

## 5081 (2-wire)

### **Model 5081 pH & ORP 2-Wire Loop-Powered Transmitter & Analyzer**



[\*\*pH/ORP/ISE Sensors WITHOUT preamplifier Hook-Up Schematic\*\*](#)

[\*\*pH/ORP/ISE Sensors WITH preamplifier Hook-Up Schematic\*\*](#)

[\*\*pH/ORP/ISE Sensors with Mini External Preamplifier Hook-Up Schematic\*\*](#)

[\*\*Guide to quick disconnect Q7M/Q7F snap cable system for Rosemount transmitters\*\*](#)

- The Transmitter has a rugged, weatherproof, corrosion-resistant enclosure.
- NEMA 4X and IP65 of epoxy-painted aluminum.
- This enclosure also meets NEMA 7B explosion-proof standards.
- 24V DC Operation Standard, 12 V minimum and 42.4 maximum.
- Continuous Diagnostics monitor sensor performance and warns of failure (FAULT) or approaching failure (WARNING).

- CE Certification for Class I, Division I Areas and FM group A-G.
- Automatic Two-Point Buffer Calibration reduces errors.
- Choice of Communication Protocol: HART® or Foundation Fieldbus.
- Non-Volatile Memory retains program settings and calibration data during power failures.
- Solution Temperature Compensation converts measured pH into the pH at 25°C.

### Product Specifications for Hart & Fieldbus (242K-PDF)

### 5081 pH/ORP Operation Manual (2,465K-PDF)

Measurement	Input	Measurement Range	Outputs	Calibration Points	Compatible Sensor(s)	Special Features
pH/ORP	<i>Single or Dual Channel</i> – pH/ORP	<ul style="list-style-type: none"> <li>– 0 to 14 pH (standard)</li> <li>– Fully Scalable from 1 to 13 pH units</li> </ul>	<ul style="list-style-type: none"> <li>– Analog 0-20 mA or 4-20 mA output for pH/ORP/ISE or temperature for each input channel</li> <li>– Optional HART or Profibus Digital Outputs</li> </ul>	<ul style="list-style-type: none"> <li>– 2 point auto buffer recognition for pH for slope determination</li> <li>– 1 point user defined pH standardize calibration to correct for offset (drift)</li> </ul>	<ul style="list-style-type: none"> <li>– Any Suitable ASTI pH/ORP Sensor with 100 or 1000 Ohm Platinum TC</li> <li>– Any Suitable ASTI pH/ORP Sensor with 100 or 1000 Ohm Platinum TC &amp; 1056 compatible preamplifier</li> </ul>	<ul style="list-style-type: none"> <li>– Excellent option for severe service pH &amp; ORP measurement in areas with flammable gas and corrosive environments.</li> </ul>
Contacting Conductivity	<i>Single or Dual Channel</i> – Conductivity Cell	<ul style="list-style-type: none"> <li>– Cell from 0.01 to 10.0, user selectable</li> <li>– Ranges from 0-200 microSiemens (0.01/cm) to 0-200 milliSiemens (10.0/cm) as mates with cell</li> </ul>	<ul style="list-style-type: none"> <li>– Analog 0-20 mA or 4-20 mA output for Conductivity or temperature for each input channel</li> <li>– Optional HART or Profibus Digital Outputs</li> </ul>	<ul style="list-style-type: none"> <li>– Zero Calibration (Capitance)</li> <li>– Cell Constant calibration to find exact effective (apparent) cell constant in standard solution or process media</li> </ul>	<ul style="list-style-type: none"> <li>– Any Suitable Contacting Conductivity Sensor with 1000 Ohm Platinum TC</li> </ul>	<ul style="list-style-type: none"> <li>– Support for displaying in concentration units of acids, bases and electrolytes as well as salinity</li> <li>– Special ultrapure water temperature compensation and support for display in resistivity units</li> </ul>

Toroidal Conductivity (Contactless Inductive)	<i>Single or Dual Channel</i> – Toroidal Conductivity Sensor	– Range from 0.050 to 2,000 millSiemens (2 Siemens)	– Analog 0-20 mA or 4-20 mA output for Conductivity or temperature for each input channel – Optional HART or ProfiBUS Digital Outputs	– Zero Calibration (Capitance) – Cell Constant calibration to find exact effective (apparent) cell constant in standard solution or process media	– Any Suitable Toroidal Conductivity Sensor with 20/20 Windings and 1000 Ohm Platinum TC	– Support for displaying in concentration units of acids, bases and electrolytes as well as salinity – Excellent choice for strong acid, strong base and strong electrolyte solutions at elevated temperatures
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