

# Process Flat ORP Sensor with Modbus output MBRTU-ORPFLAT

SKU: MBRTU-ORPFLAT

Doc No: MBRTU-ORPFLAT-DS-EN-10

## Introduction

MBRTU-ORPFLAT is a general purpose in-line (continuous measurement) ORP sensor offering affordable, flat sensor application coverage for many water applications such as drinking water, industrial water, aquaculture, tank installations or related applications. The flat surface sensor is often referred to as "self-cleaning" when installed in a process stream since the water flow has a tendency to "shear off" biofouling and other debris from the sensor surface. Output is Modbus RTU for easily integrating with any PLC, controller, SCADA, BMS or IoT gateway.

- Robust ORP electrode for continuous measurement;
- Self-cleaning flat electrode;
- Standard ModbusRTU output;
- Plug & Play.

## Typical Applications

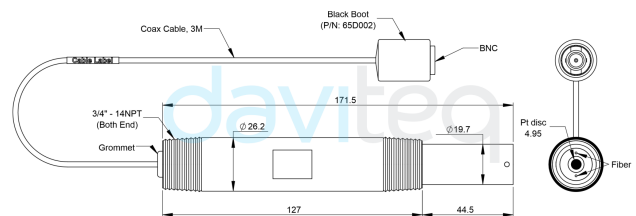
MBRTU-ORPFLAT is a cost effective method used to monitor a variety of processes. Common applications include disinfection using chlorine, ozone, and bromine. All of these species are strong oxidizers, so ORP is used as an indicator of sanitizing activity. ORP is also used in process applications to monitor destruction of chromate or cyanide, as well as in bleach production and wet scrubbers.

PROCESS ORP FLAT SENSOR  
MBRTU-ORPFLAT



MBRTU-ORPFLAT-H1.PNG

DIMENSION DRAWING OF MBRTU-ORPFLAT  
(Unit: mm)



MBRTU-ORPFLAT-H2.PNG

### MEASURING ORP IN WATER



MBRTU-ORPFLAT-H3.PNG

### ORP TRANSMITTER, DIN-RAIL MOUNT



MBRTU-ORPFLAT-H4.PNG

## Specification

ORP SENSOR SPECIFICATION	
Sensing Technology	Glass, combine electrode
Measuring range	+/- 2000 mV
Resolution	0.1 mV
Accuracy	+/- 1 mV
Working temperature	0 .. 100 oC (compensated)
Working pressure	0 .. 100 psig
Process connection	3/4" NPT both ends
Wetted parts	PVC
Sensor Cable	6m with BNC connector
Rating	IP68
Sensor Dimension	D27 x 172 (mm)
Sensor net weight	< 200 grams
ORP TRANSMITTER SPECIFICATION	
Inputs	mV
Output	RS485, ModbusRTU protocol, max 19200 baud
Power supply	9..36VDC, avg. < 200mA
Mounting	DIN Rail
Working temperature	-40 .. 85 oC
Working humidity	0 .. 95% RH, non-condensing
Housing	Engineered Plastic

Ingress Protection	IP20
Dimension	93 x 40 (mm)
Net weight	<200 grams

## Ordering Code

Item code	Descriptions
MBRTU-ORPFLAT-01	PROCESS ORP FLAT SENSOR IP68, 3/4" NPT SUBMERSIBLE, DIN-RAIL MOUNT TRANSMITTER WITH MODBUSRTU RS485 OUTPUT, 9-36VDC, 6M CABLE
<b>Accessories</b>	
RS485-FM12-USB-1	RS485 FEMALE M12 4-PIN, CODING A TO USB CABLE WITH POWER ADAPTER 12VDC/2.0A FOR CONFIGURATION
* Configuration cable for pH sensor, Windows' software is free. Contact our sales for more information.	

⚠ Link to download datasheet: <https://filerun.daviteq.com/wl/?id=Vy59lmYEtzVilaLxsjjDGpAwg799wMYI>

⚠ Link for manual:



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