**General Purpose Sensor for Viscous Applications**

**PHE-7451**

- High Temperature
- High Pressure
- Any Angle Orientation

**Applications**

- Continuous and Batch
- Process Control
- Pulp and Paper
- Petro-Chemical

The PHE-7451-15 is a combination pH sensor designed specifically for insertable use in process and waste water applications. The outer body material is PPS and has ¾ MNPT (or optional 1 MNPT) front and rear facing threads. The double junction reference cell is highly resistant to electrode poisoning solutions, while the use of the non-fouling patented Porous PTFE liquid junction ensures a steady presence of reference electrolyte. The PHE-7451 assures a low maintenance service life in most applications. The concave sensor configuration (see drawing on the right) protects the pH bulb from particulate matter and provides a cleansing flow without affecting critical line pressure characteristics. Use of the high temperature version is recommended where service temperatures continuously exceed 80°C (176°F).

**Specifications**

**Body Material:** PPS

**pH Range:** 0 to 14 pH

**Temperature Range:**
- **Standard Version:** 0 to 80°C (32 to 176°F)
- **High Temperature Version:** 0 to 110°C (32 to 230°F)

**Pressure Range:**
- **Standard Version:** 0 to 100 psig
- **High Temperature Version:** 0 to 150 psig

**Accuracy:** ±0.1% over full range

**Sodium Error:** Less than 0.05 pH in 0.1 molar Na+ ion @ 12.8 pH

**Impedance:** 150 MΩ @ 25°C (76°F)

**Reference Cell:** Double KNO3 KCl/AgCl

**Zero Potential:** 7.0 pH ±0.2 pH

**Wetted Materials:** PPS, PTFE, FKM, glass

**Response Time:** 95% of reading in 10 sec

**Drift:** < 2 mV per week

**Dimensions:**
- 140 (5.5) mm
- 12.5 (0.500) in
- 22 (0.875) mm

**To Order**

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<th>Model No.</th>
<th>Description</th>
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<tr>
<td>PHE-7451-15-(*)</td>
<td>¾ MNPT sensor for viscous liquids</td>
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<tr>
<td>PHE-7354-15-(*)</td>
<td>¾ MNPT long insertable sensor for viscous liquids</td>
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Comes complete with 4.6 m (15') cable and operator’s manual.

Non standard cable lengths available for additional cost.

* Specify ATC Sensor: “-PT100” for 100 Ω Platinum RTD or “-PT1K” for 1000 Ω Platinum RTD, for additional cost.

Ordering Examples: PHE-7451-15-PT1K pH sensor with “PT1K” (high pH).

PHE-7354-15, pH electrode for viscous liquids.