



### Description

The P60C-8 pH and the R60C-8 ORP probe are dependable industrial grade sensors designed to provide accurate measurement and longer service life under the most demanding conditions. Some features of these probes include: differential measurement technology, replaceable salt bridge and encapsulated preamp.

The P/R60C-8 incorporates all the benefits of differential measurement found in other models of the 60 series, field proven in thousands of installations. This technique uses two glass electrodes to make the measurement differentially with respect to a third metal electrode. The domed glass process electrode is specially designed for tough applications. The second electrode is immersed in a pH 7 buffer encapsulated in the probe.

This second electrode is protected from the process by a double junction

replaceable salt bridge. The resulting true differential measurement has several advantages over conventional probes: ground loop problems are virtually eliminated, and the salt bridge is easily replaced.

If the internal solution becomes contaminated, the probe can be rejuvenated at modest cost by replacing the salt bridge and reference solution. Automatic temperature compensation is accomplished through the use of a thermistor at the tip of the probe. This thermistor placement provides rapid response for process temperature variations.

The encapsulated preamplifier provides an output signal which can be transmitted 3000 feet over inexpensive cable. Another version encapsulates a blind 4-20 mA two wire transmitter which can transmit a virtually unlimited distance over a twisted pair cable. (See P/R65 data sheet).

### Features

- Replaceable Salt Bridge
- Low Maintenance Cost
- Field-proven

### Encapsulated Preamplifier

- Transmits up to 3000 ft.

### Options

- 4-20 mA two-wire blind transmitter version available (model P/R65)
- ORP available with gold electrode
- Password protection and watchdog timer

### Applications

- Process Control
- Industrial and Municipal Water Treatment
- Industrial and Municipal Waste Treatment and Neutralization
- Fume Scrubbers
- Plating
- Circuit Board Manufacturing
- Food and Beverage
- Chemical Processing
- Pulp and Paper
- Mining
- Power Generation
- Pharmaceutical Industry

# Model P/R60C-8 Differential pH or ORP Probes

## Technical Data

### Measuring Range

pH 0 to 14 pH  
(Call factory for applications below 2 or above 12).

ORP -2000 to +2000 mV

### Flow Rate

10 ft./sec maximum (3 meters/sec)  
Flow should be as low as possible in water with low conductivity water or suspended solids

### Wetted Materials

CPVC, Kynar, glass, titanium palladium alloy and EPDM (platinum for ORP probe). Opt. Viton and ceramic

### Transmission Distance

3000 ft. (900 m)

### Sensitivity

pH 0.001 pH

ORP 0.1 mV

### Stability

pH 0.03 pH per day, non-cumulative

ORP 2 mV per day, non-cumulative

### Temperature Compensation

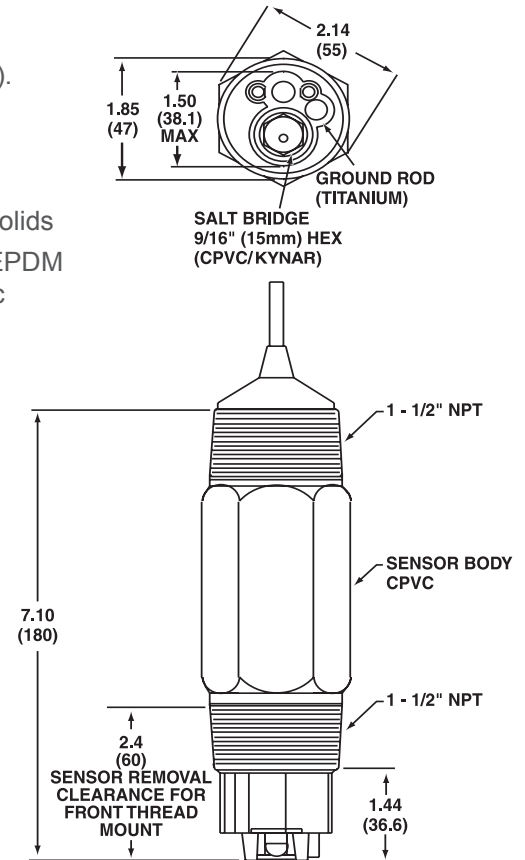
3000  $\Omega$  NTC or 1000  $\Omega$  RTD  
-5 to 95°C (23 to 203°F)

Pressure Limit 100 psig at 65°C maximum

Temperature Limits -5 to 95°C (23 to 203°F)

Probe Cable 5 Conductor plus shield, 15 ft. (4.6m)

## Dimensions



## Related Products

### CABLES & ACCESSORIES

- JB1 NEMA 4X junction box
- STC60-L Mounting kit for submersion applications includes 1-1/2" NPT x 1" reducer, 4 feet of 1" CPVC pipe with watertight strain relief fitting and securing assembly
- C42-5PXXX Interconnect cable; specify length
- AM60-9765K Salt bridge kit w/ Kynar outer junction (Package of 3)
- AM60-9765 Salt bridge kit w/ ceramic outer junction (Package of 3)
- Protector-3 Protection shroud for submersion applications

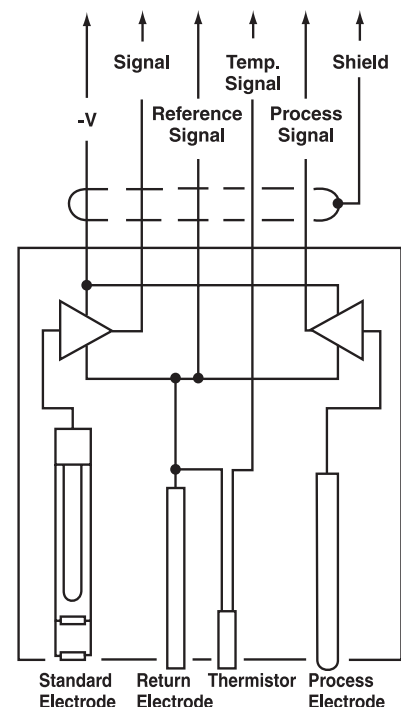
### CALIBRATION SOLUTIONS

- A35-13 pH 4 Buffer, 500 mL.
- A35-14 pH 7 Buffer, 500 mL
- A35-24 pH 10 Buffer, 500 mL
- A35-40 ORP Buffer, 200 mV, 500 mL
- A35-41 ORP Buffer, 600 mV, 500 mL

## Ordering Information

- P60C-8 pH probe, 1-1/2" NPT threaded body
- P60C-8H pH probe with Hard glass electrode
- P60C-8A pH probe with Antimony electrode
- R60C-8 ORP probe, 1-1/2" NPT threaded body
- R60C-8-H ORP probe with Hard glass electrode
- R60C-8-G ORP probe with Gold electrode

## Differential Measurement



### DIFFERENTIAL pH MEASUREMENT