

Digital Indicating ORP Meter

AER-101-ORP

- 48 x 96 mm, panel mounting type
- Drip-proof/Dust-proof IP66 (for front panel only)
- Power supply 24 V AC/DC available (user-specified)
- 2-points Contact output (Standard), additional 2 points (Optional)
- Proportional control, Max 4 points of relay contact
- Various settings & calibration via software communication (RS-485) (Optional)
- Cleansing output function



Name	Digital Indicating ORP Meter																																									
Model	<table border="1"> <tr> <td>AER - 1 0</td> <td>1</td> <td>-ORP</td> <td><input type="checkbox"/></td> <td>, <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Input points</td> <td>1</td> <td></td> <td></td> <td></td> <td>1 point</td> </tr> <tr> <td>Input</td> <td></td> <td>ORP</td> <td></td> <td></td> <td>ORP Combined Electrode Sensor</td> </tr> <tr> <td rowspan="2">Power supply voltage</td> <td></td> <td></td> <td></td> <td></td> <td>100 to 240 V AC (Standard)</td> </tr> <tr> <td>1</td> <td></td> <td></td> <td></td> <td>24 V AC/DC (*)</td> </tr> <tr> <td rowspan="2">Option</td> <td></td> <td>C5</td> <td></td> <td></td> <td>Serial communication RS-485</td> </tr> <tr> <td></td> <td>EVT3</td> <td></td> <td></td> <td>EVT3, EVT4 outputs (Contact output 3, 4)</td> </tr> </table> <p>(*) Power supply voltage 100 to 240 V AC is standard. When ordering 24 V AC/DC, enter 1 in Power supply voltage, after ORP.</p>		AER - 1 0	1	-ORP	<input type="checkbox"/>	, <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Input points	1				1 point	Input		ORP			ORP Combined Electrode Sensor	Power supply voltage					100 to 240 V AC (Standard)	1				24 V AC/DC (*)	Option		C5			Serial communication RS-485		EVT3			EVT3, EVT4 outputs (Contact output 3, 4)
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Measurement range	-2000 to 2000 mV Resolution: 1 mV																																									
Repeatability	Within ± 5 mV (at equivalent input)																																									
Linearity	Within ± 5 mV (at equivalent input)																																									
Input sampling period	125 ms																																									
Time accuracy	Within $\pm 1\%$ of setting time																																									
ORP inputs for moving average	1 to 120 times																																									
Contact output	Relay contact 1a Control capacity: 3 A 250 V AC (Resistive load), 1 A 250 V AC (Inductive load, $\cos\phi=0.4$) Electrical life: 100,000 cycles Output action: P control, ON/OFF control																																									
Transmission output	Converting ORP value or MV to analog signal every input sampling period, outputs the value in current. If Transmission output high limit and low limit are set to the same value, Transmission output will be fixed at 4 mA DC. Bar graph indication is possible in accordance with transmission output. Resolution: 12000 Output: 4 to 20 mA DC (Load resistance: Max. 550 Ω) Output accuracy: Within $\pm 0.3\%$ of Transmission output span																																									
Self-diagnosis	The CPU is monitored by a watchdog timer, and if an abnormal status occurs, the instrument is switched to warm-up status.																																									
Ambient temperature	0 to 50°C																																									
Ambient humidity	35 to 85 %RH (Non-condensing)																																									
Power supply voltage (user-specified)	AER-101-ORP: 100 to 240 V AC 50/60 Hz Allowable fluctuation range: 85 to 264 V AC AER-101-ORP 1: 24 V AC/DC 50/60 Hz Allowable fluctuation range: 20 to 28 V AC/DC																																									
Structure	Flush (Applicable panel thickness: 1 to 8 mm) Case: Flame-resistant resin Color: Black Front panel: Membrane sheet Drip-proof/Dust-proof IP66 (for front panel only)																																									
Protection structure	Overvoltage category II, Pollution degree 2 (IEC61010-1)																																									
Safety standards	RoHS directive compliant																																									
Dimensions	W48 x H96 x D110 mm, Case depth: 98.5 mm (when mounted through a control panel)																																									
Weight	Approx. 280 g																																									

Serial communication [C5 option]	The following operations can be carried out from an external computer.	
	(1) Reading and setting of various data	
	(2) Reading of the ORP value and status	
	(3) Function change, adjustment	
	(4) Reading and setting of user save area	
	Cable length	1.2 km (Max.), Cable resistance value: Within 50 Ω (Terminators are not necessary, but if used, use 120 Ω minimum on both sides.)
	Communication line	EIA RS-485
	Communication method	Half-duplex communication
	Communication speed	9600, 19200, 38400 bps (selectable by keypad)
	Synchronization method	Start-stop synchronization
	Code form	ASCII, Binary
	Communication protocol	Shinko protocol, MODBUS ASCII, MODBUS RTU (selectable by keypad)
	Data bit/Parity	8-bits/No parity, 7-bits/No parity, 8-bits/Even, 7-bits/Even, 8-bits/Odd, 7-bits/Odd (Selectable by keypad)
	Stop bit	1, 2 (Selectable by keypad)
Error correction	Command request repeat system	
Error detection	Parity check, Checksum (Shinko protocol), LRC (MODBUS protocol ASCII), CRC-16 (MODBUS protocol RTU)	
Data Format		
	Communication Protocol	Shinko Protocol MODBUS ASCII MODBUS RTU
	Start bit	1 1 1
	Data bit	7 7 (8) Selectable 8
	Parity	Even Even (No parity, Odd) Selectable No parity (Even, Odd) Selectable
	Stop bit	1 1 (2) Selectable 1 (2) Selectable

EVT3, EVT4 outputs (Contact output 3, 4) [EVT3 option]	Same as Contact output
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