



### Description

The P60C-5 pH and the R60C-5 ORP probes are the latest additions to the legendary Aquametrix differential probe family. It fills the gap for a 1" fixed insertion, MNPT probe and uses the same electrodes and salt bridge as the 1" variable insertion P60C-6 probe.

All of the P60 and P65 probes 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-5 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 encapsu-

lated 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

### Applications

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

# Model P/R60C-5 Differential pH or ORP Probes

## Technical Data

### Measuring Range

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

ORP -2000 to +2000 mV

**Flow Rate** 10 ft./sec maximum (3 metres/sec)  
Flow should be as low as possible in low conductivity water and in solutions with high 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

Automatic -5 to 95°C (23 to 203°F)

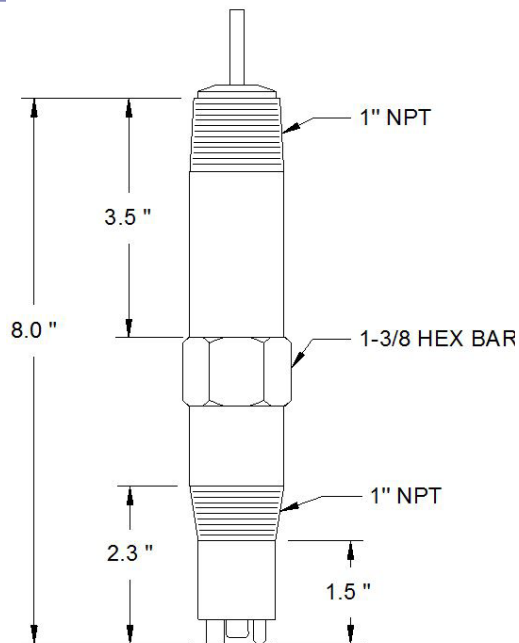
**Pressure Limit** 100 psig at 65°C maximum

### Temperature Limits

CPVC -5 to 95°C (23 to 203°F)  
The temperature limit of probes in flow-through applications is limited by pressure and by the pipe fitting material.

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

## Dimensions



## Ordering Information

P60C-5	pH probe, 1" NPT threaded body
P60C-5F	pH probe with flat electrode
P60C-5A	pH probe with Antimony electrode
P60C-5H	pH probe with Hard glass electrode
R60C-5	ORP probe, 1" NPT threaded body
R60C-5F	ORP probe with flat electrode
R60C-5-H	ORP probe with Hard glass electrode
R60C-5-G	ORP probe with Gold electrode

## Related Products

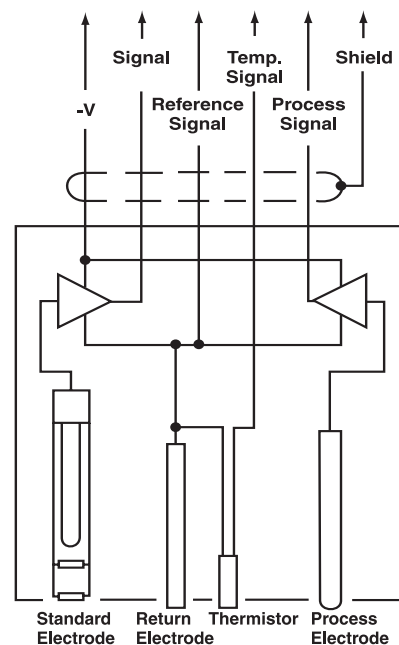
### CABLES & ACCESORIES

JB1	NEMA 4X junction box
STC60-5	Mounting kit for submersion applications includes 1" NPT x 1" reducer, 4 feet of 1" CPVC pipe with watertight strain relief fitting and securing assembly
C42-5PXXX	Interconnect cable; specify length
C35-17	Salt bridge kit w/ kynar outer junction (Package of 3)
C35-17K	Salt bridge kit w/ ceramic outer junction (Package of 3)
Protector-6	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

## Differential Measurement Technique



## DIFFERENTIAL pH MEASUREMENT