ABQINDUSTRIAL
PRECISION. RELIABILITY. QUALITY.

Distributed by: ABQ Industrial LP USA
Tel: +1 (281) 516-9292 / (888) 275-5772 **eFax:** +1 (866) 234-0451
Web: https://www.abqindustrial.net **E-mail:** info@abqindustrial.net

HORIBA
Scientific

ISO9001 JQA-IQ298 IMS HORIBA Group is ISO14001 JQA-E-90039 JQA-OH0068 OHSAS18001

WATER QUALITY

ANALYZERS

- pH
- mV(ORP)
- ION
- Conductivity
- DO
- Resistivity
- Salinity
- TDS

SENSOR TECHNOLOGY

ELECTRODE LINE UP

HORIBA popular ToupH electrode is now even tougher and responds faster

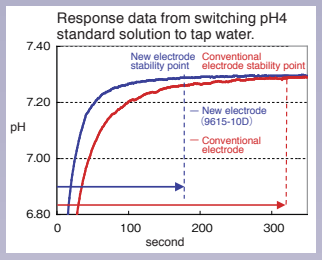
Enhanced stability and minimized drift

Integrating two new technologies for faster response times and optimal performance

01 New Technology

pH fast response glass membrane (Patent pending)

The membrane contains HORIBA's unique combination of rare earth metals to improve response time by twofold and to increase durability against chemical substances.



02 New Technology

Reference electrode with increased stability (Patent pending)

Covering the internal electrode with a cation-conductive hollow fiber membrane, liquid junction clogging by silver ions and silver complex ions is reduced to 1/1000 of the conventional technology. Furthermore, maintained internal solution concentration ensures a stable standard electrical potential.

ToupH electrodes are now even stronger

HORIBA's glass membrane molding technology achieves strengths more than 10 times the Japanese Industrial Standards (strength tests).

New dome-shaped construction boosts strength in all directions !

NEW pH

NEW Pb Free water proof

NEW Pb Free water proof

STANDARD ToupH
9615-10D

SLEEVE ToupH
9681-10D

General laboratory application

Buffer adjustment, general measurement

High viscosity application

Non-aqueous water, protein sample, food, and drinks

ToupH

pH (3-in-1)

Plastic Electrode
9625-10D

Sleeve
6367-10D

For Food Analysis
6252-10D

pH (Combination)

Standard
6066-10C

For Extra-Thin Test Tubes
6069-10C

Needle Type
6251-10C

Flat Type
6261-10C

ORP

Metalic Electrode
Platinum
3-in-1 Type
9300-10D

Temperature

Temperature Electrode
4163-10T

Conductivity

Immersion Type
3551-10D

Immersion Type
3552-10D

Immersion Type
3553-10D

Immersion Type
9382-10D

Flow Type
3561-10D

Flow Type
3562-10D

Flow Type
3573-10C

Flow Type
3574-10C

Dissolved Oxygen

Field Use
9551-20D
(2 m Cable)

Field Use
9551-100D
(10 m Cable)

Laboratory Use
9520-10D

NEW water proof

NEW Pb Free water proof

NEW water proof

water proof

MICRO ToupH
9618-10D

Precious, trace amount sample
Direct measurement from micro tubes, only 50µL of sample required

LONG ToupH
9680-10D

For large containers and long test tubes
283 mm length & 8 mm diameter

FLAT ISFET
0040-10D

Surface of solid samples

Gel-like materials such as agar medium, foods such as meat, cloth and paper surface

NEEDLE ISFET
0030-10D

Inside solid samples

Measurement inside the solid sample such as fruits, vegetables and bread

ISFET

Not just "unbreakable" . New flat sensor innovations allow the measurement of trace sample droplets or the measurement of solid sample surface.

ISFET

What is an ISFET (semiconductor sensor) ?

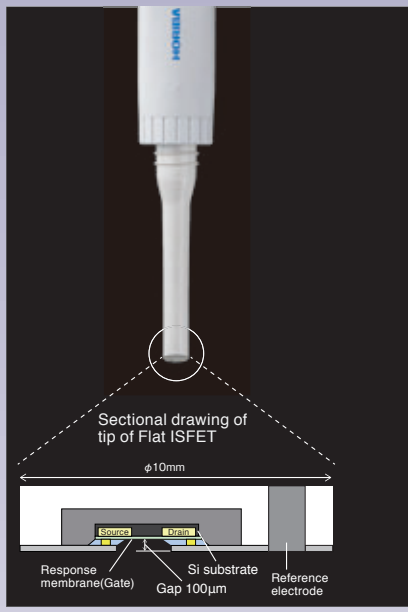
ISFET is the abbreviation of Ion Sensitive Field Effect Transistor. The response membrane is equipped with semiconductor based sensor.

Special features of the ISFET

1. Will not crack or break like conventional glass electrodes
2. The sensor is flat and very small in size, enabling the measurement of extremely small samples
3. Easy handling and maintenance - simply clean with a toothbrush
4. Can be stored dry

The flat electrode has less than a 100µm distance between the housing and the sensor

The unique structure enables to measure miniscule amount of moisture on the surface of solid objects and prevents bubbles from trapping on the sensor when measuring samples in a beaker.



Effects of static electricity is reduced

The combination of HORIBA's unique semiconductor device construction and improved static protection circuit means that the effects of static electricity, once the Achilles heel of semiconductor sensors, are greatly reduced.

ION

Cyanide Ion Electrode 8001-10C — CN^-

Chloride Ion Electrode (Combination Type) 6560-10C — Cl^-

Chloride Ion Electrode 8002-10C — Cl^-

Sulfide Ion Electrode 8003-10C — S^{2-}

Iodide Ion Electrode 8004-10C — I^-

Bromide Ion Electrode 8005-10C — Br^-

Copper Ion Electrode 8006-10C — Cu^{2+}

Cadmium Ion Electrode 8007-10C — Cd^{2+}

Lead Ion Electrode 8008-10C — Pb^{2+}

Thiocyanate Ion Electrode 8009-10C — SCN^-

Fluoride Ion Electrode (Combination Type) 6561-10C — F^-

Fluoride Ion Electrode 8010-10C — F^-

Silver Ion Electrode 8011-10C — Ag^+

Ammonia Electrode (Combination Type) 5002A-10C — NH_3

Sodium Ion Electrode 1512A-10C — Na^+

Nitrate Ion Electrode (Combination Type) 6581-10C — NO_3^-

Nitrate Ion Electrode 8201-10C — NO_3^-

Potassium Ion Electrode (Combination Type) 6582-10C — K^+

Potassium Ion Electrode 8202-10C — K^+

Calcium Ion Electrode (Combination Type) 6583-10C — Ca^{2+}

Calcium Ion Electrode 8203-10C — Ca^{2+}

LABORATORY

pH
mV(ORP)
ION
Conductivity
Resistivity
Salinity
TDS

LAQUA

F-70 Series
DS-70 Series

Intuitive and very easy to use touch panel operation

Simply slide your finger across the screen to switch displays

2-channel can be displayed simultaneously

Color LCD display

F-74

CH.1 pH ORP ION
CH.2 COND RESI SAL TDS

F-73

CH.1 pH ORP ION
CH.2 pH ORP ION

F-72

CH.1 pH ORP ION

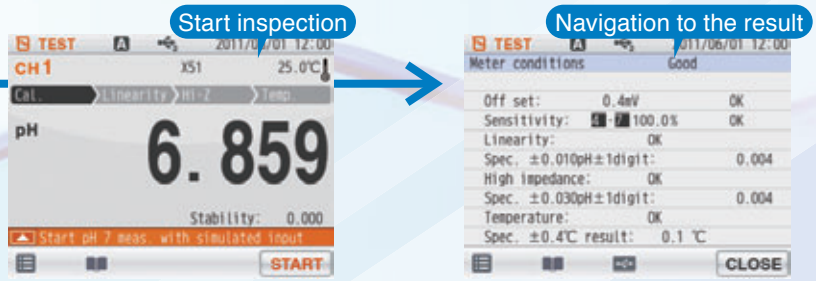
DS-72

COND RESI SAL TDS

Full support for on-screen settings confirmation, maintenance information and troubleshooting tips guide you through trouble free operation

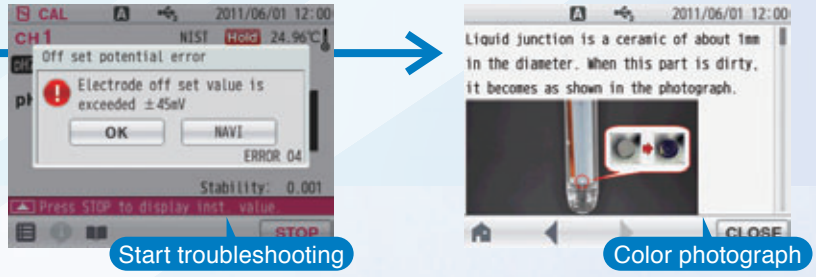
Inspection Navigation

Easy navigation for main unit and electrode inspections.
Various industrial standards (JIS, USP, EP, JP, CP) are also supported.



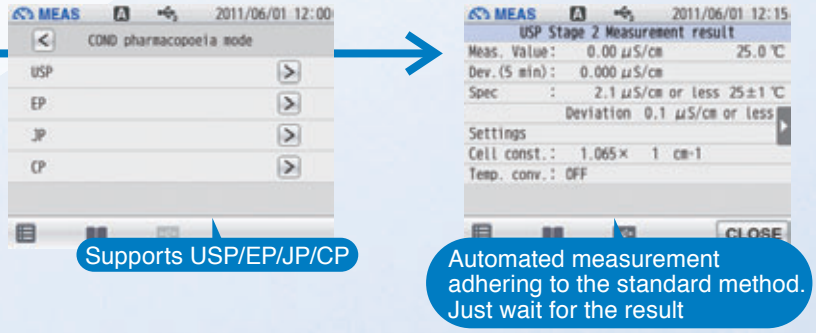
Troubleshooting Navigation

On-screen reliable support for a resolution when a problem occurs during calibration or sample measurements. A user's guide is incorporated in the software to access if one experiences any operation difficulties.



Application Functions

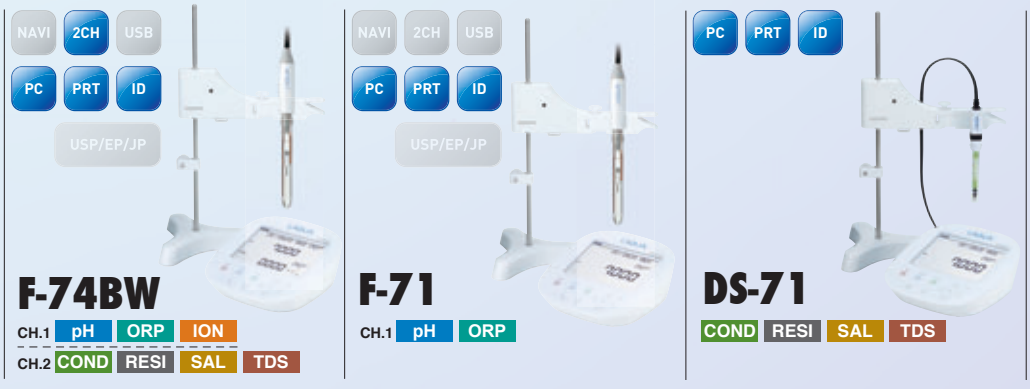
Various industry standard methods are supported from the measurement to result output.
Conductivity measurement for various country pharmaceutical pure water guidelines are also supported.



Full-Range of Functions for Validation and Usability

- Periodic inspection mode: JIS/Pharmacopeias/Digital Simulator (F-72/F-73/F-74)
- Full support for various country pharmaceutical pure water guidelines (USP/EP/JP/CP) (F-74/DS-72)
- Customizable auto hold function for calibration and measurement (F-72/F-73/F-74/DS-72)
- Simultaneous connection to a GLP/GMP compatible printer and PC
- Digital memory: Maximum 2,000 sets of measurement data can be recorded (F-71/F-74BW/DS-71:999)
- USB PC Communication *(All models) and USB memory (F-72/F-73/F-74/DS-72)
- Multi-language support (Japanese, English, Chinese, Korean) (F-72/F-73/F-74/DS-72)
- FDA21CFR Part 11 (Please ask for quotation)

Custom LCD display



Option

Printer
(For GLP/GMP compliance)

Printer Cable
Part No. 3014030148
(9096003800)

Digital Simulator
X-51(pH,ORP,ION,DO,TEMP)
X-52(COND,TEMP)

NAVI Navigation function
2CH 2-channel measurement
USB USB flash drive compatible
PC PC connection※ compatible (USB)
PRT Printer output compatible (printer sold separately)
ID Security function
USP/EP/JP Conductivity measurements stipulated under various countries'

※Data storage software availiable as a free download for registered users.

Economical meter for pH and temperature

D-51

pH

Multi-parameter for pH/temperature/ORP with PC/printer output capability.

D-52

pH ORP

• RS-232C output (PC/Printer)

Multi-parameter for pH/temperature/ORP/ION with PC/printer output capability

D-53

pH ORP ION

• RS-232C output (PC/Printer)

FIELD

Navi

D-50 Series
ES-51
OM-51

pH

mV(ORP)

ION

Conductivity

DO

Resistivity

Salinity

Multi-parameter for pH/temperature/ORP/ conductivity with PC/printer output capability

D-54

pH ORP COND

- RS-232C output (PC/Printer)

Multi-parameter for pH/temperature/ORP/ dissolved oxygen with PC/printer output capability

D-55

pH ORP DO

- RS-232C output (PC/Printer)

Portable conductivity/resistivity/ salinity meter with PC/printer output

ES-51

COND SAL RESI

- RS-232C output (PC/Printer)

※Set includes conductivity electrode. (model 9382-10D)

Portable dissolved oxygen meter with PC/printer output

OM-51

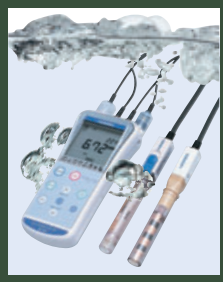
DO

- RS-232C output (PC/Printer)

※Select from the followings.
- 2 m cable (OM-51-2)
- 10 m cable (OM-51-10)
- Laboratory (OM-51-L1) (BOD measurement)

Revolutionary waterproof meter and electrodes enhance care-free operation in the lab or field

HORIBA portable meter conforms to waterproof standard of IEC529:IP67.



pH electrode (model 9621-10D) is waterproof down to depth of 1m.

DO electrode (model 9551-20D, 9551-100D) is waterproof down to depth of 10m.

Quick connection to PC allows easy and fast data evaluation

Portable multi-parameter meter allows measurement of up to 4 parameters

pH **D-51**
pH with ORP **D-52**

pH

- ION — pH with ION **D-53**
- COND — pH with Conductivity **D-54**
- DO — pH with Dissolved Oxygen **D-55**

Automatic data-logging function

Store up to 300 sets of data automatically.

Self diagnostic function assures reliable measurement

User-friendly self-diagnostic modes for battery voltage, temperature, calibration and LCD checks.

User-friendly features and portability with large LCD display

■ Option

Digital Simulator

X-51(pH, ORP, ION, DO,TEMP)

X-52(COND,TEMP)

Electrode Stand

Part No. 3014028590(9096002700)

■ F-70 series / DS-70 series Specifications

		F-71 CH.1 pH ORP	F-72 CH.1 pH ORP ION	F-73 CH.1 pH ORP ION CH.2 pH ORP ION	F-74 CH.1 pH ORP ION CH.2 COND RESI SAL TDS	F-74BW CH.1 pH ORP ION CH.2 COND RESI SAL TDS
Measurement method	pH	Glass electrode method				
	ION	——	Ion electrode method			
	Conductivity	——	——	——	2 AC bipolar method	
	Salinity	——	——	——	Conversion from conductivity value	
	Resistivity	——	——	——	Conversion from conductivity value	
	TDS	——	——	——	Conversion from conductivity value	
Measurement range	pH	pH0.000 ~ 14.000 Resolution 0.001pH	pH0.000 ~ 14.000 Resolution 0.01/0.001pH			pH0.000 ~ 14.000 Resolution 0.001pH
	mV(ORP)	±1999.9mV Resolution 0.1mV				
	Temperature(Display)	0.0 ~ 100.0°C(-30.0 ~ 130.0°C) Resolution 0.1°C				
	ION	——	0.00μg/L ~ 999g/L(mol/L) Resolution Valid numbers 3 digits			
	Conductvity	——	——	——	Cell constant 100m^{-1} : 0.000mS/m ~ 19.99S/m Cell constant 10m^{-1} : 0.0μS/m ~ 1.999S/m Cell constant 1000m^{-1} : 0.00mS/m ~ 199.9S/m Resolution 0.05% of F.S.	
	Salinity	——	——	——	0.00 ~ 80.00PPT(0.000%~8.000%) Resolution 0.01PPT(0.001%)	
	Resistivity	——	——	——	Cell constant 100m^{-1} : 0.00Ω・m ~ 199.9kΩ・m Cell constant 10m^{-1} : 0.0Ω・m ~ 1.999MΩ・m Cell constant 1000m^{-1} : 0.000Ω・m ~ 19.99kΩ・m Resolution 0.05% of F.S.	
	TDS	——	——	——	0.01 mg/L ~ 1000 g/L Resolution 0.01mg/L	0.01 mg/L ~ 100 g/L Resolution 0.01mg/L
Repeatablity	pH	±0.005pH±1digit	±0.001pH±1digit			±0.005pH±1digit
	mV(ORP)	±0.1mV±1digit				
	Temperture	±0.1°C±1digit				
	ION	——	±0.5% ±1 digit of F.S.			
	Conductvity	——	——	——	±0.5% ±1 digit of F.S.	
	Resistivity	——	——	——	±0.5% ±1 digit of F.S.	
Memory		999sets	2000sets	2000sets	2000sets	999sets
Multilanguage display		——	Japanese/English/Chinese/Korean			——
Power		AC adaptor 100 ~ 240V 50/60Hz				
Power consumption		Approx. 0.7VA	Approx. 9.8VA			Approx. 0.7VA
Mass of main unit		Approx. 500g	Approx .700g			Approx .500g
Accessories included		Electrode stand Manual/AC adapter	Electrode stand/Manual/AC adapter/Cover			Electrode stand Manual/AC adapter

■ D-50 series / ES-51 / OM-51 Specifications

		D-51 pH	D-52 pH ORP •RS-232C output (PC/Printer)	D-53 pH ORP ION •RS-232C output (PC/Printer)	D-54 pH ORP COND •RS-232C output (PC/Printer)	D-55 pH ORP DO •RS-232C output (PC/Printer)	ES-51 COND SAL RESI •RS-232C output (PC/Printer)
Measurement method	pH	Glass electrode method	Glass electrode method	Glass electrode method	Glass electrode method	Glass electrode method	——
	ION	——	——	Ion electrode method	——	——	——
	Conductvity	——	——	——	AC bipolar method	——	AC bipolar method
	Dissolved Oxygen	——	——	——	——	Diaphragm galvanic battery method	——
	SALT	——	——	——	——	——	Conductivity conversion
	Resistance	——	——	——	——	——	Conductivity conversion
	Saturation Oxygen	——	——	——	——	——	——
	Oxygen	——	——	——	——	——	——
Measurement range	pH	pH0.00 ~ 14.00 Resolution 0.01pH	pH0.00 ~ 14.00 Resolution 0.01pH	pH0.00 ~ 14.00 Resolution 0.01pH	pH0.00 ~ 14.00 Resolution 0.01pH	pH0.00 ~ 14.00 Resolution 0.01pH	——
	Temperture	0.0 ~ 100.0℃ Resolution 0.1℃	0.0 ~ 100.0℃ Resolution 0.1℃	0.0 ~ 100.0℃ Resolution 0.1℃	0.0 ~ 100.0℃ Resolution 0.1℃	0.0 ~ 100.0℃ Resolution 0.1℃	0.0 ~ 100.0℃ Resolution 0.1℃
	mV(ORP)	——	-1999 ~ 1999 Resolution 1mV	-1999 ~ 1999 Resolution 1mV	-1999 ~ 1999 Resolution 1mV	-1999 ~ 1999 Resolution 1mV	——
	ION	——	——	0.0μ ~ 999g/L (mol/L)	——	——	——
	Conductvity	——	——	——	Cell constant 100m^{-1} : 0.000mS/m ~ 19.99S/m Cell constant 10m^{-1} : 0.0μS/m ~ 1.999S/m Cell constant 1000m^{-1} : 0.00mS/m ~ 199.9S/m Resolution 0.05% F.S.	——	Cell constant 100m^{-1} : 0.000mS/m ~ 19.99S/m Cell constant 10m^{-1} : 0.0μS/m ~ 1.999S/m Cell constant 1000m^{-1} : 0.00mS/m ~ 199.9S/m Resolution 0.05% F.S.
	Dissolved Oxygen	——	——	——	——	0.00 ~ 19.99mg/L Resolution 0.01mg/L	——
	Resistance	——	——	——	——	——	Cell constant 100m^{-1} : 5.00Ω·m ~ 199.9kΩ·m Cell constant 10m^{-1} : 50.0Ω·m ~ 1.99MΩ·m Cell constant 1000m^{-1} : 0.500Ω·m ~ 19.99kΩ·m Resolution 0.05% F.S.
	SALT	——	——	——	——	——	0.00 ~ 4.00% Resolution 0.01%
	Saturation Oxygen	——	——	——	——	——	——
	Oxygen	——	——	——	——	——	——
Repeatability	pH	±0.01pH ±1digit	±0.01pH ±1digit	±0.01pH ±1digit	±0.01pH ±1digit	±0.01pH ±1digit	——
	Temperture	±0.1℃ ±1digit	±0.1℃ ±1digit	±0.1℃ ±1digit	±0.1℃ ±1digit	±0.1℃ ±1digit	±0.1℃ ±1digit
	mV(ORP)	——	±1mV ±1digi	±1mV ±1digi	±1mV ±1digit	±1mV ±1digit	——
	ION	——	——	±0.5%F.S. ±1digit	——	——	——
	Conductvity	——	——	——	±0.5%F.S. ±1digit	——	±0.5%F.S. ±1digit
	Dissolved Oxygen	——	——	——	——	±0.1mg/L ±1digit	——
	Resistance	——	——	——	——	——	±0.5%F.S. ±1digit
Power supply		DC3V (LR6 dry cell battery) Option: AC adapter	DC3V (LR6 dry cell battery) Option: AC adapter	DC3V (LR6 dry cell battery) Option: AC adapter	DC3V (LR6 dry cell battery) Option: AC adapter	DC3V (LR6 dry cell battery) Option: AC adapter	DC3V (LR6 dry cell battery) Option: AC adapter
Mass		Approx. 300g	Approx. 300g	Approx. 330g	Approx. 330g	Approx. 330g	Approx. 300g

	DS-71 COND RESI SAL TDS	DS-72 COND RESI SAL TDS
	———	———
	———	———
	2 AC bipolar method	
	Conversion from conductivity value	
	Conversion from conductivity value	
	Conversion from conductivity value	
	———	———
	———	———
	0.0 ~ 100.0°C(-30.0 ~ 130.0°C) Resolution 0.1°C	
	———	———
	Cell constant 100m^{-1} : 0.000mS/m ~ 19.99S/m Cell constant 10m^{-1} : 0.0μS/m ~ 1.999S/m Cell constant 1000m^{-1} : 0.00mS/m ~ 199.9S/m Resolution 0.05% of F.S.	
	0.00~80.00PPT(0.000%~8.000%) Resolution 0.01PPT(0.001%)	
	Cell constant 100m^{-1} : 0.00Ω・m ~ 199.9kΩ・m Cell constant 10m^{-1} : 0.0Ω・m ~ 1.999MΩ・m Cell constant 1000m^{-1} : 0.000Ω・m ~ 19.99kΩ・m Resolution 0.05% of F.S.	
	0.01 mg/L ~ 100 g/L Resolution 0.01mg/L	0.01 mg/L ~ 1000 g/L Resolution 0.01mg/L
	———	———
	———	———
	±0.1°C±1digit	
	———	———
	±0.5% ±1 digit of F.S.	
	±0.5% ±1 digit of F.S.	
	999sets	2000sets
	———	Japanese/English/Chinese/Korean
	AC adaptor 100 ~240V 50/60Hz	
	Approx. 0.7VA	Approx. 9.8VA
	Approx .500g	Approx. 700g
	Electrode stand Manual/AC adapter	Electrode stand/Manual /AC adapter/Cover

	OM-51 DO
	•RS-232C output (PC/Printer)
	———
	———
	———
	Diaphragm galvanic battery method
	———
	———
	Dissolved Oxygen conversion
	Dissolved Oxygen conversion
	———
	0.0 ~ 100.0℃ Resolution 0.1℃
	———
	———
	———
	0.00 ~ 19.99mg/L Resolution 0.01mg/L
	———
	———
	0.0 ~ 199.9% Resolution 0.1%
	0.0 ~ 50.0% Resolution 0.1%
	———
	±0.1℃ ±1digit
	———
	———
	———
	±0.1mg/L ±1digit
	———
	DC3V (LR6 dry cell battery) Option: AC adapter
	Approx. 300g

■pH/ORP Electrode Line up

Name		Description	Model	Temp.range(℃)	pH range	Part No. (Old No.)
Combination pH electrode	3-in-1	Plastic body	9625-10D	0~100 ※1	0~14	3200360505
		Standard ToupH	9615-10D	0~100	0~14	3200366539
		Micro ToupH	9618-10D	0~60	0~14	3200366552
		Long ToupH	9680-10D	0~100 ※1	0~14	3200366560
		Sleeve ToupH	9681-10D	0~60	0~14	3200366572
		Sleeve	6367-10D	0~60	0~14	3014079136(9003011800)
		For measurement of low-conductivity water and non-aqueous solvents	6377-10D	0~60	0~14	3014093085(9003014100)
		Needle type	6252-10D	0~60	0~12	3014080850(9003013800)
		For very slender test tubes	6069-10C	0~60	0~14	3014081107(9003013500)
		Flat type	6261-10C	0~50	0~12	3014081807(9003013700)
ISFET pH electrode		Flat type ISFET	0040-10D	0~60	0~14	3200367925
		Needle type ISFET	0030-10D	0~60	0~14	3014028323(9096002100)
		Flat type ISFET(0040-10D) sensor	141	0~60	0~14	3200367926
		Needle type ISFET(0030-10D) sensor	131	0~60	0~14	3014028400(9096002200)
Temperature electrode		For temperature compensation and measurement	4163-10T	0~100	—	3014080375(9003013000)
ORP electrode		Water proof Platinum 3-in-1 type	9300-10D	0~60	—	3014046710(9096000400)

※1 0-50°C when completely immersed.

■Conductivity Electrode Line up

Electrode	Cell constant m^{-1}(cm^{-1})		Model	Range m^{-1}(cm^{-1})	Minimum Volume	Temp. range(℃)	Part No. (Old No.)
Conductivity electrode	Immersion type	10 (0.1)	3551-10D	10μS ~ 1S (0.1μS ~ 10mS)	50mL	0 ~ 60	3014081712(9056000800)
		100 (1)	9382-10D	0.1mS ~ 10S (1μS ~ 100mS)	20 ~ 30mL	0 ~ 80	3014046709(9096000300)
		100 (1)	3552-10D	0.1mS ~ 10S (1μS ~ 100mS)	15mL	0 ~ 100	3014081545(9056000900)
		1000 (10)	3553-10D	1mS ~ 100S (10μS ~ 1S)	50mL	0 ~ 60	3014081714(9056001000)
	Flow type	10 (0.1)	3561-10D	10μS ~ 1S (0.1μS ~ 10mS)	10mL	0 ~ 60	3014082350(9056001100)
		100 (1)	3562-10D	0.1mS ~ 10S (1μS ~ 100mS)	16mL	0 ~ 60	3014082513(9056001200)
		1000 (10)	3573-10C	1mS ~ 100S (10μS ~ 1S)	4mL	0 ~ 60	3014082590(9056001300)
		1000 (10)	3574-10C	1mS ~ 10S (10μS ~ 100mS)	0.25mL	0 ~ 60	3014082592(9056001400)

■Ion Electrode Line up

Please be aware of the hindering ion and pH range interference of ion electrodes.

Electrode name	Model	Measuring range	Applicable reference electrode	Part No. (Old No.)
Cyanide ion electrode	8001-10C	0.03 ~ 2,600 ppmCN^-	2060A・2565A	3014094393(9003015500)
Chloride ion electrode (Combination type)※	6560-10C	0.4 ~ 35,000 ppmCl^-	—	3014093430(9003014500)
Chloride ion electrode	8002-10C	0.4 ~ 35,000 ppmCl^-	2565A	3014094394(9003015600)
Sulfide ion electrode	8003-10C	0.3 ~ 32,000 ppmS^{2-}	2060A・2565A	3014094395(9003015700)
Iodide ion electrode	8004-10C	0.01 ~ 13,000 ppmI^-	2060A・2565A	3014094396(9003015800)
Bromide ion electrode	8005-10C	0.8 ~ 80,000 ppmBr^-	2565A	3014094397(9003015900)
Copper ion electrode	8006-10C	0.06 ~ 6,400 ppmCu^{2+}	2565A	3014094398(9003016000)
Cadmium ion electrode	8007-10C	0.1 ~ 11,000 ppmCd^{2+}	2060A・2565A	3014094399(9003016100)
Lead ion electrode	8008-10C	2 ~ 20,000 ppmPb^{2+}	2565A	3014094400(9003016200)
Thiocyanate ion electrode	8009-10C	0.6 ~ 5,800 ppmSCN^-	2565A	3014094401(9003016300)
Fluoride ion electrode (Combination type)※	6561-10C	0.02 ~ 19,000 ppmF^-	—	3014093431(9003014600)
Fluoride ion electrode	8010-10C	0.02 ~ 19,000 ppmF^-	2060A・2565A	3014093439(9003016400)
Silver ion electrode	8011-10C	0.01 ~ 110,000 ppmAg^+	2565A	3014094402(9003016500)
Ammonia electrode (Combination type)※	5002A-10C	0.1 ~ 1,000 ppmNH_3	—	3014093560(9003016600)
Sodium ion electrode	1512A-10C	2.3 ~ 230,000 ppmNa^+	2565A	3014068526(9003016700)
Nitrate ion electrode (Combination type)※	6581-10C	0.62 ~ 62,000 ppmNO_3^-	—	3014093432(9003014700)
Nitrate ion electrode	8201-10C	0.62 ~ 62,000 ppmNO_3^-	2565A	3014094403(9003016800)
Potassium ion electrode (Combination type)※	6582-10C	0.04 ~ 39,000 ppmK^+	—	3014093433(9003014800)
Potassium ion electrode	8202-10C	0.04 ~ 39,000 ppmK^+	2565A	3014094404(9003016900)
Calcium ion electrode (Combination type)※	6583-10C	0.4 ~ 40,080 ppmCa^{2+}	—	3014093434(9003014900)
Calcium ion electrode	8203-10C	0.4 ~ 40,080 ppmCa^{2+}	2060A・2565A	3014068839(9003017000)
Chloride ion tip	7660	—	—	3014093436(9003015000)
Fluoride ion tip	7661	—	—	3014093438(9003015100)
Nitrate ion tip	7681	—	—	3014068364(9003015200)
Potassium ion tip	7682	—	—	3014069795(9003015300)
Calcium ion tip	7683	—	—	3014068795(9003015400)
Ammonia electrode membrane (6pcs)	membrane(NH_3)	—	—	3014067083(9012001000)

※ D-53 can use only combination type ion electrode.

■ DO electrode / DO Tip Line up

Electrode	Lead length	Model	Specification	Temp. range(℃)	Part No. (Old No.)
Waterproof DO electrode	2m	9551-20D	Field immersible type	0 ~ 40	3014047090(9096002300)
Waterproof DO electrode	10m	9551-100D	Field immersible type	0 ~ 40	3014047091(9096002400)
DO electrode	1m	9520-10D	Laboratory use	0 ~ 45	3014046711(9096000500)
DO tip	—	5401	Replacement electrode tip for 9551	—	3014072770(9033010000)
DO tip	—	7541	Replacement electrode tip for 9520	—	3014074145(9074000200)

LAQUAtwin Compact

Water proof

Accurate measurement from only a single drop on the HORIBA original flat sensor. LAQUAtwin's easy, reliable and on-site quick measurement quick measurement of 7 parameters brings a new dimension to your water quality testing.

■ Unique measurement variation by LAQUAtwin. Select measurement method depending on your situation and sample.

Drops

Drop a sample with a pipette, small volume as 0.1mL can be measured. Using sampling sheet B (optional), volumes down to 0.05 mL can be tested.

Immersion

When you're in the lab, you can test the sample in a beaker. Ensure the sensor guard sliding cap is open.

Scoop

Use as a scoop to test water eg from a river. Vertical scoop from a aquarium is also available with unique sensor guard.

Wipe

The sampling sheet allows tiny, trace volumes to be analysed. For example, wipe off the surface of the skin with a sampling sheet soaked with pure water and measure.

	pH Meter **B-711/712/713**	Conductivity(EC) Meter **B-771**	Sodium Ion Meter **B-722**	Potassium Ion Meter **B-731**	Nitrate Ion Meter **B-743** **(for general use)**	Calcium Ion Meter **B-751**	Salt Meter **B-721**
							
Model	B-711 / B-712/B-713(US only)	B-771	B-722	B-731	B-743(for general use)	B-751	B-721
Measurement principle	Glass electrode method	2 AC bipolar	Ion electrode method				
Minimum sample volume	0.1 mL or more *1	0.12 mL or more	0.3 mL or more *1				
Measurement range	2 to 12 pH	Conductivity: 0 to 19.9 mS/cm (0 to 1.99 S/m) Salt:0 to 1.1% TDS:0 to 9900 ppm	23 to 2300 ppm(mg/L) (10^{-3} to 10^{-1} mol/L)	39 to 3900 ppm(mg/L) (10^{-3} to 10^{-1} mol/L) 20 to 2000 kg/10a *2	NO_3^-:62 to 6200 ppm(mg/L) (10^{-3} to 10^{-1} mol/L) NO_3^--N:14 to 1400 ppm(mg/L)	40 to 4000 ppm(mg/L) (10^{-3} to 10^{-1} mol/L)	0.1 to 10% by weight
Display range	0 to 14 pH	0 to 199 mS/cm	0 to 9900 ppm(mg/L)				0.00 to 25% by weight
Calibration	One-point / Two-point *4	Two-point *4	Two-point *4				
Accuracy *5	±0.1 pH	±2%F.S.±1 digit (for each range)*6	±10% of reading value.			±20% of reading value.	±10% of reading value.
Functions	Temperature compensation・Waterproof *7・Auto hold	Salt/TDS Measurement・Temperature conversion(2%/°C fixed)・Waterproof *7・Auto hold	Temperature compensation・Waterproof *7・Auto hold				
Operating temperature/ humidity	5 to 40°C, 85% or less in relative humidity (no condensation)						
Power	CR2032 batteries (x2)						
Dimensions /Mass	164 mm x 29 mm x 20 mm (excluding projections) / Approx. 50 g (meter only, without batteries, B-771 approx. 45 g)						

- Accurate reading from only a single drop, in a few seconds. whenever and wherever you want to measure without beakers. It is your "lab-in-a-pocket".
- pH, conductivity, ions and Salt concentration. 7 parameters, 11 models
- Calibrate and measure at the touch of a button - the smiley face will tell you when the result can be read
- LAQUAtwin is fully waterproof and dustproof(IP67)
- Carrying case containing standard solution comes standard for handy lab portability

Solid samples

Foods containing some moisture can be tested by placing a small piece directly onto the sensor.

Powders

LAQUAtwin meters can also test dry powders. Simply place the powder sample onto the sensor, and drop on a constant amount of pure water.

Paper, textiles and films

To test sheets of paper and textiles, cut up the sample into small pieces and place directly onto the sensor. Drop on a constant amount of pure water.

Nitrate Ion Meter

B-741 (for crops)

ION NO_3^-

■ Measurement range:
100 to 9,900 ppm(NO_3^-),
23 to 2,200 ppm(NO_3^--N)

Standard solution for crops (300 ppm&5000 ppm)(14 mL) / 2 CR2032 batteries / 5 Pipette / Instruction manual / Quick manual / Cleaning solution bottle(250 mL) / Crop sample press / 3 Medical cups / Quick manual / Carrying case

Nitrate Ion Meter

B-742 (for soil)

ION NO_3^-

■ Measurement range:
30 to 600 ppm(NO_3^-),
6.8 to 140 ppm(NO_3^--N),
3.4 to 6 kg/10 a(NO_3^--N)

Standard solution for soil(30 ppm,300 ppm) (14 mL) / 2 CR2032 batteries / 5 Pipettes / Instruction manual / Quick manual / Cleaning solution bottle(250 mL) / 3 Extraction bottles(100 mL)/2 sets of spoon for soil sampling / Tweezers / Sampling sheetB / 2 Sampling sheet holders / Quick manual / Carrying case

*1 Smaller amount(0.05 mL or more) can be measured with the sampling sheet B. (Please close the light shield cover. If a sample that contain particulate, please use "Sampling sheet holder" (sold separately))
*2 With soil/water sampling ratio of 1:5.
*3 When the measured value is out of the measurement range, the displayed value blinks. It should be used only as a guide.
*4 Selectable between one-point and two-point calibrations. High conductivity standard solution (12.9 mS/cm) is sold separately. Calibration point B-712:pH 6.86/B-713:pH 7.00
*5 Repeatability in measurement of a standard solution after calibration using it.
*6 ①±5 µS/cm (0 to 199 µS/cm) ②±0.05 mS/cm(0.20 to 1.99 mS/cm) ③±0.5 mS/cm (2.0 to 19.9 mS/cm) ④±5 mS/cm (20 to 199 mS/cm)
*7 IP67:no failure when immersed in water at a depth of 1 meter for 30 minutes. But the product can not be used underwater.

Ideal for water quality testing and inspection of river, lake, well water, groundwater, discharge water and other water sources

pH ORP COND SAL TDS DO TURB DEPTH TEMP GPS

Multiparameter Water Quality Checker

U-50 Series

- Simultaneous measurement and display of up to 11 parameters
- Integrated sensor probe and display section for maximum portability. Convenient for one-point measurement and measurements near the surface of the water. Built-in highly sensitive turbidity sensor enables measurement of even low turbidity water.

pH ORP COND SAL TDS DO TURB DEPTH TEMP ION

Water Quality Monitoring System

W-20 Series

- Simultaneous measurement of up to 13 parameters
- Up to one month Data logging
- Measurement at depths as low as 100 meters

Oil Ideal for applications needed for environmental monitoring and measurement of oil on machined parts

Oil Content Analyzer

OCMA-300/310/350

- Capable of measuring low concentrations that cannot be measured using the n-hexane method
- Uses highly safe S-316 as a solvent.
- Suitable when making highly precise measurements or measuring oil content in water (OCMA-300/310/350)
- Suitable for measuring oil on parts, etc. and the oil content of dried soil (OCMA-350)

OCMA-300

OCMA-310

OCMA-350

WATER QUALITY ANALYZERS website

Horiba 60 years engineering realizes lineup various of water quality analyzers and electrodes for any laboratory use. "Water quality analyzer website" introduces HORIBA lab water quality analyzers and electrodes and provide many services such as manual download or water quality measurement tips.

http://www.horiba.com/wq

LAQUA website

Taking your comments and feedback to our heart,"LAQUA" is our new brand to deliver you our best solution to your needs. "LAQUA" website introduces case of solutions with LAQUA and innovative pH electrodes.

http://www.horiba.com/laqua

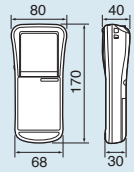
LAQUAtwin website

Water quality will be more familiar with you by LAQUAtwin. Whoever ,whenever, wherever be able to measure easily with LAQUAtwin. "LAQUAtwin website" introduces the charm of LAQUAtwin.

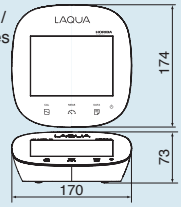
http://www.horiba.com/laquatwin

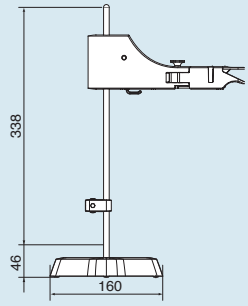
■ Dimension Unit: mm

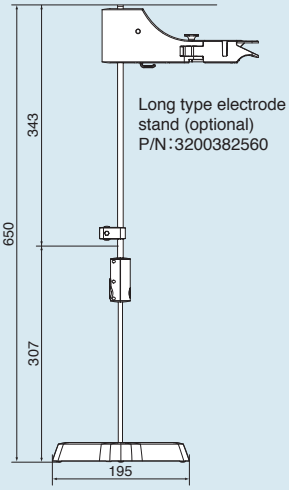
● D-50 Series / ES-51 / OM-51



● F-70 Series / DS-70 Series







Long type electrode stand (optional)
P/N:3200382560

SUPPORT HORIBA CUSTOMER SUPPORT SYSTEM

HORIBA offers a variety of services to conform to quality standards and international guidelines such as GLP, GMP and ISO

Technical Support	User Support	Validation Support
Please contact us with any technical questions about our products. http://www.horiba.com/wq/support	Special website is available for the registered customers featuring: ・Data collection software ・Instruction manual downloads ・Measurement tips, etc.	・Traceability certification* ・IQ/OQ/PQ support* ・SOP guidance ・FAQ *Optional services

Please read the operation manual before using this product to assure safe and proper handling of the product.

HORIBA celebrates its 60th anniversary in 2013.
One past, One future, One HORIBA

ABQINDUSTRIAL
PRECISION. RELIABILITY. QUALITY.

Distributed by: ABQ Industrial LP USA
Tel: +1 (281) 516-9292 / (888) 275-5772 **eFax:** +1 (866) 234-0451
Web: https://www.abqindustrial.net **E-mail:** info@abqindustrial.net