

## Handy water analyzers **HM** series



# High Response and Low Cost Design

Three models of convenient, easy-to-handle handy water analyzers (one suitable for each of the following : pH, dissolved oxygen and conductivity) are available on the market. All models have excellent characteristics suitable for its specific liquid and a low-cost design.

Each analyzer is applicable to a wide range of water quality control functions for fisheries and culture-related facilities, hydroponic farms, wastewater treatment plants and so forth.



**HM-P1** (pH meter)

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- External mounting of an electrode enhances high response to temperature changes.
- A large LCD displays measured value.
- Automatic calibration/manual calibration(except HM-E1)
- Equipped with automatic temperature compensation function
- Equipped with sensor-diagnosing function/A memory for data storage/Automatic turning off of power
- Easy operation and low cost design

## Specifications

### HM-P1 (pH meter)

Measuring method	Glass electrode system
Calibration method	Automatic calibration (manual calibration also possible)
Measuring range	0.00-14.00 pH
Repeatability	±0.05 pH
Accessories	1. Calibration solutions pH 4 : 250 ml (JIS) pH 7 : 250 ml (JIS) 2. AC adaptor (optional item)

### HM-E1 (Conductivity meter)

Measuring method	AC two electrodes system
Measuring range	HM-E1-10 (Low conc. type) 0.0 - 99.9 mS/m HM-E1-100 (Medium conc. type) 0 - 999 mS/m HM-E1-1000 (High conc. type) 0.00 - 9.99 S/m
Reproducibility	2% F.S
Accessories	AC adaptor (option item)

### HM-D1 (Dissolved oxygen meter)

Measuring method	Galvanic battery system
Calibration method	Automatic calibration (manual calibration also possible)
Measuring range	0.00 -19.99 mg/L
Repeatability	±0.1 mg/L
Accessories	1. Internal solution, sodium chloride : 2 mol (250 mL) 2. Pipette: 1 pc. 3. Replacement membrane : 6 sheets 4. AC adaptor (optional item)

## Common specifications

Standard functions	Hold function, automatic power-off (about 10 minutes), self-diagnosis
Operating method	Key operation (membrane switches)
Display	Custom-made LCD (4 digits/2 digits, 7 segments/14 segments)
Sensor connection	Electrode side : BNC connector Temperature side : plug jack, 3.5mm in diameter
Length of cable	1 m and 3 m Standard length for pH meter, conductivity meter : 1 m Standard length for dissolved oxygen meter : 3 m
Power supply	DC9V (6F22 battery)
Dimensions	W78 x D49 x H183 mm
Mass	About 450 g
Environmental specifications	Working temperature range : 0-40 °C(without dew condensation) Working humidity range : 40-85%RH Temperature range for storage : 0-50 °C(without dew condensation)

## Specifications of temperature sensor

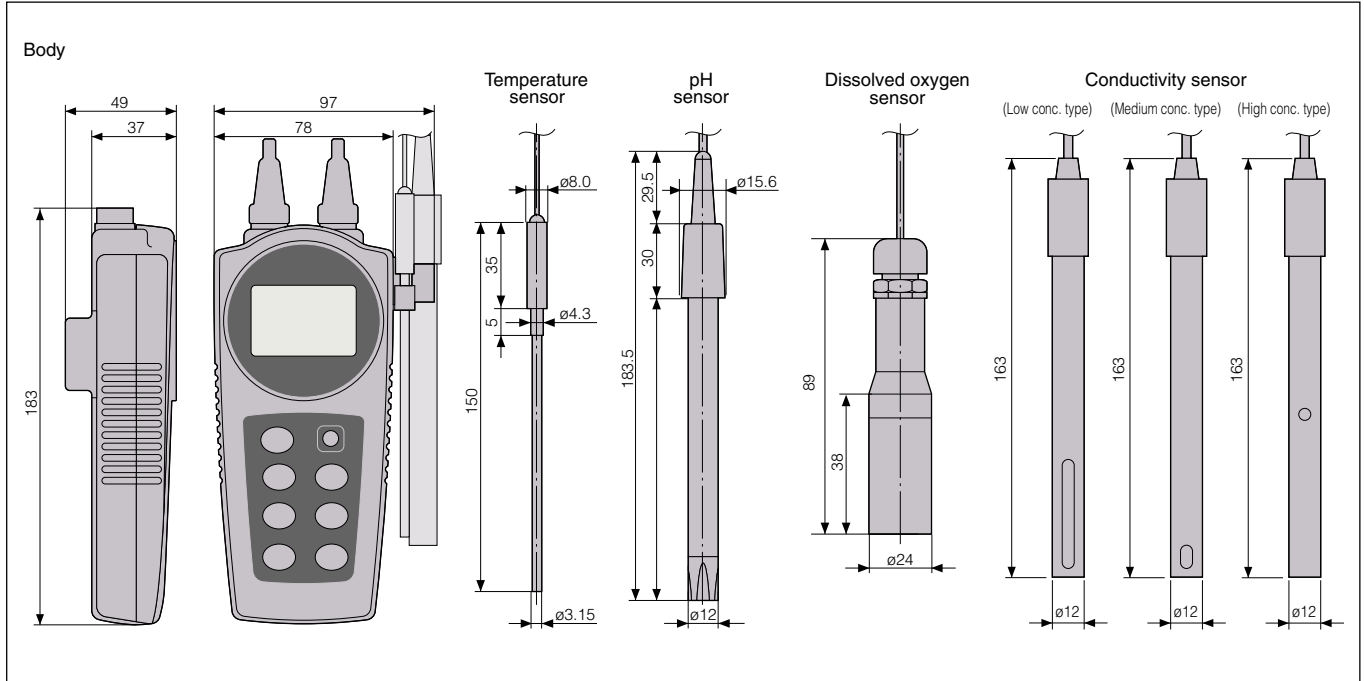
Temperature measuring method	Platinum thermoresistance (1000Ω)
Temperature measuring range	HM-P1.D1 0.0 - 40.0 °C HM-E1 0.0 - 80.0 °C
Temperature reproducibility	HM-P1.D1 ±0.2 °C HM-E1 ±0.4 °C



HM-D1 (Dissolved oxygen meter)

HM-E1 (Conductivity meter)

**Dimensions in mm**



**Examples of applications**

<p><b>Marine culture control</b></p> <p>HM-P1 (pH meter)                  HM-D1 (Dissolved oxygen meter)                  HM-E1 (Conductivity meter)</p>	<p><b>Environment pollution analysis</b></p> <p>HM-P1 (pH meter)                  HM-D1 (Dissolved oxygen meter)                  HM-E1 (Conductivity meter)</p>	<p><b>Control of tap water, primary water supply system and water receiving tanks</b></p> <p>HM-P1 (pH meter)                  HM-E1 (Conductivity meter)</p>
<p><b>Control of purifying tank and drainage</b></p> <p>HM-P1 (pH meter)                  HM-D1 (Dissolved oxygen meter)                  HM-E1 (Conductivity meter)</p>	<p><b>School material and laboratories</b></p> <p>HM-P1 (pH meter)                  HM-D1 (Dissolved oxygen meter)                  HM-E1 (Conductivity meter)</p>	<p><b>Surface treatment</b></p> <p>HM-P1 (pH meter)                  HM-E1 (Conductivity meter)</p>
<p><b>Control of cooling water and boiler water</b></p> <p>HM-P1 (pH meter)                  HM-D1 (Dissolved oxygen meter)                  HM-E1 (Conductivity meter)</p>	<p><b>Hydroponic farming</b></p> <p>HM-P1 (pH meter)                  HM-D1 (Dissolved oxygen meter)                  HM-E1 (Conductivity meter)</p>	<p><b>Control of tap water and swimming pool water</b></p> <p>HM-P1 (pH meter)</p>

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**!** Caution for safety use: Before use of pump, read instruction manual carefully to use the product correctly.  
 Actual pumps may differ from the photos. Specifications and dimensions are subject to change without prior notice. For further details please contact us.