

Portable pH · Water Quality Meter

# LAQUA<sup>act</sup>

D-70/ES-70/OM-70 Series

Industry  
First

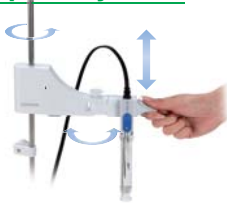
The casing is made from shock resistant and extremely durable polycarbonate resin. With high chemical resistance it is ideal for harsh environments.

According to our research as of June 2013.

## In the lab, in the field or anywhere you need it

### Laboratory use capability

The optional electrode stand offers excellent manoeuvrability, allowing the electrode to be moved up and down, and from left to right, easily with one hand.



### Easy-to-view large display shows two measurement items simultaneously

The measurement values are easily visible on a display that is about 40% larger than those of our conventional products. Two measurement values can be displayed on a single screen.

\*Models compatible with two item measurement: D-73, 74, 75



### Chemical resistant

The polycarbonate resin casing is extremely chemical-resistant\*, so can be cleaned using alcohol.

\*Resistant to alcohol, weak acid, bases and oil.



### Various data processing

The built-in data memory can store 1000 items, and connecting to a computer allows measurement data to be collected. Output to a GLP/GMP-compatible printer is also possible.

\*An optional cable is necessary to connect to a computer.

The software can be downloaded after user registration.

\*The D-71 does not have computer and printer connectivity.



### Backlit LCD model

- BACK LIGHT
- 2CH
- WATER PROOF
- PC
- PRT
- ID
- SHOCK PROOF



#### D-75

CH.1 pH ORP  
CH.2 DO

- BACK LIGHT
- 2CH
- WATER PROOF
- PC
- PRT
- ID
- SHOCK PROOF



#### D-74

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

- BACK LIGHT
- 2CH
- WATER PROOF
- PC
- PRT
- ID
- SHOCK PROOF



#### D-73

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

- BACK LIGHT
- 2CH
- WATER PROOF
- PC
- PRT
- ID
- SHOCK PROOF



#### D-72

CH.1 pH ORP

### Basic model

- BACK LIGHT
- 2CH
- WATER PROOF
- PC
- PRT
- ID
- SHOCK PROOF



#### D-71

CH.1 pH

\*Accessories included : Instruction Manual/Quick Manual/2 pcs Batteries

BACK LIGHT Backlit LCD

2CH 2-channel measurement

WATER PROOF Waterproof and dustproof (IP67 rated)

PC PC connection\* compatible

PRT Printer output compatible (printer sold separately)

ID Security function

SHOCK PROOF Shock and chemical resistant body case

\*Data storage software available as a free download for registered users.

## One hand operation

Slim body fits in your hand. Only three basic operation buttons for one-hand operability.



## Shock-resistant

Polycarbonate resin\* used in automobiles and mobile phones has been adopted to enhance shock resistance. \*Polycarbonate resin has about twice the shock resistance of conventional ABS resin.



## Visible LCD in dark places

Backlight (except D-71) allows reading of measurement values even in the dark.



\*image

## Waterproof and dustproof

IP67 rated waterproof and dustproof casing. \*IP67: Fully waterproof for approximately 30 min in 1 metre of water.



## Extended operation

Uses about 10% of the power compared to conventional meters. With up to 1000 hrs of use\*, long periods of field work are possible. \*D-71/D-72



## Easy to carry

The compact and ergonomic design is easy to carry and includes a cable winding function for the optional electrode hook attachment.



## Conductivity



ES-71

CH.1 COND RESI SAL TDS

## Dissolved Oxygen



OM-71

CH.1 DO

\* Select from the following:  
• 2 m cable (OM-71-2)  
• 10 m cable (OM-71-10)  
• Laboratory (OM-71-L1) (BOD measurement)

## [Various functions]

LAQUAact boasts a variety of safety and other useful functions to assist with measurements and data processing. For details, see page 16 of the specifications.

Common	Interval measurement function (except D-71)
	Sample ID number setting function
	Clock function and auto power-off function
pH [D-70 series]	Usable with AAA alkaline batteries, Ni-MH batteries, or AC adapter
	Automatic calibration and calibration interval alarm function
Conductivity [D-74/ES-71]	Usable with both 5-point calibration and USA/NIST standard solutions
	Electrical resistivity/total dissolved solids/salt content conversion functions
Dissolved Oxygen [D-75/OM-71]	Automatic range switching, automatic temperature conversion, and unit switching functions
	Temperature compensation, atmospheric pressure calibration and salt concentration calibration functions
Dissolved Oxygen [D-75/OM-71]	Oxygen concentration and saturated oxygen concentration measurement functions

LAQUAact

# LAQUA<sup>act</sup> D-70/ES-70/OM-70 series specifications

		D-71	D-72	D-73	D-74	D-75	ES-71	OM-71
pH	Measuring principle	Glass electrode method					—	—
	Measuring range	pH 0.00~14.00					—	—
	Display range	-2.00~16.00 *Flashes when outside the measurement range					—	—
	Resolution	0.01 pH					—	—
	Repeatability	±0.01 pH±1digit					—	—
	Auto calibration (5 points)/Calibration record	●					—	—
	Standard solution Auto-detect	●					—	—
	USA/NIST selectable	●					—	—
mV (ORP)	Measuring range (Display range)	—	-2000~2000 mV *Flashes when outside the measurement range			—	—	
	Resolution	—	1 mV			—	—	
	Repeatability	—	±1 mV±1 digit			—	—	
	Absolute/relative selectable	—	●			—	—	
Temperature	Measuring range (Display range)	0.0°C~100.0°C (-30°C~130°C) *Flashes when outside the measurement range					—	—
	Resolution	0.1°C					—	—
	Repeatability	±0.1°C±1digit					—	—
	Calibration function	●					—	—
ION	Measuring principle	—	—	Ion electrode method	—	—	—	
	Measuring range (Display range)	—	—	0.00 µg/L~999 g/L	—	—	—	
	Resolution	—	—	3-digit valid numbers	—	—	—	
	Repeatability	—	—	±0.5% F.S.±1 digit	—	—	—	
	5 points calibration/Calibration record	—	—	●	—	—	—	
Conductivity	Measuring principle	—	—	—	2 AC bipolar method	—	2 AC bipolar method	
	Measuring range (Display range)	—	—	—	0.0 µS/m~200.0 S/m <sup>*1</sup>	—	0.0 µS/m~200.0 S/m <sup>*1</sup>	
	Resolution	—	—	—	0.05%F.S.	—	0.05%F.S.	
	Repeatability	—	—	—	±0.5% F.S.±1 digit	—	±0.5% F.S.±1 digit	
	Change unit (S/m,S/cm)	—	—	—	●	—	●	
	Auto temperature conversion (25 °C)	—	—	—	●	—	●	
Salinity	Measuring principle	—	—	—	Conversion from conductivity value	—	Conversion from conductivity value	
	Measuring range (Display range)	—	—	—	0.00%~4.00% (0.0PPT~40.0PPT)	—	0.00%~4.00% (0.0PPT~40.0PPT)	
	Resolution	—	—	—	0.01%/0.1 PPT	—	0.01%/0.1 PPT	
	Calibration function	—	—	—	●	—	●	
Resistivity	Measuring principle	—	—	—	Conversion from conductivity value	—	Conversion from conductivity value	
	Measuring range (Display range)	—	—	—	0.000 Ω·m~2.000 MΩ·m <sup>*2</sup>	—	0.000 Ω·m~2.000 MΩ·m <sup>*2</sup>	
	Resolution	—	—	—	0.05%F.S.	—	0.05%F.S.	
	Repeatability	—	—	—	±0.5%F.S.±1 digit	—	±0.5%F.S.±1 digit	
TDS	Measuring principle	—	—	—	Conversion from conductivity value	—	Conversion from conductivity value	
	Measuring range (Display range)	—	—	—	0.01 mg/L~100 g/L	—	0.01 mg/L~100 g/L	
	Resolution	—	—	—	0.01 mg/L	—	0.01 mg/L	
Dissolved Oxygen	Measuring principle	—	—	—	—	Membrane galvanic cell	—	Membrane galvanic cell
	Measuring range (Display range)	—	—	—	—	0.00~20.00 mg/L	—	0.00~20.00 mg/L
	Temperature compensation	—	—	—	—	0~40°C	—	0~40°C
	Resolution	—	—	—	—	0.01 mg/L	—	0.01 mg/L
	Repeatability	—	—	—	—	±0.1 mg/L±1 digit	—	±0.1 mg/L±1 digit
	Salinity concentration correction (0~40PPT)	—	—	—	—	●	—	●
Saturated Oxygen	Air pressure correction	—	—	—	—	●	—	●
	Measuring principle	—	—	—	—	Membrane galvanic cell	—	Membrane galvanic cell
	Measuring range (Display range)	—	—	—	—	0.0~200.0%	—	0.0~200.0%
Oxygen concentration	Resolution	—	—	—	—	0.1%	—	0.1%
	Measuring principle	—	—	—	—	Membrane galvanic cell	—	Membrane galvanic cell
Display	Measuring range (Display range)	—	—	—	—	0.0~50.0%	—	0.0~50.0%
	Resolution	—	—	—	—	0.1%	—	0.1%
	Display	Custom LCD		Custom LCD with backlight				
	PC connectivity <sup>*3</sup>	—	—	—	—	●	—	—
	Printer connectivity (GLP/GMP)	—	—	—	—	●	—	—
	Temperature compensation (Auto/manual)	—		●			—	
	Auto Hold function	—		●			—	
	Data memory number	—		1000			—	
Interval memory	—	—	—	—	●	—	—	
Function	ID input	—		●			—	
	Clock function	—		●			—	
	Auto power off/Battery Level Indicator	—		●			—	
	Dustproof and waterproof standard	—		IP67			—	
	Operating ambient temperature/humidity	0°C to 45°C, 80% or less in relative humidity (no condensation)						
	Power	LR03/AAA alkaline batteries or AAA Ni-H rechargeable batteries × 2, AC adapter 100 V to 240 V 50/60 Hz (option)						
Current consumption	Less than 1 mA	Less than 1 mA	Less than 2 mA	Less than 5 mA	Less than 2 mA	Less than 5 mA	Less than 2 mA	
Battery life <sup>*4</sup>	Approx. 1000 hours	Approx. 1000 hours	Approx. 500 hours	Approx. 200 hours	Approx. 500 hours	Approx. 200 hours	Approx. 500 hours	
Dimensions	Approx. 67 (80) × 28 (42) × 170 mm (The figures in parentheses are maximum thicknesses.)							
Weight (without batteries and electrode)	Approx. 270 g	Approx. 270 g	Approx. 285 g	Approx. 285 g	Approx. 285 g	Approx. 270 g	Approx. 270 g	

\*1 Cell constant 100 m<sup>3</sup>: 0.000 mS/m~20.00 S/m, Cell constant 10 m<sup>3</sup>: 0.0 µS/m~2.000 S/m, Cell constant 1000 m<sup>3</sup>: 0.00 mS/m~200.0 S/m  
 \*2 Cell constant 100 m<sup>3</sup>: 0.00 Ω·m~200.0 kΩ·m, Cell constant 10 m<sup>3</sup>: 0.0 Ω·m~2.000 MΩ·m, Cell constant 1000 m<sup>3</sup>: 0.000 Ω·m~20.00 kΩ·m  
 \*3 RS-232C cable (3014030151) and software is required. Software can be download by web registration. If you need to connect to the USB, the commercially available (RS232C to USB) adapter is required. Please purchase according to the specifications of the PC (Operating system · USB Specification, etc.). \* HORIBA will not guarantee the adapter operation  
 \*4 Battery life will be shorter when using optional accessories and LCD backlight is activated.



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



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Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.