

# Process Flat pH Sensor with Modbus output MBRTU-PHFLAT

SKU: MBRTU-PHFLAT

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

## Introduction

MBRTU-PHFLAT is a general purpose in-line (continuous measurement) pH 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 pH electrode for continuous measurement;
- Self-cleaning flat electrode;
- Standard ModbusRTU output;
- Plug & Play.

## Typical Applications

MBRTU-PHFLAT can be used for pH monitoring and control in the followings:

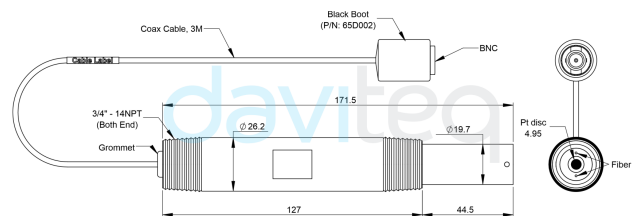
- Drinking water;
- Waste water;
- Industrial water;
- Aquaculture;
- ...

PROCESS PH FLAT SENSOR  
WITH TEMPERATURE COMPENSATION  
MBRTU-PHFLAT



MBRTU-PHFLAT-H1.PNG

DIMENSION DRAWING OF MBRTU-PHFLAT  
(Unit: mm)



MBRTU-PHFLAT-H2.PNG

### MEASURING PH IN WATER



MBRTU-PHFLAT-H3.PNG

### pH TRANSMITTER, DIN-RAIL MOUNT



MBRTU-PHFLAT-H4.PNG

## Specification

| pH SENSOR SPECIFICATION      |  |
|------------------------------|--|
| Sensing Technology           | Glass, combine electrode with Pt100 temperature sensor |
| Measuring range              | pH 0 .. 14   |
| Resolution                   | pH 0.1   |
| Accuracy                     | +/- 0.1  |
| 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  |
| pH TRANSMITTER SPECIFICATION |  |
| Inputs                       | pH and Pt100   |
| 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-PHFLAT-01   | PROCESS PH FLAT SENSOR WITH TEMPERATURE COMPENSATION 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=S2wQivqLtEFdY4di7gODEJEecRt3g0gv>

⚠ Link for manual:



Daviteq Technologies Inc



[www.daviteq.com](http://www.daviteq.com)



[info@daviteq.com](mailto:info@daviteq.com)

🕒 Revision #17

★ Created Fri, Mar 5, 2021 2:15 AM by [Lộc Vĩnh Nguyễn](#)

✎ Updated Sun, Mar 7, 2021 9:39 PM by [Kiệt Anh Nguyễn](#)