

TOA DKK

mylana

P40 series
Handheld Water Quality Meter



MM-42DP / MM-41DP

pH

ORP

Conductivity

Optical DO

HM-40P

pH

ORP

Ion

DKK-TOA CORPORATION

Digital Probe



Automatically recognizes probe information
Multiple probe combinations are available
for 2ch type

pH ORP Conductivity Optical dissolved oxygen

Digital Communication Transmission (RS-485 Transmission)(For MM-42DP/41DP)



Easily replaceable electrode for pH and ORP probe



Lana

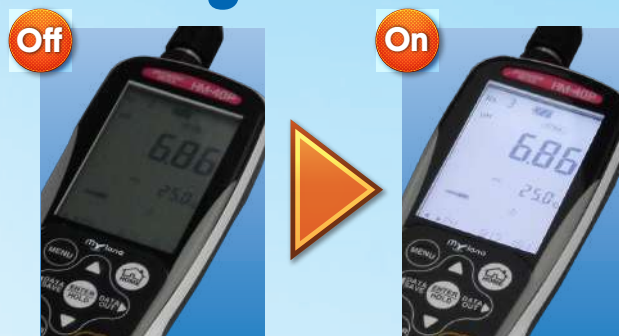
Portable
Slim design



Waterproof *1*2



Backlight



Memory Data Memory function

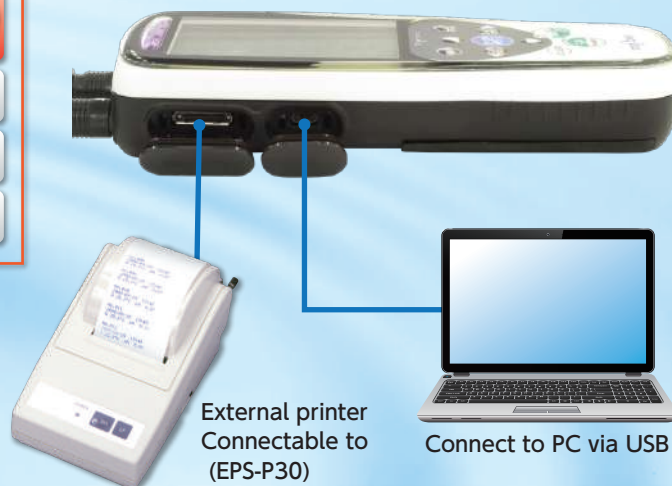
1500 Data memory available

Measurement time

Measurement value

Temperature

Expansion System extensibility
(For MM-42DP/41DP)



Mylana is a brand of the P40 series Handheld Multi-function Water Quality Meter from DKK-TOA. In Hawaiian "Lana" means "floating, quiet water surface". It is our wish that Mylana Water Quality Meter be used as your trusted partner.

*1 Disabled when probes or electrodes are not connected.

*2 Disabled when using external output or USB.(MM-42DP/41DP)

Multi-function type (Digital probe connectable)

pH

ORP

Conductivity

Resistivity

Salt
(NaCl, PSS)

TDS
(Total Dissolved Solid)

Optical DO

Handheld Multi-function Water Quality Meter

MM-42DP

2ch
Type



pH/Conductivity probe set



pH/DO probe set



With a Conductivity probe and a DO probe Combination allows automatic Salinity compensation

MM-41DP

1ch
Type



pH probe set



ORP probe set



Conductivity Probe Set



DO Probe Set

USB(PC connectable)

External Printer

Backlight

Data Memory (1500 data)

Waterproof

USB power supply (optional)

Set name	Combination probe	Order code
MM-42DP (2ch)	Main unit only	MM42DP-2-00A0
pH/Conductivity probe set*1	MM-42DP (main unit) + MM4-PH(1m) + MM4-EC(1m)	MM42DP-2-1AA0
pH/DO probe set*2 *3	MM-42DP (main unit) + MM4-PH(1m) + MM4-DDO (3m)	MM42DP-2-3AA0
MM-41DP (1ch)	Main unit only	MM41DP-2-00A0
pH probe set	MM-41DP (main unit) + MM4-PH(1m)	MM41DP-2-1AA0
	MM-41DP (main unit) + MM4-PH(3m)	MM41DP-2-1EA0
	MM-41DP (main unit) + MM4-PH(5m)	MM41DP-2-1IA0
	MM-41DP (main unit) + MM4-PH(11m)	MM41DP-2-1QA0
ORP probe set	MM-41DP (main unit) + MM4-ORP(1m)	MM41DP-2-2AA0
	MM-41DP (main unit) + MM4-ORP(5m)	MM41DP-2-2IA0
	MM-41DP (main unit) + MM4-ORP(11m)	MM41DP-2-2QA0
Conductivity probe set	MM-41DP (main unit) + MM4-EC(1m)	MM41DP-2-3AA0
	MM-41DP (main unit) + MM4-EC(5m)	MM41DP-2-3IA0
	MM-41DP (main unit) + MM4-EC(11m)	MM41DP-2-3QA0
DO probe set*3	MM-41DP (main unit) + MM4-DDO(3m)	MM41DP-2-4EA0
	MM-41DP (main unit) + MM4-DDO(1m)	MM41DP-2-4AA0
	MM-41DP (main unit) + MM4-DDO(5m)	MM41DP-2-4IA0
	MM-41DP (main unit) + MM4-DDO(11m)	MM41DP-2-4QA0

*1 When purchasing a combination other than the EC probe (MM4-EC) with a lead length of 1 m, MM4-EC arrangement is required separately.

*2 When purchasing a combination other than the DO probe (MM4-DDO) with a lead length of 3 m, MM4-DDO arrangement is required separately.

*3 The standard length of the lead wire for the DO probe (MM4-DDO) is 3 m.

For other combinations, please contact us separately.

Order code example
(pH probe set)

MM41DP-2-1A

- ① Description form..... A : Standard (Japanese operation manual), B : English operation manual, C : Korean operation manual
 ② Examination of Individual units (pH only)..... 0 : None, 1 : Only main unit, 2 : Main unit + pH electrode
 3 : Main unit + pH electrode (with inspection stamp and certificate)

* MM4-PH probe and instrument body are required for each pH examination.

If the main body is MM-41DP, please prepare one MM4-PH; if the main body is MM-42DP, please arrange two MM4-PH.

Versatile type

pH

ORP

Ion

Handheld pH, Ion, ORP Meter HM-40P



pH electrode set



ORP electrode set

Backlight

Data Memory (1500 data)

Waterproof

Battery life (Approx. 2000 hours)

Set name	Combined electrode	Order code
HM-40P	Main unit only	HM40P-1-00A0
pH electrode set	HM-40P (main unit) + GST-2739C (1m)	HM40P-1-1CA0
	HM-40P (main unit) + GST-2739C (3m)	HM40P-1-1EA0
	HM-40P (main unit) + GST-2739C (5m)	HM40P-1-1IA0
	HM-40P (main unit) + GST-2739C (11m)	HM40P-1-1QA0
ORP electrode set	HM-40P (main unit) + PST-2739C (1m)	HM40P-1-2AA0
	HM-40P (main unit) + PST-2739C (5m)	HM40P-1-2IA0
	HM-40P (main unit) + PST-2739C (11m)	HM40P-1-2QA0

* For other combinations, please contact us separately.

Order code
example
(pH electrode set)

HM40P-1-1C A 0

- ① Description form..... A : Standard (Japanese operation manual), B : English operation manual, C : Korean operation manual
- ② Examination of Individual units (pH only)..... 0 : None, 1 : Only main unit, 2 : Main unit + pH electrode, 3 : Main unit + pH electrode (with inspection stamp and certificate)

P30 series Conductivity Meter for pure water and Membrane-type DO Meter also available

Handheld Conductivity Meter (For pure water) CM-31P-W



Conductivity
Resistivity

Includes Conductivity cell for pure water (CT-27111D) and Flow cell (CEF-22A (PP))

Handheld DO Meter DO-31P



Membrane-type DO

Includes Immersion type DO electrode (OE-270AA)

Handheld DO/pH Meter DM-32P



ch1

Membrane-type DO

ch2

pH

ORP



Includes Immersion type DO electrode (OE-270AA) pH Composite Electrode (GST-2729C)

We also have a separate catalog for the P30 series. Please contact us for more information.

Probes, electrodes

◆pH / ORP

For MM-42DP / MM-41DP



Probe	Lead length	Order code	Sample requirement*1	Remarks
pH probe MM4-PH 	1m (standard)	MM4PH -1-A0	3mL	Replacement pH combined electrode*2 ELP-072
	3m	MM4PH -1-E0		
	5m	MM4PH -1-I0		
	11m	MM4PH -1-Q0		
ORP probe MM4-ORP 	1m (standard)	MM4ORP-1-A	3mL	Replacement ORP combined electrode ELM-027
	5m	MM4ORP-1-I		
	11m	MM4ORP-1-Q		



*1 This is the capacity when using the smallest container into which the electrode can be inserted.

*2 The replacement pH composite electrode with the pH probe is not certified. Please contact us for details.

For HM-40P

Electrode	Lead length	Order code	Sample requirement*1	Remarks
pH combined electrode GST-2739C 	1m (standard)	GST2739C-1-CN0	3mL	
	3m	GST2739C-1-EN0		
	5m	GST2739C-1-IN0		
	11m	GST2739C-1-QN0		
pH combined electrode GST-5841S	1m	GST5841S-0-AN0	3mL	For organic solvent
pH combined electrode ELP-040	1m	ELP040 -0-AN	30mL	For hydrofluoric acid bath*3 Glass electrode chip replaceable Glass electrode chip 5082L
pH combined electrode GST-5821C	1m	GST5821C-0-AN0	1mL	General, Glass body
ORP combined electrode PST-2739C 	1m (standard)	PST2739C -1-AN	3mL	
	5m	PST2739C -1-IN		
	11m	PST2739C -1-QN		

*1 This is the capacity when using the smallest container into which the electrode can be inserted.

*3 The glass electrode is affected by fluorinated acid solution. However, because this product is a replaceable type glass electrode tip, a reduction in operating costs can be expected. In regards to measuring the 1% fluorinated acid solution (at 25°C, for 1 min.), approximately 1000 measurements can be performed.

Order code example
(pH combination electrode)


GST2739C-1-CN Examination of Individual units (pH only) 0 : None, 1 : Inspection mark affixed
2 : Inspection mark and approval certification affixed

Product name	Order code
Prepared pH4.01 standard solution, 500 mL	143F191
Prepared pH6.86 standard solution, 500 mL	143F192
Prepared pH9.18 standard solution, 500 mL	143F193
Reference electrode internal solution RE-4 50 mL (3 bottles)	0BG00011
ORP check solution (pH4.01 standard solution 500 mL + quinhydrone powder)	143F196
Abrasive for ORP electrode 10 mL	AO-001



◆Conductivity

For MM-42DP / MM-41DP

Probe	Lead length	Order code	Sample requirement*1
Conductivity Probe MM4-EC 	1m (standard)	MM4EC - 1 - A	32mL or more (The volume is to fill Φ20mm×100mm)
	5m	MM4EC - 1 - I	
	11m	MM4EC - 1 - Q	



Product name	Order code
Conductivity Cell Check Solution 0.1mol/kg 250 mL (2 bottles) 1282 mS/m at 25 °C	143A143

Conductivity Cell Check Solution

5 *1 This is the capacity when using the smallest container into which the electrode can be inserted.

◆ Dissolved Oxygen

For MM-42DP / MM-41DP

Probe	Lead length	Order code
Optical DO probe MM4-DDO	1m	MM4DDO - 0 - A
	3m (standard)	MM4DDO - 0 - E
	5m	MM4DDO - 0 - I
	11m	MM4DDO - 0 - Q



Immersion / drop-in type



For Lab / incubator bottle



Product name	Order code	Remarks
Sodium sulfite 50g	143A030	Used for preparing zero solution
Replacement sensor cap	7595230K	
Stirrer attachment set	7609650K	Attachment A (Full length 25mm:100mL for incubator bottle compatible) Attachment B (Full length 50mm:200mL for incubator bottle compatible), Stirring
Stirrer	ST-8	For sample stirring



Replacement sensor cap



Please use incubator bottle tapered standard TS19/22 (100mL or 200mL capacity)

Ion For HM-40P

Electrode	Ion replacement chip	Measurement range (Optimal pH range)	Interference of coexisting ion*1 / Remarks
Fluoride ion combined electrode F-2021	F-200 (Solid Membrane)	0.019 to 19,000mg/L (pH5 to 6)	F ⁻ OH ⁻ =10 ¹ HPO ₄ ²⁻ , HCO ₃ ⁻ =10 ³ (pH 7~8) Cl ⁻ , Br ⁻ , I ⁻ , NO ₃ ⁻ , SO ₄ ²⁻ , S ₂ O ₃ ²⁻ =10 ⁵
Chloride ion combined electrode CL-2021	CL-200B (Solid Membrane)	1 to 35,000mg/L (pH5 to 6)	Cl ⁻ S ²⁻ =Non-coexisting CN ⁻ , I ⁻ =10 ⁻⁵ Br ⁻ , S ₂ O ₃ ²⁻ =10 ⁻² NO ₃ ⁻ , SO ₄ ²⁻ , CO ₃ ²⁻ , PO ₄ ³⁻ , F ⁻ =10 ³
Cyanide ion combined electrode CN-2021	CN-200B (Solid Membrane)	0.003 to 26mg/L (pH12 to 13)	CN ⁻ S ²⁻ =Non-coexisting I ⁻ =10 ⁻¹ S ₂ O ₃ ²⁻ =10 ¹ Br ⁻ =10 ³ NO ₃ ⁻ , SO ₄ ²⁻ , PO ₄ ³⁻ =10 ⁴ CO ₃ ²⁻ , Cl ⁻ , F ⁻ =10 ⁵
Sodium ion combined electrode NA-2011	NA-100B (Glass Membrane)	2.3 to 23,000mg/L (pH10 to 11)	Na ⁺ Mg ²⁺ , Ca ²⁺ , Zn ²⁺ , NH ₄ ⁺ , K ⁺ , Li ⁺ =10 ³
Potassium ion combined electrode K-2031	K-300B (Liquid Membrane)	0.39 to 3,900mg/L (pH5 to 6)	K ⁺ H ⁺ =10 ² NH ₄ ⁺ =3×10 ² Na ⁺ =2×10 ³ Li ⁺ =10 ⁴
Calcium ion combined electrode CA-2031	CA-300 (Liquid Membrane)	0.4 to 40,000mg/L (pH5 to 6)	Ca ²⁺ Pb ²⁺ , Zn ²⁺ =10 ¹ Mn ²⁺ =10 ² Cu ²⁺ , Mg ²⁺ , Cd ²⁺ , Ba ²⁺ , Fe ²⁺ =10 ³ Ni ²⁺ =10 ⁴
Nitrate ion combined electrode N-2031	N-300 (Liquid Membrane)	0.62 to 62,000mg/L (pH5 to 6)	NO ₃ ⁻ I ⁻ =10 ⁻³ Br ⁻ , NO ₂ ⁻ =10 ⁰ Cl ⁻ =10 ¹ CH ₃ COO ⁻ , SO ₄ ²⁻ , CO ₃ ²⁻ , F ⁻ =10 ²
Ammonia electrode AE-2041 (Membrane electrode)	-	0.09 to 1,800mg/L (pH12 or more)	NH ₄ ⁺ Volatile amines
Carbon Dioxide electrode CE-2041 (Membrane electrode)	-	Dissolved gas 1.49 to 1,490mg/L	Dissolved gas:Volatile weak acid Atmosphere:Acidic gas Calibration cell (CGC-202L) and Calibration adapter (6791140K) is necessary.
Bromide ion combined electrode BR-2021	BR-200 (Solid Membrane)	0.8 to 80,000mg/L (pH5 to 6)	Br ⁻ S ²⁻ =Non-coexisting CN ⁻ , I ⁻ =10 ⁻⁴ S ₂ O ₃ ²⁻ , SCN ⁻ =10 ⁰ Cl ⁻ =10 ² NO ₃ ⁻ , SO ₄ ²⁻ , CO ₃ ²⁻ , F ⁻ =10 ⁴
Iodide ion combined electrode I-2021	I-200 (Solid Membrane)	0.01 to 127,000mg/L (pH5 to 6)	I ⁻ S ²⁻ , Reductive material=Non-coexisting CN=10 ⁰ S ₂ O ₃ ²⁻ =10 ¹ SCN ⁻ =10 ³ Br ⁻ =10 ⁴ NO ₃ ⁻ , CO ₃ ²⁻ , PO ₄ ³⁻ , Cl ⁻ , F ⁻ =10 ⁵
Cadmium ion combined electrode CD-2021	CD-200 (Solid Membrane)	0.01 to 1,120mg/L (pH5 to 6)	Cd ²⁺ Hg ²⁺ , Ag ⁺ , Cu ²⁺ =Non-coexisting Pb ²⁺ , Fe ³⁺ =10 ⁰ Cr ³⁺ =10 ² Na ⁺ , K ⁺ , Mg ²⁺ , Ca ²⁺ , Zn ²⁺ , Al ³⁺ =10 ⁵
Copper ion combined electrode CU-2021	CU-200 (Solid Membrane)	0.06 to 630mg/L (pH5 to 6)	Cu ²⁺ Ag ⁺ , Hg ²⁺ =Non-coexisting Fe ³⁺ =10 ⁻¹ Al ³⁺ =10 ¹ Cr ³⁺ =10 ² Ni ²⁺ =10 ³ Na ⁺ , Mg ²⁺ , Ca ²⁺ =10 ⁴
Silver ion combined electrode AG-2021	AG-200 (Solid Membrane)	0.1 to 108,000mg/L (pH5v6)	Ag ⁺ Hg ²⁺ =Non-coexisting Mg ²⁺ =10 ³ Ca ²⁺ , Cu ²⁺ , Pb ²⁺ , Cd ²⁺ , Zn ²⁺ =10 ⁴ Na ⁺ , K ⁺ =10 ⁶
Sulfide ion combined electrode S-2021	S-200 (Solid Membrane)	0.3 to 32,000mg/L (pH13 or more)	-

*1. Interference of coexisting ion (selectivity coefficient for 0.1 mol/L ion concentration)

If an ion coexists in the solution, it can cause data errors when measuring the targeted ion.

"A selectivity coefficient of 10x means that if the solution contains a coexistent ion that is 10 times greater than the value of the targeted ion that is measured, an error occurs in which the value of the targeted ion equals the coexistent ion value."

"If the concentration level of the coexistent ion is high enough to affect the measured values,

we recommend conducting pretreatment in order to prevent interference."



The ion sensor portion is a "Tip-Replaceable Electrode" (except membrane electrode) Lead length is 1 m (standard)

Ion sensor replacement liquid junction (10 pieces)	0LF00001	For all ion combination electrodes (except AE/CE-2041)
F Standard Solution F-1000 500mL	143F391	For F-2021 F:1000 mg/L
Cl Standard Solution CL-1000 500mL	143A281	For CL-2021 Cl:1000 mg/L
Na Standard Solution NA-1000 500mL	143E031	For NA-2011 Na:1000 mg/L
K Standard Solution K-1000 500mL	143B482	For K-2031 K:1000 mg/L
Ca Standard Solution CA-1000 500mL	143B481	For CA-2031 Ca:1000 mg/L
NO ₃ Standard Solution NO ₃ -1000 500mL	143C486	For N-2031 NO ₃ :1000 mg/L
NO ₃ -N Standard Solution NO ₃ -N 500mL	143C487	For N-2031 NO ₃ -N:1000 mg/L
NH ₄ Standard Solution NH ₄ -1000 500mL	143A041	For AE-2041 NH ₄ :1000 mg/L
NH ₄ -N Standard Solution NH ₄ -N 500mL	143A042	For AE-2041 NH ₄ -N:1000 mg/L
Carbon dioxide electrode calibration powder CGS-111 For 1 L (10 packs)	143D044	For CE-2041
Br Standard Solution BR-1000 500mL	143C483	For BR-2021 Br:1000 mg/L
I Standard Solution I-1000 500mL	143H091	For I-2021 I:1000 mg/L
Cd Standard Solution CD-100 500mL	143B500	For CD-2021 Cd:100 mg/L
Cu Standard Solution CU-100 500mL	143D043	For CU-2021 Cu:100 mg/L
Ionic strength adjuster TISAB-01 500mL For F*2	143A279	For F-2021 For general sample
Ionic strength adjuster TISAB-11 500mL For F*2	143A280	For F-2021 For sample containing metal ion (iron, aluminum etc.)
Ionic strength adjuster ISA-CL 500 mL For Cl, Br, I, Ag	143A334	For AG/CL/BR/I-2021
Ionic strength adjuster ISA-CN 500 mL For CN	143A335	For CN-2021
Ionic strength adjuster ISA-NA 500 mL For Na	143A338	For NA-2011
Ionic strength adjuster ISA-K 500 mL For K	143A337	For K-2031
Ionic strength adjuster ISA-CA 500 mL For Ca	143A333	For CA-2031
Ionic strength adjuster ISA-NO 500 mL For NO ₃	143A340	For N-2031
Ionic strength adjuster ISA-NH 500 mL For NH ₄	143A339	For AE-2041
Ionic strength adjuster ISA-CO 500 mL For CO ₂	143D045	For CE-2041
Ionic strength adjuster ISA-CU 500 mL For Cu, Cd	143A336	For CU/CD-2021
Ionic strength adjuster powder ISA-S For 100 mL (10 packs) For S	143A332	For S-2021
Reference electrode internal solution RE-1 100 mL	143F230	For the internal solutions of all ion combination electrodes (except AE/CE-2041) Reference external solution for CA-2031, I/S-2021
Reference electrode external solution RE-2 100 mL	143F238	Reference external solution for NA-2011, CL/BR/CN/CD/CU/AG/F-2021
Reference electrode external solution RE-3 100mL	143F239	Reference external solution for K/N-2031
Ammonia electrode internal solution RE-NH ₄ 50 mL (3 bottles)	0BG00005	For AE-2041
Carbon dioxide electrode internal solution RE-11 500 mL	143D042	For CE-2041
Ammonia electrode replacement membrane (10 membranes)	AE-FILM	For AE-2041
Carbon dioxide electrode membrane cartridge (4 cartridges)	CTC-211	For CE-2041
Carbon dioxide electrode calibration cell	CGC-202L	For CE-2041
Calibration adapter For Carbon dioxide electrode	6791140K	For CE-2041

*2. 1143A279 (TISAB-01): For general sample 143A280 (TISAB-11): For sample containing metal ion (iron, aluminum etc.)

Note 1) The ion electrode does not have temperature measurement function. Measurable solution temperature range is 0 to 50 °C.

Note 2) The batch measurement method is primarily used to conduct ion measurements. This method is conducted after sampling, which uses beakers and other apparatuses.

In addition to the electrode, standard solution, ion strength adjuster, reference electrode external solution, and Electrode Holder/Stand are necessary for ion measurement.

Note 3) Make sure to contact us before you conduct ion measurements, because when there are coexisting samples, it can be difficult to conduct ion measurements.

Note 4) We do not sell cyanide, silver, and sulfide ion standard solutions. Customers are suggested to prepare following the steps listed in the instruction manual.

Options

Product name	Order code	Remarks
Data acquisition software	GP-LOG	Save the measured data in the form of text on a personal computer using USB. (Commercially available USB cables (USB2. 0, Micro) are required separately.) Supported operating systems: Windows 10/8/7 v2. 1 and later, Compatible models: MM-42DP, MM-41DP
USB communication cable	7473100K	For PC connection, cable length 2m. Compatible models: MM-42DP, MM-41DP
Analogue output cables ASSY	7585320K	Cables length 1.8 m. External device connection side terminal (3 mmY terminal). Compatible models: MM-42DP, MM-41DP (Analog Output Cable for P30-series cannot be used.)
External printer	EPS-P30	Plain paper printing. Chart width approx. 60mm. Include connection cable (118N061), printer paper (1 roll), and ink ribbon (1 piece) Compatible models: MM-42DP and MM-41DP
External printer paper	P000119	20 rolls, Plain paper
Ink ribbon for external printer	ORD00001	1 piece
Connection cable for external printer	118N061	If you already have external printer (EPS-G/EPS-R), The printer can be used with only this cable.
AC-USB adapter ASSY	7472510K	Cable length 2m. For USB power supply. Compatible models: MM-42DP and MM-41DP
Electrode holder	7430850K	
Electrode stand	7430860K	With stand, stopper, strut
Electrode attachment MM	7596030K	Compatible probes: MM4-PH, MM4-ORP, MM4-EC, MM4-DDO
Electrode attachment DP	01B00007	Compatible electrodes: GST-2739C, ELP-040, PST-2739C, and various ion electrodes (excluding AE/CE-2041)
Electrode attachment G	01B00004	For desktop sensors
Stirrer	ST-8	For sample stirring
Anchor (MM)* ¹	7596010K	Supports lead length 5m or more. Anchor for submersion of the probe. Compatible probes: MM4-PH, MM4-ORP, MM4-EC, MM4-DDO
Anchor (AN-21P)* ¹	01C00001	Supports lead length 5m or more. Anchor for submersion of the electrode. Compatible electrode: GST-2739C, PST-2739C
Stick holder (MM)	7596020K	When you cannot get close to the measurement point or when there is a large height difference, you can safely take measurements in a comfortable position. Compatible probes: MM4-pH, MM4-ORP, MM4-EC, MM4-DDO
Stick holder (SH-21P)	01B00009	When you cannot get close to the measurement point or when there is a large height difference, you can safely take measurements in a comfortable position. Compatible electrode: GST-2739C, PST-2739C
φ15US rope	01Z00002	The rope length is 12m. Auxiliary rope when the anchor is used. Both 7596010K and 01C00001 anchors can be used.
Storage case (with shoulder belt)* ²	0DA00001	This portable soft case allows you to store the main unit when it is connected to a sensor.
Soft case	SC-10P	This is a portable soft case that can be stored with the main unit and sensor connected.

*1. Before using, prepare a wire rope such as our product "01Z00002" in advance. *2. The design for the storage case may vary.



Specifications/Functions Table

◆Handheld Multi-function Water Quality Meter MM-42DP (2ch)/ MM-41DP (1ch)

Measurement method	pH	Glass electrode method	
	ORP	Platinum electrode method	
	Conductivity	AC 2-Electrode Method	
	DO	Optical	
	Temperature	Thermistor resistor	
Display unit		Custom LCD with backlight	
Measurement Item/Range	pH	pH0.000 to pH14.000	
	mV(ORP)	-2000 to 2000mV	
	Conductivity	0.1mS/m to 10S/m	
	Resistivity	0.1 Ω·m to 10kΩ·m (converted from Conductivity)	
	Salinity (NaCl, PSSs: Practical Salinity) TDS (total dissolved solid)	Conversion from Conductivity	
	DO/Saturation	0.00 to 20.00mg/L or 0.0 to 200.0%	
	Temperature	0.0 to 100.0°C When using DO probes: 0.0 to 50.0°C	
Display Range	pH	pH-2.000 to pH16.000	
	mV(ORP)	-2200 to 2200mV	
	Conductivity (manual/automatic range switching)	0.000 to 2.000mS/m (0.00 to 20.00μS/cm) 0.00 to 20.00mS/m (0.0 to 200.0μS/cm) 0.0 to 200.0mS/m (0.000 to 2.000mS/cm) 0.000 to 2.000S/m (0.00 to 20.00mS/cm) 0.00 to 20.00S/m (0.0 to 200.0mS/cm) Switchable between SI unit (S/m) and old unit (S/cm)	
	Resistivity (manual/automatic range switching)	0.005 to 2.000 Ω·m (0.5 to 200.0Ω·cm) 0.00 to 20.00 Ω·m (0.000 to 2.000kΩ·cm) 0.0 to 200.0 Ω·m (0.00 to 20.00kΩ·cm) 0.000 to 2.000kΩ·m (0.0 to 200.0kΩ·cm) 0.00 to 20.00kΩ·m (0.000 to 2.000MΩ·cm) 0.0 to 200.0kΩ·m (0.00 to 20.00MΩ·cm) 0.000 to 2.000MΩ·m (0.0 to 200.0MΩ·cm) Switchable between SI unit (Ω·m) and old unit (Ω·cm)	
	Salinity	0.00 to 4.04%(NaCl) 0.00 to 42.40psu(PSS)	
	TDS (total dissolved solid) (manual/automatic range switching)	0 to 99.99 / 999.9 mg/L 0 to 9.999 / 99.99 / 999.9 g/L	
	DO/Saturation	0.00 to 22.00mg/L or 0.0 to 220.0%	
	Temperature	-5.0 to 110.0°C When using DO probes:-5.0 to 55.0°C	
	Repeatability (instrument body)	pH	±0.006pH
		mV(ORP)	±2mV
Conductivity/Resistivity Salinity/TDS (total dissolved solid)		±0.5% FS	
DO/Saturation		8 mg/L±0.1mg/L or 100%±1% When combined with MM4-DDO	
Temperature		Within ±0.2°C	
pH Temperature Compensation Range		ATC (Automatic Temperature Compensation): 0 to 100.0°C MTC (manual Temperature Compensation): 0 to 100.0°C	
Conductivity Temperature Compensation scope		ATC (Automatic Temperature Compensation): 0 to 100.0°C MTC (manual Temperature Compensation): 0 to 100.0°C OFF (no Temperature Compensation)	
Conductivity Standard Temperature Setting		Fixed at 25°C	
Conductivity Temperature Coefficient (Linear)		0 to 10.00%/°C	
DO Temperature Compensation range		ATC (Automatic Temperature Compensation): 0 to 50.0°C	
pH calibration		JIS pH standard solution, US standard solution up to 5-point calibration or custom-made standard solution up to 2-point calibration	
Temperature Calibration		One-point calibration	
Performance Guaranteed Temperature, Humidity		0 to 45°C 20 to 90% (non-condensing) 0 to 40°C when the optional External Printer is used	
Waterproof structure		IP67(1m, immersion allowed for 30 minutes) Disabled when probes are not connected or using USB.	
Data Memory		MM-42DP: each ch 1500 data (measurement times, measurement values, Temperature) (When Data Memory is operated, the measured data of ch1 and ch2 are memorized simultaneously.) MM-41DP: 1500 data (measured time, measured value, Temperature)	
Calibration History Creation Function		Main unit side: Last 1 time Probe side: pH is 10 batches including the newest, and DO is 8 batches including the newest.	
Interval Measurement function *1		Setting interval: 1 second to 99 minutes 59 seconds or 5 minutes to 99 hours 59 minutes can be arbitrarily set.	
Print Function		Can be connected to optional External Printer EPS-P30 (Plain Paper Print)	
Auto Hold Function		Stable judgment value: Fixed	
Auto Power Off		OFF/10 min./30 min./60 min./180 min./360 min./720 min. settable	

USB (peripheral, Micro)		1 port standard equipment (isolated)
Analog output (insulate)*2	pH	pH0 to 14 → 500 to 1900mV
	mV(ORP)	-2000 to 2000mV → 200 to 2200mV
	Conductivity/Resistivity	Each range 0 to FS(2000 digit)→ 200 to 2200 mV
	Salinity (NaCl equivalent)	0.00 to 4.00% → 200 to 2200mV
	Salinity (PSS-78 equivalent)	0.00 to 40.00psu → 200 to 2200mV
	TDS	Each range 0 to FS(9999 digit)→ 200 to 2200 mV
	DO	0.00 to 20.00mg/L → 200 to 2200mV
	Saturation	0 to 200% → 200 to 2200mV
Temperature	0 to 100°C → 200 to 2200mV	
Power supply		AA batteries/rechargeable nickel-metal hydride batteries 2 pcs or USB-powered (no recharging function)*2
Battery life (estimate) *Backlight turns off, option not connected		When a pH or ORP probe is connected: Approx.800 hours When a Conductivity probe is connected: Approx. 500 hours When an optical DO probe is connected: Approx. 60 hours *2
Power consumption		0. 2VA (with battery 3V), 0. 9VA (with USB-powered)
Dimensions (projections not included)		Approx. 70 (W) × 35 (H) × 185 (D) mm
Main Unit Weight (including batteries)		MM-42DP: Approx. 300g MM-41DP: Approx. 290g

◆Handheld pH, Ion, ORP Meter HM-40P

Measurement method	pH	Glass electrode method
	ORP	Platinum electrode method
	Ion	Ion electrode method
	Temperature	Thermistor resistor
	Display unit	Custom LCD with backlight
Measurement Item/Range	pH	pH0.00 to pH14.00
	mV(ORP)	-2000 to 2000mV
	Ion	Depending on the sensor used
	Temperature	0.0 to 100.0°C Ion: Depends on the electrode used (Temperature measuring function is not available)
Display Range	pH	pH-2.00 to pH16.00
	mV(ORP)	-2200 to 2200mV
	Ion(Automatic range switching)	0.0 to 19.9 / 20 to 199 μg / L
		0.20 to 1.99 / 2.0 to 19.9 / 20 to 199 mg / L
	Temperature	0.20 to 1.99 / 2.0 to 19.9 / 20 to 199 / 200 to 999 g / L
Repeatability (instrument body)	pH	±0.02pH
	mV(ORP)	±2mV
	Ion	±0.5% FS
	Temperature	Within ±0.2°C
pH Temperature Compensation Range		ATC (Automatic Temperature Compensation): 0 to 100.0°C MTC (manual Temperature Compensation): 0 to 100.0°C
pH calibration		JIS pH standard solution, US standard solution up to 5-point calibration or custom-made standard solution up to 2-point calibration
Temperature Calibration		One-point calibration
Ion calibration		Up to 3-point calibration
Performance Guaranteed Temperature, Humidity		0 to 45°C 20 to 90% or less (non-condensing)
Data Memory		1500 data (measurement time, measurement value, Temperature)
Waterproof structure		IP67(1m, immersion allowed for 30 minutes) Disabled when electrodes are not connected
Calibration History Creation Function		Last 1 batch (When used with "Cal-Memo" pH/ionic electrodes, the last 2 calibrations can be saved, including those on the electrodes)
Interval Measurement function *1		Setting interval: 1 second to 99 minutes 59 seconds or 2 minutes to 99 hours 59 minutes can be arbitrarily set.
Auto Hold Function		Stable judgment value: Fixed
Auto Power Off		OFF/10 min./30 min./60 min./180 min./360 min./720 min. settable
Power supply		2 AA batteries/rechargeable NIMH batteries
Battery life (estimate) *Backlight turns off, option not connected		About 2,000 hours
Power consumption		0. 1VA (when using a battery 3V)
Dimensions (projections not included)		Approx. 70 (W) × 39 (H) × 188 (D) mm
Main Unit Weight (including batteries)		Approx. 300g

*1 It is effective for simplified monitoring in a short time (about half a day), etc.

*2 The use of AC-USB adapter ASSY (7472510K) is recommended for optional analogue-output connections and for continuous-measurement with DO probes because battery life is shortened (USB-powered).

Standard Accessories

MM-42DP

pH/Conductivity probe set

pH probe MM4-PH
 Conductivity probe MM4-EC
 pH6.86 standard solution 100 mL
 pH4.01 standard solution 100 mL
 Reference electrode internal solution 50 mL
 Polybeaker 50 mL (3 pieces)
 Connector protective cap
 AA alkaline dry battery (2 pieces)
 Operation manual

pH/DO probe set

pH probe MM4-PH
 DO probe MM4-DDO
 pH6.86 standard solution 100 mL
 pH4.01 standard solution 100 mL
 Reference electrode internal solution 50 mL
 Polybeaker 50 mL (3 pieces)
 Connector protective cap
 AA alkaline dry battery (2 pieces)
 Operation manual

MM-41DP

pH probe set

pH probe MM4-PH
 pH6.86 standard solution 100 mL
 pH4.01 standard solution 100 mL
 Reference electrode internal solution 50 mL
 Polybeaker 50 mL (3 pieces)
 AA alkaline dry battery (2 pieces)
 Operation manual

ORP probe set

ORP probe MM4-ORP
 Reference electrode internal solution 50 mL
 Polybeaker 50 mL (1 piece)
 AA alkaline dry battery (2 pieces)
 Operation manual

Conductivity probe set

Conductivity probe MM4-EC
 AA alkaline dry battery (2 pieces)
 Operation manual

HM-40P

pH electrode set

pH combination electrode GST-2739C
 pH6.86 standard solution 100 mL
 pH4.01 standard solution 100 mL
 Reference electrode internal solution 50 mL
 Polybeaker 50 mL (3 pieces)
 AA alkaline dry battery (2 pieces)
 Operation manual

ORP electrode set

ORP combination electrode PST-2739C
 Reference electrode internal solution 50 mL
 Polybeaker 50 mL (1 piece)
 AA alkaline dry battery (2 pieces)
 Operation manual

* If you are purchasing the main unit only, polybeaker 50mL(3 pieces), AA batteries and the operation manual will be included.
 (Connector protective cap is also attached for MM-42DP.)

* The default AA batteries are for testing.



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CAUTION

Please read the operation manual carefully before using products.

<https://www.toadkk.com/english>

Specifications and prices are subject to change without notice.