

## P30 Series

### Portable Water Quality Meter

Measurement at high precision in pure water area

Portable Electrical Conductivity Meter (for pure water)  
**CM-31P-W**

Electrical conductivity

Electrical resistivity



For DO and BOD field measurement

Portable Dissolved Oxygen Meter  
**DO-31P**



Membrane type dissolved oxygen

Portable Dissolved Oxygen/pH Meter  
**DM-32P**

2ch DO and pH measurement

ch1

Membrane type dissolved oxygen

ch2

pH

ORP  
(Electrodes sold separately)



Energy-saving design, rechargeable batteries available

Waterproof construction that is safe for field measurement (IP 67:1m, can be soaked for 30 minutes)

1000 data memory function

# Sensor



## "CALMEMO" sensor

The sensor itself stores the model, serial number, and calibration data.

### Electrical conductivity For flow-through type pure water measurement (immersion measurement is not possible)

Cell	Lead length	Note
Electrical Conductivity Cell "CALMEMO" CT-27111D	1m(standard)	CM-31P-W standard cell (The flow cell is sold separately*1)
Flow cell (made of PP)	CEF-22A	Port size: O.D. 8mm x I.D. 4mm
Flow cell (made of SUS)	CEF-23A	Port size: O.D. 8mm x I.D. 6mm

\*1 When ordering a set of 1 CM-31P-W, a PP flowcell is supplied.



### Dissolved oxygen Measurement method: Membrane-type galvanic cell method

Electrode name	Lead length	Note
Dissolved Oxygen Electrode "CALMEMO" OE-270AA <span>Waterproof</span>	3m (standard)	DO-31P/DM-32P standard electrode is attached (lead length : 3m)
	5m	
	11m	
Dissolved Oxygen Electrode "CALMEMO" OE-570BA <span>Waterproof</span>	3m (standard)	For no-flow measurement
	5m	
	11m	
Dissolved Oxygen Electrode "CALMEMO" OE-470AA	1m (standard)	For incubator bottle with stirring function (recommended for BOD measurement) JIS standard medium type TS19/22 (large diameter 18.8 mm, small diameter 16.6 mm, length 22 mm)
Dissolved Oxygen Electrode "CALMEMO" OE-470BA	1m (standard)	For incubator bottle, no-flow measurement
DO module	OEC-002	For OE-270AA with one-touch type featuring an integral construction made up of an electrode, membrane, and electrolysis solution.
Membrane set (3 pcs.)	OCC00001	OE-270AA
Membrane set (3 pcs.)	OCC00002	OE-270AA For high concentration DO measurement
Membrane set (3 pcs.)	OCC00023	OE-570BA
Membrane set (3 pcs.)	OCC00024	OE-570BA For high concentration DO measurement
Membrane set (3 pcs.)	OCC00003	OE-470AA
Membrane cartridges (5 pcs.)	OCT-2502	OE-470AA
Membrane set (3 pcs.)	OCC00022	OE-470BA
Electrolyte R-9 50mL (3 bottles)	OBG00007	For OE-270AA/570BA/470AA/470BA
Sodium sulfite 50g	143A030	For preparing zero solution

### pH/ORP Float built-in that allows exchange timing of internal solution to be judged at a glance.

Electrode name	Lead length	Note
pH combined electrode "CALMEMO" GST-2729C <span>Waterproof</span>	1m (standard)	DM-32P standard electrode is attached (lead length: 1m) Approval of type by Measurement Law: S992
	3m	
	5m	
	11m	
pH combined electrode GST-2739C <span>Waterproof</span>	1m (standard)	Approval of type by Measurement Law: S992
	3m	
	5m	
	11m	
pH combined electrode "CALMEMO" GST-5841S	1m (standard)	For organic solvent Approval of type by Measurement Law: S161
pH combined electrode "CALMEMO" ELP-040	1m (standard)	For hydrofluoric acid bath <sup>2</sup> Exchangeable chip type glass electrode Glass-electrode chip (5082L)
ORP combined electrode "CALMEMO" PST-2729C <span>Waterproof</span>	1m (standard)	
	5m	
	11m	
ORP composite electrode PST-2739C <span>Waterproof</span>	1m (standard)	
	5m	
	11m	
Prepared pH4.01 standard solution 500mL	143F191	
Prepared pH6.86 standard solution 500mL	143F192	
Prepared pH9.18 standard solution 500mL	143F193	
Reference electrode internal solution RE-4 50mL (3 bottles)	OBG00011	
ORP checking solution	143F196	pH4.01 standard solution 500mL+ quinhydrone powder
ORP electrode abrasive 10mL	AO-001	



<sup>2</sup> The glass electrode is affected by fluorinated acid solution. However, because this product is a exchangeable chip type glass electrode, a reduction in operating costs can be expected. In regards to measuring the 1% fluorinated acid solution (at 25°C, for 1 min.), approx. 1000 measurements can be performed.

# Specifications/Function Table

Product name	Portable electrical conductivity meter (for pure water)	Portable dissolved oxygen meter	Portable dissolved oxygen/pH meter	
Model name	CM-31P-W	DO-31P	DM-32P	
Measuring ch	—	—	ch1 (dissolved oxygen)	ch2 (pH / ORP)
JIS format (pH)	—	—	—	JIS type I
Type approval (pH)	—	—	—	No. SS101
Measurement method	Alternating current 2 electrode method	Membrane-type galvanic cell method	Membrane-type galvanic cell method	pH : Glass-electrode method ORP : Platinum-electrode method
Measurement range	Electrical conductivity : 5 $\mu$ S/m to 20 mS/m Electrical resistivity : 50 $\Omega \cdot$ m to 200 k $\Omega \cdot$ m Temp.: 0 to 80.0°C SI units (S/m, $\Omega \cdot$ m) Switchable to old units (S/cm, $\Omega \cdot$ cm) Automatic/manual range switching	When using a standard membrane. Dissolved oxygen : 0 to 20.00 mg/L Saturation : 0 to 200% Temp. : 0 to 50.0°C When using a high concentration membrane. Dissolved oxygen : 0 to 50.0 mg/L Saturation : 0 to 500% Temp. : 0 to 50.0°C	When using a standard membrane. Dissolved oxygen : 0 to 20.00 mg/L Saturation : 0 to 200% Temp. : 0 to 50.0°C When using a high concentration membrane. Dissolved oxygen : 0 to 50.0 mg/L Saturation : 0 to 500% Temp. : 0 to 50.0°C	pH : 0.00 to 14.00 ORP : -2000 to 2000mV Temp. : 0 to 100.0°C
Repeatability (instrument body)	Electrical conductivity : $\pm$ 0.5% FS Electrical resistivity : $\pm$ 0.5% FS Temp. : $\pm$ 0.2°C	When using a standard membrane. Dissolved oxygen : $\pm$ 0.03 mg/L Saturation : $\pm$ 2% When using a high concentration membrane. Dissolved oxygen : $\pm$ 0.2 mg/L Saturation : $\pm$ 2% Temp. : $\pm$ 0.2°C	When using a standard membrane. Dissolved oxygen : $\pm$ 0.03 mg/L Saturation : $\pm$ 2% When using a high concentration membrane. Dissolved oxygen : $\pm$ 0.2 mg/L Saturation : $\pm$ 2%	pH : $\pm$ 0.02pH ORP : $\pm$ 2mV Temp. : $\pm$ 0.2°C
Temperature compensation range	ATC (Auto Temp. Compensation) : 0 to 100.0°C MTC (Manual Temp. Compensation):0 to 100.0°C	ATC (Auto Temp. Compensation) : 0 to 50.0°C	ATC (Auto Temp. Compensation) : 0 to 50.0°C	ATC (Auto Temp. Compensation) : 0 to 100.0°C MTC (Manual Temp. Compensation):0 to 100.0°C
Data memory	1000 data			
Auto hold function	○ Determination of stability : Fixed			
Clock function	○ To be shown while conducting a measurement			
Interval function	○ The setting interval can be set from 1 sec. to 99.59 mins. or from 2 mins. to 99.59 hrs.			
Print function	○ Can be connected to an optional external printer EPS-P30 (plain paper)			
RS-232C interface (non-isolated)*1	○ Can be connected to a PC or external printer EPS-P30 (optional) (Computer and printer cannot be used at the same time.)			
Analog output (non-isolated)*1 *Connecting cable is a designated product by us.	Electrical conductivity/resistivity : 0 to 1V FS (range) Temp. : 0 to 100°C → 0 to 1V	Dissolved oxygen/saturation rate : 0 to 1V FS (range) Temp. : 0 to 100°C → 0 to 1V	Dissolved oxygen/saturation rate : 0 to 1V FS (range) Temp. : 0 to 100°C → 0 to 1V	pH : pH 0 to 14 → -700 to 700mV ORP : -2000 to 2000mV → -1 to 1V Temp. : 0 to 100°C → 0 to 1V
Waterproof construction	○ IP67 (enabled when sensor is connected and external I/O part is masked) *1m, immersion allowed for 30 mins			
Performance compensation temperature	0°C to 45°C (0°C to 40°C when using an optional AC adapter and external printer).			
Power supply	2 AA alkaline batteries/Ni-MH batteries or dedicated AC adapter (6VA optional)			
Power consumption (When using battery DC3V)*2	Approx. 0.009W	Approx. 0.014W	Approx. 0.014W	
Battery life (Reference)*3	Approx. 600 hrs.	Approx. 400 hrs. *4	Approx. 400 hrs. *4	
Dimensions	Approx. 68 (W) × 35 (H) × 173 (D) mm			
Weight (including batteries)	Approx. 280g	Approx. 280g	Approx. 300g	

\*1 If the sample is grounded, please use RS-232C and analog output in a insulated condition.

When RS-232C interface and analogue output are used simultaneously (real time), a special cable is required separately. Contact us for details.

\*2 This is the power consumption (current consumption) of the optional device (PC, printer, etc.) without connection.

\*3 When the optional device is connected, it is approximately twice the maximum depending on the model.

\*4 This is an estimated value obtained from the power consumption when optional equipment is not connected at room temperature and the battery capacity.

It varies depending on the battery performance used. If option devices are connected, the value might be approximately half, depending on the model

\*5 Except when the dissolved oxygen electrode with stirring function is connected.

## Standard accessories

CM-31P-W	DO-31P	DM-32P
Electrical conductivity cell CT-27111D (Lead length: 1m)*5 Flow cell (PP) CEF-22A*5 Hand strap OTZ00006 AA alkaline batteries (2 pcs.)*6 Instruction manual	DO electrode OE-270AA (Lead length: 3m)*5 Hand strap OTZ00006 AA alkaline batteries (2 pcs.)*6 Instruction manual	DO electrodes OE-270AA (Lead length: 3m)*5 pH Electrode GST-2729C (Lead length: 1m)*5 pH4.01 standard solution (100mL) pH6.86 standard solution (100mL) Internal solution for reference electrode RE-4 (50 mL) Poly beaker (50mL) 3 pcs. Hand strap OTZ00006 AA alkaline batteries (2 pcs.)*6 Instruction manual


\*5 This is not included when purchasing the main unit only.

\*6 This battery is supplied as a sample.

# Option

Item name	Code No.	Note
Data collection software	GP-LOG	Measurement data is saved to a PC in text format.
RS-232C connecting cable	118N062	For PC connection. Cable length 2m. A commercially USB serial converter cable is required separately when connecting to a USB port.
Analog output cable	118N063	Cable length 1.5m. External device connection side terminal (3 mm Y terminal).
External printer	EPS-P30	Plain paper print, chart wide approx. 60mm. Connecting cable (118N061) , Printer paper (1 vol.) , Ink ribbon (1 pc.) .
External printer paper	P000119	20 volumes, plain paper
Ink ribbon for an external printer	ORD00001	1 piece
Connecting cable for an external printer	118N061	If you already have an external printer (EPS-G/EPS-R) , the printer can be used with only this cable.
AC adapter	7269270K	AC100V
Electrode holder	7430850K	Not compatible with DO electrode.
Electrode stand	7430860K	With support and stopper.
Electrode attachment DP	0IB00007	Standard electrode for all P30 series products. Not compatible with DO electrode.
Anchor (AN-21P)	0IC00001	Can be used for waterproof immersion sensors with 5m lead length or more. Anchors for submersion.
Rope for AN-21P	0IZ00002	φ 1 SUS rope (12m) . Auxiliary rope when using an anchor.
Storage case (with shoulder strap)	0DA00001	Attached items such as body, sensor, and standard solution can be stored and carried.
Protective cover (with shoulder strap)	7258070K	Attached to the main unit to protect from impact such as dropping.
Soft case	SC-10P	Can be stored with the main unit and sensor connected.

## Mylana (P40 Series) Lineup




### Multi-type with a digital probe connectable

pH	ORP	Electrical conductivity	Electrical resistivity	Salinity (NaCl, PPS)	TDS (total dissolved solid)	Optical dissolved oxygen
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Portable multi-water quality meter

**MM-42DP**


2ch Type



Portable multi-water quality meter

**MM-41DP**

1ch Type



USB peripheral (PC connection supported)

External printer

Backlight

Data memory (1500 data)

Waterproof construction


USB feeding (Optional)

### Popular type that can measure pH, ORP and various ionic

pH	ORP	ION
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Handheld pH, Ion, ORP meter

**HM-40P**




Backlight

Data memory (1500 data)

Waterproof construction

Battery life Approx. 2000 hrs.

Please scan this QR code for more details about Mylana products.



We also have a separate detailed catalog. Please contact us for more information.



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**CAUTION**

Please read the operation manual carefully before using products.

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Specifications and prices are subject to change without notice.