

HANDHELD ION/pH METER

Model: IM-22P

These instruments form part of the P20 series family of hand-held, waterproof meters.

**FEATURES**

• **Waterproof construction (IP67)**

Can be used outside in all weather conditions, no need to worry if the meter is dropped into rivers, lakes or seas. Sensor can be immersed to a depth of 10m (excluding certain special sensors).

• **Full validation supporting functions**

Supports ISO-14000/9001.

• **Built-in clock function**

Time and measured value are constantly displayed allowing real-time observation. Data storage enables recalling of measurement times. Easy confirmation of previous calibration time.

• **Data storage function built into sensor itself**

The sensor itself can store information including type, lot no. and calibration data. This information can be printed out when connected to an optional printer.

• **Calibration data display**

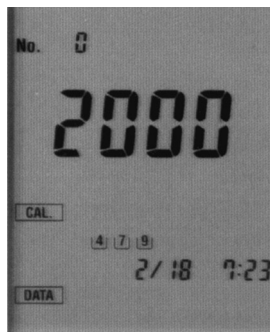
The latest calibration data and results can be displayed. In addition, data from previous calibration history is available from the built-in memory sensor "Calibration Memo". These features provide smooth operation and instrument management.

• **Calibration error display**

The sensor condition is automatically determined during calibration and an error code is displayed if a problem is detected. Maintenance and sensor replacement can be carried out exactly when required optimising instrument management.



Time is always displayed.

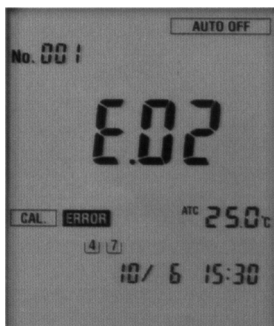


Latest calibrated update.

```
2000/02/18 07:33
[Electrode]
Type GST-2729C
Serial No.001F0001
```

```
[Set]
Model HM-21P
Serial No.82AK0001
```

```
[Calib. data]
1. 2000/02/18 07:23
pH 4.01 25.1°C
177 mV
pH 6.86 25.1°C
8 mV
pH 9.18 25.1°C
-129 mV
Slope
4 - 7 - 9
100%100%
```



Error No. display.

Example of printing on pH calibration record.



• **Dual channel versions available.**

Ion/pH version is available that can measure 2 parameters simultaneously.

• **Wide range of standard optional features.**

- Auto power off function on/off setting.
- JIS/International standards for pH solution selectable (pH meter).
- Keypad lock function.
- Temperature Calibration function (single point).
- Auto-hold function for automatic stability judgement of measured value.
- Optional external printer (uses plain paper).
- Optional data acquisition software (G-LOG2) allows data to be transferred to PC (CSV format). Once transferred to PC, the data can be manipulated and presented using third party software such as spreadsheets etc.

**EXPANDABLE FUNCTIONS**

Function	Specifications
AC adapter	: Uses an exclusive adapter
Printer output *	: Printer output
RS-232C interface*	
Communication method	: start/stop transmission.
Baud rate	: 9,600 bps Character.
Length	: 8 bit
Parity	: None
Stop bit	: 2
Analog output pH	: Specified PC connecting cable
ORP	: pH0~14→ ± 700mV.
Temp.	: 1999mV→ 1V
	: 0~99.9°C→ 0~1V.
	: Specified analog output cable

\* Can not be used simultaneously.

**OPTIONS**

For smooth field measurement, indoor measurement and/or data processing needs.

- **External printer EPS-G**

Uses normal paper suitable for long-term storage. 60mm effective chart.

- **Data acquisition software G-LOG2**

This enables the data to be downloaded in CSV format into a PC, enabling data management using third party software such as spreadsheets, databases etc..

- **RS-232C cable 2m long**

D-sub9P type connector at PC side.

- **AC adapter 0AA00001**

- **Electrode stand 01F00001**

- **Electrode holder 01B00001**

- **Electrode attachment tip 01B00007**

- **Stick holder**

Sensor with 5m or more lead wire is required.

- **Twin stick holder**

Enables use of two electrodes.

- **Anchor 01C00001**

For waterproof type pH, ORP, DO sensor or conductivity cell.

- **DC drive stirrer ST-1A**

For DO-21P or IM-22P.

- **Carrying case ODA00001**

Meter, sensor etc... are encased in this case.

- **Soft case SC-10P**

The meter with sensor connected is encased.

- **Analog output cable**

For connecting to recorder.

- **pH checker PC-1G**

- **Temp. check plug TC-1G**

\*\* Disconnectable from HM-20P/RM-20P

**SPECIFICATIONS**

<b>Measuring Method</b>	: glass & ion electrode
<b>Measuring Range</b>	: pH0.00~14.00, ORP: 0~±1999mV, 0.1μ~999g/L
<b>Repeatability</b>	: pH: ±0.02pH, ORP: ±2mV, Ion: ±1% rgd. ±1 digit
<b>Temperature</b>	: pH/ORP: 0~99.9°C, Ion: 0~45°C
<b>Temperature Compensation</b>	
pH	: auto/manual
ORP/ion	: Nil
<b>Calibration</b>	
pH/ion	: up to 3 points
<b>Data Storage</b>	: 200 data points x 2
<b>Temperature Calibration</b>	: 1 point calibration
<b>2ch Display</b>	: provided (1ch only available)
<b>Auto Hold Function</b>	: provided
<b>Interval Function</b>	: provided (5 secs.~99min.59secs.)
<b>Clock Function</b>	: provided
<b>Power Source</b>	: AA size dry battery x 2pcs.
<b>RS-232C Output</b>	: provided
<b>Analogue Output</b>	: provided
<b>Water Proof</b>	: IP67
<b>Ambient Temperature</b>	: 0~40°C
<b>Dimensions</b>	: Approx. 187.5(w) x 37.5(h) x 75(w) mm
<b>Weight</b>	: Approx. 320g

**STANDARD ACCESSORIES**

pH electrode GST-2729C (lead length 1m)	1 ea.
pH standard solution, 100ml, pH4.01	1 ea.
pH standard solution, 100ml, pH6.86	1 ea.
3.3mol/L KCL solution, 50ml	1 ea.
AA size dry battery	2 ea.

Selective ion electrodes and ORP electrode are separately sold.

**OPTIONS**

Sodium, chloride, bromide, iodide, cyanide, copper, silver, sulphur, fluoride, potassium, calcium, nitrate, ammonium, carbon dioxide electrodes

ORP electrode  
External printer  
AC adapter  
Analogue output cable  
Stick holder  
Carrying case

**DKK-TOA CORPORATION**

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**CAUTION**

Do not operate products before consulting instruction manual.