



# INDUSTRIAL pH INSTRUMENTATION & ELECTRODES

## Wall-Mounted, Single Setpoint and Proportional pH Control

PHCN-901  
Starts at  
**\$505**



- ✓ Wall Mount
- ✓ Isolated Recorder Output
- ✓ Simple Operation
- ✓ 10 Minute Maximum Dosing Time

The PHCN-901 is a pH controller with a single setpoint for proportional dosage of acid or alkaline solutions. Any pH electrode with a BNC connector can be directly attached to the PHCN-900 series or ORCN-901. The proportional control can be fine tuned through two dials on the front panel. The time cycle is adjustable from 0 to 90 seconds and the proportional band from 0.0 to 2.0 pH. Coarse and fine as well as two offset and slope trimmers make accurate setting and calibration easy and convenient. A pump or electro-valve can be wired directly to the controller and be powered through the terminals.

The PHCN-901 also provides for an alarm relay. The alarm is activated when the measurements stray away from the setpoint by a predetermined value in the 0 to 2 pH range. A max dosing time from 1 to 10 minutes is required to be set, after which the alarm is activated to warn of an abnormality. The alarm can be configured in either normally-closed or normally-open state. The PHCN-900 series also provides an isolated output signal, which is user selectable between 0 to 20 or 4 to 20 mA. A dial on the front panel renders manual temperature compensation fast and easy. For automatic compensation, hook up a 3 wire Pt 100 RTD to the controller. To speed up wiring, PHCN-900 and ORCN-901 series comes with extractable terminal modules. Once wired up, the compartment containing the connections is protected behind a fire-retardant ABS panel. Several LEDs show whether the setpoint or alarm relays are activated from a distance.

The PHCN-902 is a pH controller with two setpoints for proportional dosage of acidic and alkaline solutions. Through two sets of coarse and fine trimmers, the setpoints can be accurately fine tuned to any value in the 0.00 to 14.00 range. Likewise, two trimmers on the front panel make for easy calibration. The proportional control can be adjusted to match your application through the time cycle from 0 to 90 seconds and the proportional band of 0 to 2 pH. Two pumps or valves can be wired directly to the controller and be powered through the terminals. The PHCN-902 provides for two types of alarms. The alarm relay is activated when the measurements are beyond the setpoints by more than a predetermined value in the 0 to 2 pH range. Alternatively, the relay can activate, when one of the two independently-adjustable maximum dosing times is exceeded. The alarm can be configured in either normally-closed or normally-open state and turned off during maintenance.



PHCN-902, \$550 shown smaller than actual size.  
PHE-1411 laboratory pH electrode, \$70, sold separately, see pH page C-13 and C-14.

The ORCN-901 is an ORP controller with a single setpoint for user-selectable dosage of reducing or oxidizing solutions. With proportional control, you can fine tune your treatment plant and minimize the use of chemicals. The proportional setting can be adjusted through the time cycle from 0 to 90 seconds and the band from 0 to 200 mV. The setpoint can be accurately adjusted through coarse and fine trimmers. A pump or electro-valve can be wired directly to the controller and be powered through the terminal. In addition to the setpoint relay, the ORCN-901 also provides for an alarm relay. The alarm is activated when the measurements exceed the operator-adjustable threshold of 0 to 200 mV. For extra security, a maximum dosing time from 1 to 10 minutes is required to be set, after which the alarm is activated to signal an abnormality. The alarm configuration is alterable in a normally-closed or a normally-open state to accommodate fail-safe installations. Any recorder accepting a 0 to 20 or 4 to 20 mA output can also be hooked up to the controller. One can judge the controller's status, even from a distance, by observing the dosage or alarm LEDs.



## Specifications

**Range:** 0.00 to 14.00 pH;

ORCN-901: -500 to +1500 mV

**Resolution:** 0.01 pH; ORCN-901: 1 mV

**Accuracy @ 20°C/68°F:** ±0.02 pH

ORCN-901: ±5 mV

**Typical EMC Deviation:** ±0.1 pH;

ORCN-901: ±6 mV

**Calibration:** PHCN-901, ORCN-901:

One point, through trimmers on the front panel; PHCN-902: Two point

**Temperature Compensation:**

Manual or Automatic with Pt100 RTD from -10 to 80°C (14 to 176°F)

**Setpoint:** PHCN-901: one, selectable from 0.00 to 14.00 pH;

PHCN-902: Two, selectable

**Recorder Output:** Selectable from 0 to 20 mA or 4 to 20 mA, isolated

**Proportional Control:**

Adjustable: pH from 0.0 to 2.0 and time cycle from 0 to 90 seconds;

ORCN-901: Adjustable: mV from 0 to 200 and time cycle from 0 to 90 seconds

**Dosing Contact:** PHCN-901: One powered terminal for pH correction (115 or 240V) (Max 2 A 1,000,000 strokes); activated proportionally when pH > setpoint for acid dosage or pH < setpoint for alkaline dosage

**PHCN-902:** Two powered terminals for acid and alkaline correction (115 or 240V) (Max 2 A 1,000,000 strokes); Proportional acid

**Dosage:** activated when pH > setpoint, Proportional Alkaline dosage: activated when pH < setpoint

**ORCN-901:** One powered terminal for mV correction (115 or 240V) (Max 2 A 1,000,000 strokes);

activated proportionally mV > setpoint for acid dosage or mV < setpoint for alkaline dosage

**Alarm Relay:** One, activated when pH varies (selectable 0 to 2.0) (ORCN-901 selectable 0 to 200 mV) from the setpoint and/or max dosage time (1 to 10 minutes) elapses. Isolated, (max 2 A, max 240V, resistive load, 1,000,000 strokes)

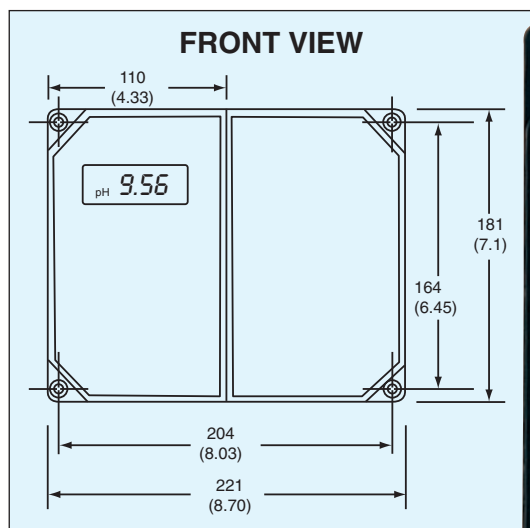
**Power Supply:**

110/115V or 220/240V; 50/60 Hz

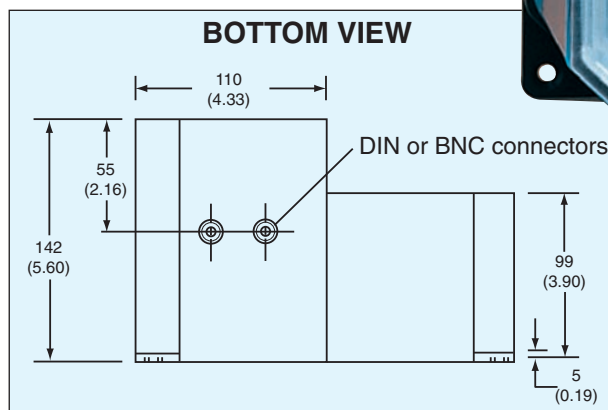
**Environment:** -10 to 50°C (14 to 122°F); 95% non-condensing

**Enclosure:** 181 L x 221 W x 142 H mm (7.1 x 8.7 x 5.6")

**Weight:** 1.6 kg (3.5 lb)



Dimensions: mm (in)



ORCN-901, \$505, shown smaller than actual size.

**AVAILABLE FOR FAST DELIVERY!**

## To Order (Specify Model Number)

Model No.	Price	Description
PHCN-901	\$505	Wall mount single setpoint pH controller
PHCN-902	550	Wall mount dual setpoint pH controller
ORCN-901	505	Wall mount single setpoint ORP controller
PHE-6510	134	pH industrial submersible electrode (requires mounting assembly)
PHEH-65-10-PT100	141	Mounting assembly with temperature compensation (required for PHE-6510)
PHA-4	5	4.00 pH buffer solution 500 mL (1 pt) bottle
PHA-7	5	7.00 pH buffer solution 500 mL (1 pt) bottle
PHA-10	5	10.00 pH buffer solution 500 mL (1 pt) bottle
ORE-6510	159	ORP industrial submersible electrode (requires PHEH-65-10 mounting assembly)
PHEH-65-10	55	Mounting assembly for ORE-6510 (required)
FW-400	84	Reference Book: The Automation, Systems, and Instrumentation Dictionary

Comes complete with operator's manual.

**Ordering Examples:** PHCN-901, pH controller, PHE-6510, pH electrode, PHEH-65-10-PT100, mounting assembly with temperature compensation, PHA-4, pH 4.00 buffer, PHA-7, pH 7.00 buffer, \$505 + 134 + 141 + 5 + 5 = \$790.

PHCN-902, dual setpoint pH controller, \$550.



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