Call **800.959.0299** to speak with a sales representative or visit us on the web at **www.analyticaltechnology.com** 

# **pH/ORP**Transmitter



# **Applications**

Cooling Towers
Potable Water Treatment
Wastewater Treatment
Chemical Process Control

Plating Baths Metals Precipitation Streams & Rivers Boiler Feedwater

#### **Features**

- Differential sensors for long life
- Loop-powered or battery-operated
- External 5-17 VDC version for solar power applications
- Submersion, In-line, or sanitary-style sensors
- · Special High Purity sensor option
- Adapts to Conventional pH or ORP sensors
- Large, easy-to-read LCD display
- · Clear, menu-driven user interface
- NEMA 4X (IP-66) enclosure
- Wall or pipe mounting bracket standard
- · Built-In PID controller



#### Model Q45P/R

Measurement and control of pH is important in a wide variety of industries. Water and wastewater, boiler feed water, food processing wash water, chemical plant make-up water and many other aqueous system require reliable pH monitoring.

The pH Transmitter provides the combination of durability, accuracy, and versatility required for virtually any pH monitoring application.

The ORP Transmitter provides the same reliable monitoring system for Oxidation-Reduction Potential (ORP) applications.

Q45 pH and ORP Transmitters use "differential" type sensors designed for long life in the most demanding applications. Differential sensors are well suited for applications that quickly poison conventional pH or ORP sensors, and can be easily serviced by operators. A variety of sensor styles are available to meet almost any application.

## **Sensor Options**



**Differential Sensors** 



**Conventional Sensor** 



# Model Q45P/R **SPECIFICATIONS**

#### **ELECTRONIC TRANSMITTER**

Display Range	<b>pH:</b> 0.00 - 14.00 <b>ORP:</b> -1000 to +2000 mv
Accuracy	0.02 pH or 2 mv
Repeatability	0.01 pH or 1 mv
Sensitivity	0.01 pH or 1 mv
Linearity	0.1% of scale
Temperature Drift	0.1% of span/°C
Sensor Type	<b>pH:</b> Series Q25P Differential or Conventional types <b>ORP:</b> Series Q25R Differential or Conventional types
Temperature Input	Pt1000 or Pt100 RTD for temperature compensation
Power	2- Wire unit: 17-30 VDC, 25 mA maximum Battery unit: Two AA Alkaline batteries External DC: 5-17 VDC, 10 mA maximum
Analog Outputs	2-Wire unit: Single 4-20 mA DC, 450 ohms maximum Battery unit: Two 0-2.5 VDC, 50K ohms minimum External DC: Two 0-2.5 VDC, 50K ohms minimum
Output Isolation	600 V Galvanic isolation
Enclosure	NEMA 4X (IP-66) Polycarbanate, V-0 flammability
Mounting Options	Wall or pipe mounting bracket supplied
Conduit Entries	Two PG-9 cord grips, 0.16-0.31" diameter cable
Ambient Temperature	Operating: $-40^{\circ}$ to $+60^{\circ}$ C Storage: $-40^{\circ}$ to $+70^{\circ}$ C
Ambient Humidity	0-95%, Non-condensing
Size	4.4"H x 4.4"W x 3.5"D (111 x 111 x 90 mm)
Weight	<b>2-Wire or External DC unit:</b> 1 lb (0.45 Kg) <b>Battery unit:</b> 2 lbs (0.9 Kg)
Certifications	CE marked to BS EN 61326-1:2006 Standard UL and CSA General Purpose

#### SENSOR OPTIONS

07-0100	Sensor	junction	box,	NEMA 4X	
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**31-0057** Sensor interconnect cable

03-0029 Cable assembly with connector, 25 ft.

**00-0628** Submersion mounting hardware for standard sensor

**07-0209** 1"NPT Tee, CPVC

**07-0221** 1-1/2" NPT Union/Tee mount, CPVC, (requires 44-0219 tee)

**07-0210** 2" NPT Union/Tee mount, CPVC, (requires 44-0233 tee)

**00-1391** External preamp for Conventional sensors, NEMA 4X

**00-1527** Sealed flowcell for 63-0013 or 63-0008 sensors

**63-0017** 3/4" Flow Tee adapter for 63-0008 or 63-0013 sensors

**63-0021** 1" Flow Tee adapter for 63-0008 or 63-0013 sensors

47-0005 2" U-bolt, 304SS

05-0068 Panel mount bracket kit

### **ORDERING INFORMATION**

#### Model Q45 - A - B pH/ORP Transmitter

#### Suffix A - Measurement Type

P - p

R - ORP

#### Suffix B - Power

1 - 24 VDC, 2-wire (single output only)

4 - Battery-operated with two 0-2.5 VDC outputs

5 - External 5-17 VDC with two 0-2.5 VDC outputs

#### **NOTES**

1 - Pipe mount requires two 2" U-bolts (47-0005).

#### Model Q25 - A - B - C Differential Sensor

#### Suffix A - Electrode Type

P1 - pH: industrial glass

P2 - pH: municipal glass

P3 - pH: antimony metal (HF applications only)

R1 - ORP: platinum metal

R2 - ORP: gold metal

#### Suffix B - Sensor Type

1 - 1" NPT convertible-style PEEK

2 - Insertion-style, 316SS

3 - 1-1/2" sanitary-style, 316SS

4 - 2" sanitary-style, 316SS

5 - Auto-clean sensor, with nozzle, Noryl (submersion only)

6 - Convertible-Style, PEEK, with connector (See Note 1 & 2)

#### Suffix C - Sensor Cable Length

1 - 15 ft. (4.6 m)

2 - 30 ft. (9.2 m) (standard with Auto-Clean sensor)

3 - 60 ft. (18.4 m)

9 - Special

#### NOTES:

**1 -** Sensor with integral connector is not waterproof. Used for indoor applications only.

2 - Suffix B, Option 6 requires 03-0029 cable

# **CONVENTIONAL pH/ORP SENSORS**

**63-0013** Flow type pH sensor, 25 ft. cable, Pt100, Twist-lock

63-0009 Submersible pH sensor, 25 ft. cable, Pt100

**63-0008** Flow type Pt. ORP sensor, 25 ft. cable, No temp., Twist-lock

**63-0023** Submersible Pt. ORP sensor, 25 ft. cable, No temp.

**07-0092** Q25 Style combination sensor w/connector (reg. 03-0029 cable)

**07-0149** Q25 Style combination sensor, 30 ft. cable





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