P30 Series

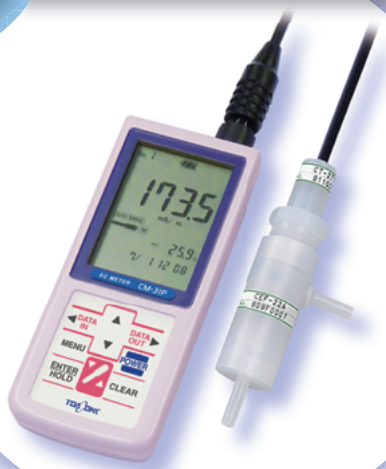
Portable -Water Quality Meter

Measurement at high precision in pure water area

Portable Electrical Conductivity Meter (for Pure Water)
CM-31P-W

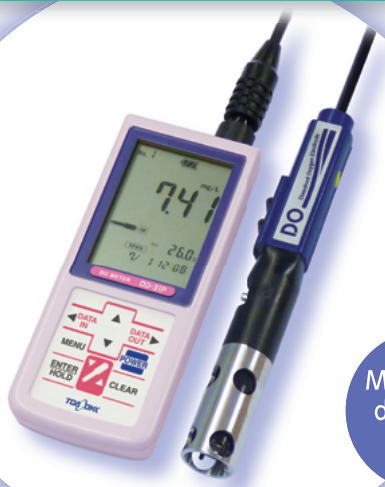
Electrical conductivity

Electrical resistivity



For measuring DO in the field and BOD

Portable dissolved oxygen meter
DO-31P



Membrane dissolved oxygen

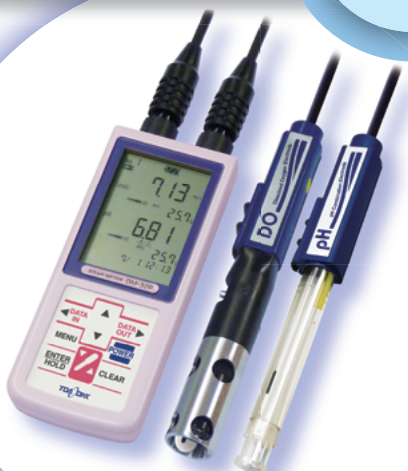
Portable dissolved oxygen/pH meter
DM-32P

2ch measurement of dissolved-oxygen and pH

ch1 Membrane 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

DKK-TOA CORPORATION

Sensor

"CALMEMO" sensor

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

Electrical conductivity

Flow-through type pure water measurement (immersion measurement is not possible)

Cell	Lead length	Note
Electrical Conductivity Cell "CALMEMO" CT-27111D	1m (typical)	Cells with CM-31P-W standards (Flow cell is an optional ※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: Diaphragm type galvanic battery method

Electrode name	Lead length	Note
Dissolved Oxygen Electrode "CALMEMO" OE-270AA Waterproofing	3m (typical)	DO-31P/DM-32P standard-attached electrode (lead length : 3m)
	5m	
	11m	
Dissolved Oxygen Electrode "CALMEMO" OE-570BA Waterproofing	3m (typical)	Measurement of no-flow velocity supported
	5m	
	11m	
Dissolved Oxygen Electrode "CALMEMO" OE-470AA	1m (typical)	For bottles with agitation function (recommended when measuring BOD) Recommended Furan Bottle: JIS Standard Medium TS19/22 (Large diameter 18.8mm, Small diameter 16.6mm, Length 22mm)
Dissolved Oxygen Electrode "CALMEMO" OE-470BA	1m (typical)	Flow rate-free measurement for Fluorine Bottle
DO modular	OEC-002	One-touch mounting type with OE-270AA dedicated electrode, membrane, and electrolyte integrated construction
Diaphragm set (3 pcs.)	0CC00001	OE-270AA
Diaphragm set (3 pcs.)	0CC00002	OE-270AA for measuring highly concentrated DO
Diaphragm set (3 pcs.)	0CC00023	OE-570BA
Diaphragm set (3 pcs.)	0CC00024	OE-570BA for highly concentrated DO
Diaphragm set (3 pcs.)	0CC00003	OE-470AA
Diaphragm cartridges (5 pcs.)	OCT-2502	OE-470AA
Diaphragm set (3 pcs.)	0CC00022	OE-470BA
Electrolyte R-9 50mL (3 bottles)	0BG00007	OE-270 AA/570 BA/470 AA/470 BA Common
Sodium sulfite 50g	143A030	For preparation of zero solution

pH/ORP

Built-in float that can be judged as a guide for internal liquid replacement.

Electrode name	Lead length	Note
pH combined electrode "CALMEMO" GST-2729C Waterproofing	1m (typical)	DM-32P standard-attached electrode (lead length: 1m) Measurement Method Type Approval Number: S992
	3m	
	5m	
	11m	
KCL Supply-type pH combined electrode GST-2739C Waterproofing	1m (typical)	Measurement Method Type Approval Number: S992
	3m	
	5m	
	11m	
pH combined electrode "CALMEMO" GST-5841S	1m (typical)	For the solvent of the machine containing Measurement Method Type Approval Number: S161
pH combined electrode "CALMEMO" ELP-040	1m (typical)	Fluoride※2 Glass Electrode Tip Replaceable Type Glass-electrode tip (5082L)
ORP combined electrode "CALMEMO" PST-2729C Waterproofing	1m (typical)	
	5m	
	11m	
ORP composite electrode PST-2739C Waterproofing	1m (typical)	
	5m	
	11m	
pH4.01 reference solution 500mL	143F191	
pH6.86 reference solution 500mL	143F192	
pH9.18 reference solution 500mL	143F193	
Comparative Inner Liquid RE-4 50mL (3 tubes)	0BG00011	
ORP checking solution	143F196	pH4.01 reference solution 500mL+ quinhydrone powder
Polish 10mL for ORP electrodes	AO-001	

※2 The glass electrode is immersed by a hydrofluoric acid solution, but the replacement of the tip reduces the running cost.
Approximately 1000 measurements can be performed with a 1% hydrofluoric acid solution at 25° C for a measurement time of 1 minute.

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)	—	—	—	Item SS101
Measurement method	AC bipolar method	Diaphragm galvanic battery method	Diaphragm galvanic battery method	pH : Glass-electrode method ORP : Platinum-electrode method
Measurement range	Electrical conductivity : 5μS/m to 20 mS/m Electrical resistivity : 50Ω·m to 200 kΩ·m Temperature: 0 to 80.0℃ As SI units (S/m, Ω•m) Switchable to old units (S/cm, Ω·cm) Automatic/manual range switching	[When using standard membrane]. Dissolved oxygen : 0 to 20.00 mg/L Saturation : 0 to 200% Temperature : 0 to 50.0℃ [When using a high-concentration membrane]. Dissolved oxygen : 0 to 50.0 mg/L Saturation : 0 to 500% Temperature : 0 to50.0℃	[When using standard membrane]. Dissolved oxygen : 0 to 20.00 mg/L Saturation : 0 to 200% Temperature : 0 to 50.0℃ [When using a high-concentration membrane]. Dissolved oxygen : 0 to 50.0 mg/L Saturation : 0 to 500% Temperature : 0 to 50.0℃	pH : 0.00 to 14.00 ORP : −2000 to 2000mV Temperature : 0 to 100.0℃
Repeatability (instrument body)	Electrical conductivity : ±0.5% FS Electrical resistivity : ±0.5% FS Temperature : ±0.2℃	[When using standard membrane]. Dissolved oxygen : ±0.03 mg/L Saturation : ±2% [When using a high-concentration membrane]. Dissolved oxygen : ±0.2 mg/L Saturation : ±2% Temperature : ±0.2℃	[When using standard membrane]. Dissolved oxygen : ±0.03 mg/L Saturation : ±2% [When using a high-concentration membrane]. Dissolved oxygen : ±0.2 mg/L Saturation : ±2%	pH : ±0.02pH ORP : ±2mV Temperature : ±0.2℃
The temperature compensation range	ATC (Automatic Temp. Compensate) : 0 to 100.0℃ MTC (Manual Temp. Compensation):0 to 100.0℃	ATC (Automatic Temp. Compensate) : 0 to 50.0℃	ATC (Automatic Temp. Compensate) : 0 to 50.0℃	ATC (Automatic Temp. Compensate) : 0 to 100.0℃ MTC (Manual Temp. Compensation):0 to 100.0℃
Data memory	1000 data			
Auto hold function	○ Determination of stability : Fixed			
Clock function	○ Measurement always displayed			
Interval function	○ The setting interval can be set from 1 second to 99 minutes and 59 seconds or from 2 minutes to 99 hours and 59 minutes.			
Print function	○ Can be connected to an optional external printer EPS-P30 (plain paper)			
RS-232 C interface (non-isolated) Note1	○ Can be connected to a PC or external printer EPS-P30 (optional) (Computers and printers cannot be used at the same time.)			
Analog output (non-isolated) Note1 *The connecting cable is designated by us.	Electrical conductivity/ resistivity : 0 to 1V FS (range) Temp : 0 to 100℃ → 0 to 1V	Dissolved oxygen/ saturation rate : 0 to 1V FS (range) Temp : 0 to 100℃ → 0 to 1V	Dissolved oxygen/ saturation rate : 0 to 1V FS (range) Temp : 0 to 100℃ → 0 to 1V	pH : pH 0 to pH 14 →−700 to 700mV ORP : −2000 to 2000mV →−1～1V Temp : 0 to 100℃ → 0 to 1V
Waterproof construction	○ IP67 (enabled when sensor is connected and external I/O part is masked) *1m, immersion allowed for 30 minutes			
Performance compensation temperature	0℃ to 45℃ (0℃ to 40℃ 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) Note2	About 0.009W	About 0.014mW	About 0.014W	
Battery Life (Reference) Note3	About 600 hours	Note4 for about 400 hours	Note4 for about 400 hours	
Dimensions	Approximately 68 (wide) × 35 (high) × 173 (deep) mm			
Weight (including batteries)	About 280g	About 280g	About 300g	

Note 1) Isolate RS-232C and analogue outputs when the sample is grounded.
When RS-232C interface and analogue output are used simultaneously (real time), a special cable is required separately. Contact us for details.
Note 2) This is the power consumption (current consumption) of the optional device (PC, printer, etc.) without connection.
When the optional device is connected, it is approximately twice the maximum depending on the model.
Note 3) Estimated value obtained from power consumption and battery capacity when optional equipment is not connected at normal temperature. Varies depending on the battery performance being used. When the optional device is connected, the maximum is approximately 1/2 depending on the model.
Note 4) 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) ※1 Flow Cell (PP) CEF-22A ※1 Hand strap 0TZ00006 AA Alkaline Batteries (2 pcs.) ※2 Ring instructions manual	DO Electrode OE-270 AA (Read length: 3m) ※1 Hand strap 0TZ00006 AA Alkaline Batteries (2 pcs.) ※2 Ring instructions manual	DO electrodes OE-270AA (lead length: 3m) ※1 pH Electrode GST-2729C (Lead Length: 1m) ※1 pH4.01 reference solution (100mL) pH6.86 reference solution (100mL) Solution within the reference electrode (50 mL) Poly beaker (50mL) 3 pcs. Hand strap 0TZ00006 AA Alkaline Batteries (2 pcs.) ※2 Ring instructions manual

※1 This item is not included when only the main unit is purchased.
※2 This battery is supplied as a sample.

Option

Item name	Code No.	Note
Data collection software	GP-LOG	The measured data is saved in a text format on a personal computer. ※After purchasing the product, register the user at our service site. Download free.
RS-232C connecting cable	118N062	For PC connection. Cable-length 2m. With a commercially available USB serial converter to connect to USB Separately required.
Analog output cable	118N063	Cable-length 1.5m. External device termina (3mmY terminal) .
External printer	EPS-P30	Plain paper print, chart-wide approx. 60mm. Connecting Cable (118N061) , Printer Paper (1 vol.) , with Ink Ribbon (1 pc.) .
External printer paper	P000119	20 volumes, plain paper
Ink ribbon for external printers	0RD00001	1 piece
Connection cable for the external printer	118N061	If you already have an external printer (EPS-G/EPS-R) , The printer can be used only with this cable.
AC adapter	7269270K	AC100V
Electrode holder	7430850K	Not compatible with DO.
Electrode stand	7430860K	With support and stopper.
Electrode attachment DP	0IB00007	P30 SeriesVarious standards. Not compatible with DO.
Anchors (AN-21P)	0IC00001	Waterproof immersion sensor supports lead length 5m or longer. Anchors for submersion.
Ropes for AN-21P	0IZ00002	ϕ1 SUS-rope(12m) . Auxiliary rope when using an anchor.
Storage case (with shoulder belt)	0DA00001	Attached items such as body, sensor, and standard liquid can be stored and carried.
Protective cover (with shoulder belt)	7258070K	This protective cover is attached to the main unit to protect it from impact such as dropping.
Soft case	SC-10P	This is a portable soft case that can be stored with the main unit and sensor connected.

Mylana (P40Series) Lineup

Mylana

Multi-type with a digital probe connectable

pH | ORP | Electrical conductivity | Electrical resistivity | Salinity (NaCl, PSS) | TDS (total dissolved solids) | Optical Dissolved oxygen

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

Handheld PH Ion ORP Meter
HM-40P

- Backlight
- Data memory (1500 data)
- Waterproof construction
- Battery life About 2000 hours

From this QR code
Mylana Details Can be seen

Detailed catalogs are available separately, so please contact us.

TOADKK

DKK-TOA CORPORATION

Overseas Sales Division:
DKK-TOA Corporation
29-10, 1-Chome, Takadanobaba, Shinjuku-ku, Tokyo 169-8648 Japan
Tel : +81-3-3202-0225 Fax : +81-3-3202-5685
E-mail : intsales@dkktoa.com

CAUTION Please read the operation manual carefully before using products.

https://www.toadkk.com/english

Specifications and prices are subject to change without notice.

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