml
3200697179	500-NO3-SH	1000 mg/L Nitrate Ion Standard Solution, 500ml
3200697180	500-NO3-SL	100 mg/L Nitrate Ion Standard Solution, 500ml
3200697183	500-K-SH	1000 mg/L Potassium Ion Standard Solution, 500ml
3200697184	500-K-SL	100 mg/L Potassium Ion Standard Solution, 500ml

Ionic Strength Adjustors

Part No.	Model	Description
3200697178	500-CA-ISA	Calcium Ionic Strength Adjustor, 500ml
3200697170	500-CL-ISA	Chloride Ionic Strength Adjustor, 500ml
3200697166	500-F-TISAB	Fluoride Ionic Strength Adjustor, 500ml
3200697182	500-NO3-ISA	Nitrate Ionic Strength Adjustor, 500ml
3200697186	500-K-ISA	Potassium Ionic Strength Adjustor, 500ml

ISE Electrode Filling Solutions

Part No.	Model	Description
3200697173	500-NH3-IFS	Ammonia Electrode Filling Solution, 500ml
3200697177	500-CA-IFS	Calcium Electrode Filling Solution, 500ml
3200697169	500-CL-IFS	Chloride Electrode Filling Solution, 500ml
3200697165	500-F-IFS	Fluoride Electrode Filling Solution, 500ml
3200697181	500-NO3-IFS	Nitrate Electrode Filling Solution, 500ml
3200697185	500-K-IFS	Potassium Electrode Filling Solution, 500ml

Accessories

Part No.	Description
3200861022	Integrated Electrode Stand for LAQUA 2000 Series Bench Meters
3014028368	X-51 pH/mV/Ion/DO/Temperature Digital Simulator
3014028370	X-52 Conductivity/Temperature Digital Simulator
3200869791	Universal power adaptor
3014030147	Printer for GLP / GMP compliance, 230V EU version, plain paper included (printer cable is sold separately)
3200779639	PC Cable (1.5m phono to USB cable for connecting meter to PC)*
3200779638	Printer Cable (1.5m phono to 25-pin D-sub cable for connecting meter to printer)
3014030149	Printer Paper, 20 rolls
3014030150	Printer Ink Ribbon, 5pcs/pack



3200779638



3200779639





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.



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 instruments, we are able to meet your needs.



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 the smallest samples. Designed to produce accurate and reliable results. Use the LAQUATwin 4M carrying case to conveniently store and transport up to 7 meters, a true lab on the go.



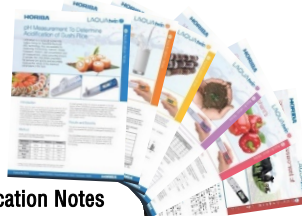
Electrodes

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 samples.



Solutions

A complete range of high quality calibration, buffer, filling and cleaning solutions is available for pH, conductivity, ORP and ion selective measurements. Free of charge Certificates of Analysis are available on selected items.



Application Notes

LAQUATwin pocket meters offer a 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 selected items.



YouTube



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