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WATER MONITORING SOLUTIONS

SENSORS & CONTROLLERS

ANALYZERS & SAMPLERS

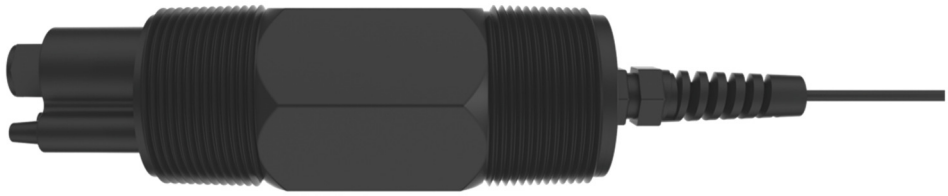
LEVEL, FLOW & PRESSURE

WEB APP & DATALOGGING

ACCESSORIES

# S406 DIFF/N DATASHEET

## DIFFERENTIAL ORP ELECTRODE



## MAIN FEATURES

- Reliable ORP measure thanks to the use of a process of digital measurement
- Communication of measurements via MODBUS RTU protocol
- Differential method of measurement enables a longer electrode life in time and in the most prohibitive applications
- Possibility to execute all the calibrations via MODBUS RTU serial port
- Black RYTON® sensor body
- Absence of moving mechanical parts
- Immediate installation and easy maintenance

These sensors are fully interchangeable with any ORP electrode and are suitable for use with any MODBUS RTU ORP meter. They are able to communicate the values of the measure ORP and Temperature via MODBUS RTU protocol, and you can perform all calibrations through the serial port.

## APPLICATIONS

ORP electrodes S406 DIFF/N are designed for measurements of ORP in heavy duty applications where ORP electrodes standards would not be able to work because the life of reference would be too short.

The S406 DIFF/N ORP sensor is constituted by a RYTON® body which houses the glass electrode for measuring the ORP, the reference electrode with a salt bridge, the temperature sensor, the earth contact of the solution and the electronic board of signal handling.

As already said, the S406 DIFF/N uses the proven technique of differential measurement in three electrodes, the ORP and the reference electrode are compared to a ground electrode for a rate measuring accuracy, even in chemical applications difficult. The bridge replaced and the tank can be refilled ensure a long service life in applications containing sulphide (H2S) and metals such as lead, mercury, and silver.

The electrode will maintain a constant potential in the reference cell dilution resisting the variations of pressure and temperature over time. Not surprisingly, examples of applications where differential ORP electrodes are the most suitable choice are: wastewater treatment plants, suspended solids fouling processes, processes with pollutants, processes with high concentrations of sulfides, coagulation and flocculation, scrubbers, galvanic processes, surface finishing, processes of elimination or recovery of heavy metals.

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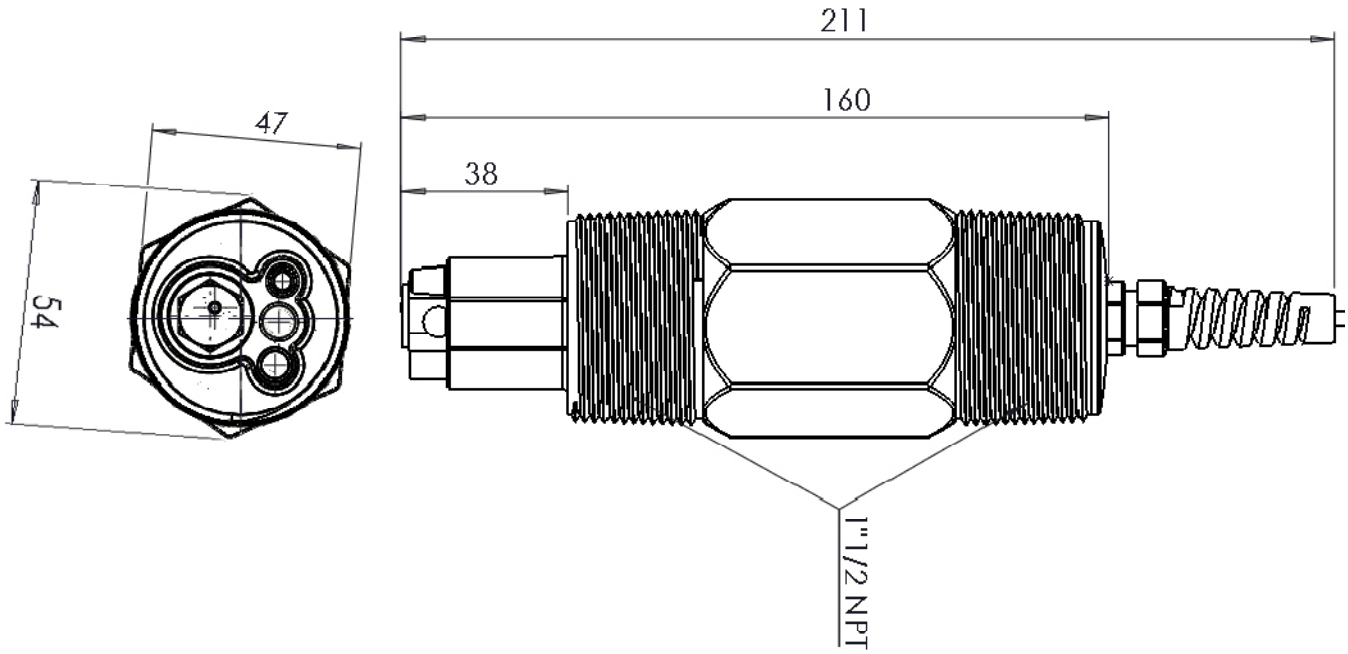
## TECHNICAL DATA

| | |
|---|---|
| Materials | • Ryton® body and saline bridge • Ceramic & PVDF junction • Viton® Orings<br>• Platinum electrode • Glass membrane • Nylon and NBR cable gland |
| Measuring electrode | Hemispherical glass membrane |
| Thread | 1-1/2 ”NPT |
| Measuring ranges | -1500mV…+1500mV |
| Measuring method | Differential |
| Resolution | ±1mV |
| Accuracy | ±5mV |
| Repeatability | ±5mV |
| Temperature probe | PT100 |
| Maximum refreshing time | < 1 second |
| Operating temperature | Immersion: -5 ... 70°C (21 ... 158°F)<br>Insertion: -5 ... 95°C (21 ... 203°F) |
| Max working pressure | 6.9 bar |
| Minimum operating conductivity | 50µS |
| Maximum absorption | 1W |
| Cable | 10m integral with sensor (more on request) |
| Mechanical protection | IP68 Sensor + cable |
| Power supply | 12… 24Vdc |
| Communication | RS485 Modbus |
| Dimensions (LxHxP): | 54x160x54mm |

## DIMENSIONS




## ORDER CODES

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|---|---|
| 9711110097 | S406/DIFF/N ORP Electrode for prohibitive apps 10m cable |