

# PH/ORP, DO, CD/TDS METER

Model : YK-2005WA

ISO-9001, CE, IEC1010

## FEATURES



- \* One meter for multi purpose operation :  
PH/ORP, DO, CD/TDS METER
- \* pH : 0 to 14.00 pH, ORP :  $\pm 1999$  mV.
- \* Conductivity : 200  $\mu$ S/2 mS/20 mS/200 mS.
- \* Dissolved oxygen : 0 to 20.0 mg/L.
- \* ATC (automatic temperature compensation).
- \* Real time data logger ( record year, month, date, hour, minute, second ), 16,000 data logger.
- \* Max., Min., Data hold.
- \* RS-232 computer interface
- \* Optional electrode :  
pH, ORP, CD/TDS, DO, ATC probe.
- \* Jumbo LCD display.
- \* DC 1.5V ( UM-3, AA ) x 4 PCs or DC 9V adapter in.
- \* Size : 203 x 76 x 38 mm.



**Lutron**

**LUTRON ELECTRONIC**

*The Art of Measurement*

# CONDUCTIVITY METER

Model : YK-2005WA

## 1. FEATURES

* One meter for multi purpose operation : PH/ORP, CD/TDS, Dissolved Oxygen.
* pH : 0 to 14.00 pH, ORP : ± 1999 mV.
* Conductivity : 200 uS/2 mS/20 mS/200 mS.
* Dissolved oxygen : 0 to 20.0 mg/L.
* Real time data logger ( record year, month, date, hour, minute, second ), 16,000 data logger.
* Real time data logger, build in clock ( hour-MIN-sec., year-month-date ).
* Auto data record, 16,000 Data logger no.
* Wide sampling time adjustment range from one second to 8 hours 59 minutes 59 seconds.
* RS232 computer interface.
* MAX, MIN, Data hold.
* RS-232 computer interface
* Can default auto power off or manual power off.
* Optional PH, ORP, CD/TDS, Dissolved Oxygen and ATC probe.
* DC 1.5V ( UM-3, AA ) x 4 PCs or DC 9V adapter in.
* PH meter function can select PH or ORP.
* PH measurement can select ATC or manual temperature adjustment.
* PH measurement can make the auto calibration for pH 7, pH 4 and pH 10 or other value.
* Conductivity measurement can select uS/mS or TDS
* Conductivity measurement can select Temp. Coefficient of measurement solution.
* ATC for the conductivity measurement.
* Dissolved oxygen meter use the polar graphic type oxygen probe with temperature sensor, high precision measurement for Dissolved Oxygen ( DO ) and temperature measurement.
* Heavy duty dissolved oxygen probe, probe head can connect with BOD bottle.
* DO use the automatic Temp. compensation.
* DO meter build in " % SALT " & " Mountain Height " compensation value adjustment.
* Super large LCD display with contrast adjustment for best viewing angle.
* Separate probe, easy for operation of different measurement environment.
* Wide applications: water conditioning, aquariums, beverage, fish hatcheries, food processing, photography, laboratory, paper industry, plating industry, quality control, school & college, water conditioning.

## GENERAL SPECIFICATIONS

Circuit	Custom one-chip of microprocessor LSI circuit.
Display	LCD size : 58 mm x 34 mm.
Measurement	PH/ORP Conductivity/TDS(Total Dissolved Solids) Dissolved Oxygen
Sampling Time of Data Logger	2 sec to 8 hour 59 min. 59 sec. @ Auto datalogger
Data Hold	Freeze the display reading.
Memory Recall	Maximum & Minimum value.
Power off	Auto shut off saves battery life or manual off by push Button. @ Can default auto power or manual power off. @ When default auto power function, power will off automatically after 10 MIN, if no Button be pressed.
Sampling Time of display	Approx. 1 second.
Data Output	RS 232 PC serial interface.
Operating Temperature	0 to 50 °C. - Main instrument.
Operating Humidity	Less than 80% R.H.
Power Supply * main instrument	DC 1.5 V battery ( UM3 ) x 4 PCs, ( Heavy duty type ). DC 9V adapter input. @ AC/DC power adapter is optional.
Power Current	Operatiron : Approx. DC 28 mA Clock ( power off ) : Approx. DC 1 uA.
Weight	365 g/ 0.8 LB. @ Battery is included.
Dimension	203 x 76 x 38 mm
Accessories Included	Instruction manual..... 1 PC Hard arrying case ( CA-06 )..... 1 PC
Optional Accessories	* PH electrode..... PE-03, PE-11, PE-01, PE06HD PE-04HD, PE-05T, PE-03K7 * ATC ( Automatic Temperature Probe )..... TP-07 * pH 7 buffer solution..... PH-07 * pH 4 buffer solution..... PH-04 * Conductivity probe..... CDPB-03 * 1.413 mS Conductivity Standard Solution..... CD-14 * Oxygen probe..... OXPB-11 * Spare Probe head with Diaphragm set ..... OXHD-04 * Probe-filling Electrolyte..... OXEL-03 * AC to DC 9V adapter. * RS232 cable, UPGB-02. * USB cable, USB-01 * Data Acquisition software, SW-U801-WIN. * Data Logger software, SW-DL2005.

## ELECTRICAL SPECIFICATIONS ( 23± 5 °C )

### A. PH/mV

PH Electrode	Optional, Any PH electrode with BNC connector.
Measurement	PH 0 to 14 PH mV -1999 mV to 1999 mV
Input Impedance	10 <sup>12</sup> ohm
Temperature Compensation for pH measurement	Manual 0 to 100 °C, be adjusted by push button on front panel. Automatic ( ATC ) With the optional temperature probe ( TP-07 ) 0 to 65 °C.
pH Calibration	PH7, PH4, and PH10, 3 points calibration ensure the best linearity and accuracy.
Optional probe and accessories	* PH electrode..... PE-03, PE-11, PE-01, PE06HD PE-04HD, PE-05T, PE-03K7 * ATC ( automatic temperature probe )..... TP-07 * pH 7 buffer solution..... PH-07 * pH 4 buffer solution..... PH-04 * ORP electrode..... ORP-14

### 2-2 Electrical Specifications ( 23 ± 5 °C )

Measurement	Range	Resolution	Accuracy
PH	0 to 14 PH	0.01 PH	± (0.02 PH + 2 d)
mV	0 to 1999 mV	1 mV	± (0.5% + 2 d)

\* PH accuracy is based on calibrated meter only.

### B. Conductivity

Conductivity probe	Optional, Carbon rod electrode for long life.
Function	* Conductivity ( uS, mS ) * TDS ( Total Dissolved Solids, PPM ) * Temperature ( °C, °F )
Temperature Compensation **	Automatic from 0 to 60 °C ( 32 - 140 °F ), with temperature compensation factor variable between 0 to 5.0% per C.
Probe Operating Temperature	0 to 60 °C.
Probe Dimension	Round, 22 mm Dia. x 120 mm length.
Optional probe and accessories	* Conductivity probe..... CDPB-03 * 1.413 mS Conductivity Standard Solution..... CD-14

### 1. Conductivity ( uS, mS )

Range	Measurement	Resolution	Accuracy
200 uS	0 to 200.0 uS	0.1 uS	
2 mS	0.2 to 2.000 mS	0.001 mS	± (2% F.S. +1d)
20 mS	2 to 20.00 mS	0.01 mS	* F.S. - Full scale
200 mS	20 to 200.0 mS	0.1 mS	

\* Temperature Compensation :  
Automatic from 0 to 60 °C ( 32 - 140 °F ), with temperature compensation factor variable between 0 to 5.0% per C.  
\* The accuracy is specified under measurement value ≤ 100 mS.  
\* mS - milli Simens \* @ 23± 5 °C

### 2. TDS ( Total Dissolved Solids )

Range	Measurement	Resolution	Accuracy
200 PPM	0 to 132 PPM	0.1 PPM	
2,000 PPM	132 to 1,320 PPM	1 PPM	± (2% F.S. +1d)
20,000 PPM	1,320 to 13,200 PPM	10 PPM	* F.S. - Full scale
200,000 PPM	13,200 to 132,000 PPM	100 PPM	

\* Temperature Compensation :  
Automatic from 0 to 60 °C ( 32 - 140 °F ), with temperature compensation factor variable between 0 to 5.0% per C.  
\* The accuracy is specified under measurement value ≤ 66,000 PPM.  
\* PPM - parts per million \* @ 23± 5 °C

### 3. Temperature

Function	Measuring Range	Resolution	Accuracy
°C	0 °C to 60 °C	0.1 °C	± 0.8 °C
°F	32 °F to 140 °F	0.1 °F	± 1.5 °F

\* @ 23± 5 °C

### C. Dissolved oxygen

Oxygen Probe	Optional, The polarographic type oxygen probe with
Measurement & Range	Dissolved Oxygen 0 to 20.0 mg/L ( liter ). Oxygen in Air 0 to 100.0 %. Temperature 0 to 50 °C.
Resolution	Dissolved Oxygen 0.1 mg/L. Oxygen in Air 0.1 % O2 Temperature 0.1 °C.
Accuracy ( 23± 5 °C )	Dissolved Oxygen ± 0.4 mg/L. Oxygen in Air ± 0.7% O2 Temperature ± 0.8 °C/1.5 °F.
Probe Compensation & Adj.	Temperature 0 to 50 °C, Automatic Salt 0 to 39 % Salt Height ( M, T. ) 0 to 8900 meter
Probe Weight	335 g/0.74 LB ( batteries & probe included )
Probe Size	190 mm x 28 mm Dia. ( 7.5" x 1.1" Dia. )
Optional Accessories	* Oxygen probe..... OXPB-11 * Spare Probe head with Diaphragm set ..... OXHD-04 * Probe-filling Electrolyte..... OXEL-03