

### **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 demanding conditions. most Some features of these probes include: differential measurement replaceable technology, salt bridge and encapsulated preamp.

The 60C-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. second The 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 thermister 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 P65 data sheet).

## Advantages/Benefits

#### **Differential Measurement**

- 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 P65)
- ORP available with gold electrode

## **Applications**

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



## pH OR ORP Probes

#### **Technical Data**

**Measuring Range** 

pH 0 to 14.00 pH

(Consult factory for applications below 2

and above 12)

ORP -2000 mV 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, ceramic, glass, titanium palladium

alloy and EPDM (platinum for ORP probe)

**Transmission** 

**Distance** 3000 ft. (900 m)

Sensitivity

pH 0.001 pH ORP 0.1 mV

**Stability** 0.03 pH per day, non-cumulative

**Temperature Compensation** 

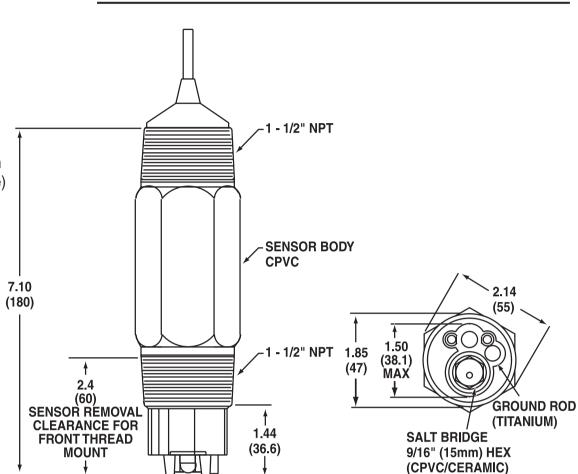
Automatic -5 to 95°C (23 to 203°F) **Pressure Limit** 100 psig at 65°C maximum

**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, 4.6m (15ft) long



**Dimensions** 

#### **Related Products**

#### **CABLES & ACCESSORIES**

JB-1 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 AM60-9765 Salt bridge Kit (Package of 3)

Protector-3 Protection shroud for submersion applications

#### **CALIBRATION SOLUTIONS**

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

#### **Ordering Information**

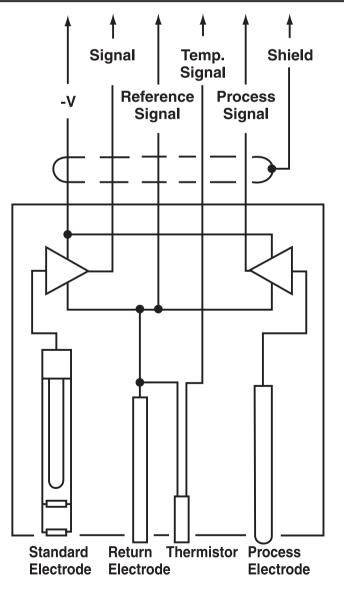
P60C-8 pH probe, 1 1/2" NPT threaded body

**P60C-8-A** Antimony pH probe

R60C-8 ORP probe, 1 1/2" NPT threaded body

**R60C-8-G** ORP probe with Gold Electrode

# Differential Measurement Technique



#### DIFFERENTIAL pH MEASUREMENT



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