

DIGITAL SENSOR : REDOX ANNULAR

DIGISENS RANGE

Digital EHAN: redox potential & temperature

Digital technology for reliable measurements



- Combined sensor: Redox & Temperature
- Range of measure:
ORP: - 1000 to + 1000 mV;
T°C: 0.00 to + 50.00°C
- Cartridge changeable with plastogel
- Digital communication **Modbus RS-485**

Scope:

- Treatment of urban wastewater (entrance, aeration basin, exit).
- Industrial effluent treatment (process optimization nitrification / denitrification)
- Chains of deodorization

Physical and Chemical Technology:

The PONSEL sensor incorporates a reference electrode, used for ORP measurements, such as Ag / AgCl in saturated KCl electrolyte plasticized "PLASTOGEL" ®.

The electrolyte "PLASTOGEL" ® communicates directly with the external environment without interposition of capillary or porous. So there is no risk of clogging or defusing the reference.

The measuring electrode is in platinum (3,5mm²) presented in sealed ring on a glass rod and is for in-situ measurements continuously

Temperature: measures via CTN.

Digital communication / Integrated transmitter:

The PONSEL sensor connects to any type of recorder, transmitter, remote management system or PLC with a Modbus RS485 input. Thanks to indexing the sensor, over 200 sensors can be connected to a recorder.

Resistant to interferences: preamplification into the sensor and digital signal processing. All data regarding the calibration, the historic and users are saved directly in the digital EHAN sensor.

Mechanics:

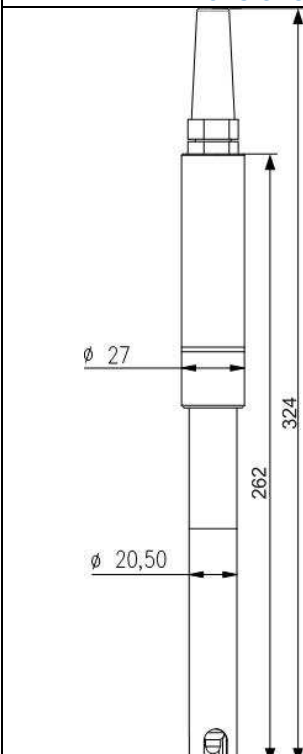
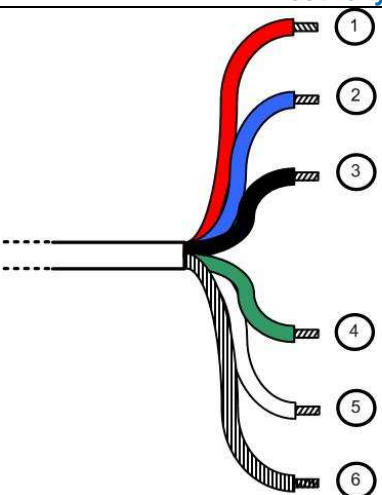
A handle in Delrin material ensures the mechanical strength of the sensor and the sealing of the cable.

Compact, robust and lightweight, the sensor can be used in portative or online version.

Technical data :

DIGITAL SENSOR : REDOX ANNULAR

| ORP Measure | |
|--|--|
| Principle of ORP measure | Combination Electrode (ORP/reference) platinumium ring, Reference Ag/AgCl. Gelled electrolyte (KCl) |
| Range of measures | - 1000.0 to + 1000.0 mV |
| Resolution | +/- 0.1 mV |
| Precision | +/- 10 mV |
| Answer time | < 90 s |
| Temperature measurement | |
| Principle of measure T°C | CTN |
| Temperature | 0,00 °C to + 50.00°C |
| Resolution | 0.01 °C |
| Precision | +/- 0.5 °C |
| T90 | < 300 s |
| Temperature of storage | 0°C to + 60°C |
| Protection scale | IP 68 |
| Interface signal | Modbus RS-485 standard and SDI-12 |
| Refresh rate measurement | Maximum < 1 second |
| Sensor power | 5 to 12 volts |
| Consumption | Standby : 25 µA Average RS485 (1 measure/second) : 20 mA Pulse current : 500 mA Heating time : 100 mS |
| Sensor | |
| Dimensions of sensor mounted | Mounted sensor length: gland (262 mm) not included ; Length with gland : 324 mm. |
| Weight | 350 g (sensor + cable) |
| Material in contact with the environment | PVC, POM-C,platinumium, Polyurethane |
| Maximum Pression | 5 bars |
| Cable/ connection | 9 armored connectors, polyurethane jacket, bare wires or waterproof metal Fischer connector |

| Dimensions | Electricity connection | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|-----|-----------|--------|--------|--------|------|----------|--------|-----------|----------|-----------|--------------|-----------|--------------|------------------|--------------|---------|-----------|----------|--------|-----------|----------|-----------|--------------|-----------|--------------|------------------|--------------|
|  |  <p>Length 15 to 100 m cable</p> <table border="1"> <tr> <td>RED</td> <td rowspan="5">Power, V+</td> </tr> <tr> <td>YELLOW</td> </tr> <tr> <td>ORANGE</td> </tr> <tr> <td>PURPLE</td> </tr> <tr> <td>PINK</td> </tr> <tr> <td>2 - Blue</td> <td>SDI-12</td> </tr> <tr> <td>3 - Black</td> <td>Power V-</td> </tr> <tr> <td>4 - Green</td> <td>B « RS-485 »</td> </tr> <tr> <td>5 - White</td> <td>A « RS-485 »</td> </tr> <tr> <td>6 - Green/Yellow</td> <td>Cable shield</td> </tr> </table> <p>Cable length up to 15m</p> <table border="1"> <tr> <td>1 - Red</td> <td>Power, V+</td> </tr> <tr> <td>2 - Blue</td> <td>SDI-12</td> </tr> <tr> <td>3 - Black</td> <td>Power V-</td> </tr> <tr> <td>4 - Green</td> <td>B « RS-485 »</td> </tr> <tr> <td>5 - White</td> <td>A « RS-485 »</td> </tr> <tr> <td>6 - Green/Yellow</td> <td>Cable shield</td> </tr> </table> | RED | Power, V+ | YELLOW | ORANGE | PURPLE | PINK | 2 - Blue | SDI-12 | 3 - Black | Power V- | 4 - Green | B « RS-485 » | 5 - White | A « RS-485 » | 6 - Green/Yellow | Cable shield | 1 - Red | Power, V+ | 2 - Blue | SDI-12 | 3 - Black | Power V- | 4 - Green | B « RS-485 » | 5 - White | A « RS-485 » | 6 - Green/Yellow | Cable shield |
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