



# INDUSTRIAL pH INSTRUMENTATION & ELECTRODES

## Industrial pH Controller/Recorders



PHCN-50 with PHE-6510 electrode, shown smaller than actual size.

PHCN-53 shown smaller than actual size.

PHE-6510 electrode and PHE-65-10 assembly with ATC shown smaller than actual size.

- ✓ 5 Models to Choose From
- ✓ Measure, Control and Record pH
- ✓ Range of 2 to 12 pH
- ✓ NEMA 4X Wall Mount Enclosure Standard
- ✓ Includes Two Wire 4 to 20 mA Transmitter
- ✓ Optional ORP Controller

The PHCN-50 Series of pH recorders and controllers provides a reliable method of monitoring, controlling and recording pH levels of various industrial and chemical processes. Featuring an extensive list of standard features, the PHCN-50 series includes a digital display, digital switches for alarms setpoints, remote mount pH 4 to 20 mA transmitter, 6 amp solid state relays, front panel adjustable dead band pots and NEMA-4X enclosure.

The controllers standard features include a digital display capable of displaying pH readings between 2 and 12 pH, adjustable dual alarm setpoints, dead band adjustments from 1 to 50% of setpoint, programmable time safety delay which activates when pH correction time is excessive and a stand by switch that disables the controller functions during calibration.

The recorder utilizes inkless pressure sensitive recording paper for 30 days of recording and front panel mounted calibration adjustments.

PHCN-50 pH recorder includes a digital display, enclosed in a NEMA 4X enclosure and accepts pH electrodes directly. Each unit is supplied with one 30-day roll of recorder paper.

## PHCN-50



PHCN-51 is a basic pH controller, it includes a NEMA-4X enclosure, digital display, two setpoints for high and low alarm, adjustable dead band, and two 6 amp SSRs. It accepts one pH electrode input through the supplied pH transmitter.

PHCN-52 pH controller/recorder combines the features of the PHCN-50 and PHCN-51 into one compact unit. It accepts one electrode through the transmitter, that drives the recorder, controller and digital display. Supplied with the PHCN-52 is one 30-day roll of recorder paper.

PHCN-53 pH controller/recorder uses two independent pH probes in a wall mounted NEMA-4X enclosure. Each pH electrode performs a separate function. The electrode input from the supplied pH transmitter drives the digital display and controller; the second pH electrode drives the recorder directly. The recorder electrode may be placed downstream from the control point to record the adjusted values. Supplied with the PHCN-53 is one 30-day roll of recorder paper.

PHCN-54 is a versatile dual pH controller. The PHCN-54 accepts two separate electrode inputs and can adjust pH at two separate locations. The dual pH model is supplied with two 4 to 20 mA pH transmitters. When one of the two controllers is configured with the optional ORP controller, it may be used for cyanide destruction or chrome reduction.



The PHCN-53 is complete with rugged NEMA-4X case, pH transmitter and pocket thermometer. Electrodes purchased separately, PHE-6510 and PHEH-65-10. Shown smaller than actual size.

## Specifications

### pH Recorder

**Display:** None

**Range:** 2 to 12 standard; 0 to 14 (optional)

**Resolution:** 0.2 pH/lateral chart deviation

**Accuracy:**  $\pm 0.2$  pH

**Repeatability:**  $\pm 0.2$  pH

**Temperature Compensation:** Manual supplied with 1093  $\Omega$  resistor; Automatic 1000  $\Omega$  platinum RTD

**Power Requirements:** 120 Vac 50/60 Hz

### pH Controller

**Display:** 12.7 mm (0.5"), 3½ digit LCD

**Range:** 2 to 12 pH standard; 0 to 14 (optional)

**Resolution:** 0.01 pH

**Accuracy:**  $\pm 0.02$  pH

**Repeatability:**  $\pm 0.02$  pH

**Temperature Compensation:** Manual supplied with 1093  $\Omega$  resistor; Automatic 1000  $\Omega$  platinum RTD

**Power Requirements:** 120 Vac 50/60 Hz (230 Vac Optional)

**Contact:** Two, 6 amp SSR, requires 200 mA minimum load

**Deadband Adjustment:** 0 to 50 % of setpoint

**Safety Time Delay:** Adjustable, 1 to 11 minutes

**Time Delay Relay:** 6 amp SPDT

**Temperature:** K-79-7 6" stem pocket thermometer range -10 to 110°C

### Optional ORP Controller

**Display:** 12.7 mm (0.5"), 3½ digit LCD

**Range:** 0 to 1000 mV

**Resolution:** 1 mV

**Accuracy:**  $\pm 1$  mV

**Repeatability:**  $\pm 1$  mV

**Power Requirements:** 120 Vac 50/60 Hz

**Contact:** Two, 6 amp SSR, requires 200 mA minimum load

**Dead Band Adjustment:** 0 to 50 % of setpoint

**Safety Time Delay:** Adjustable, 1 to 11 minutes

**Time Delay Relay:** 6 amp SPST

## To Order

Model No.	Description
PHCN-50	pH recorder and monitor, accepts pH electrodes directly
PHCN-51	Single input pH controller
PHCN-52	Single Input pH controller/recorder
PHCN-53	Dual input pH controller/recorder
PHCN-54	Dual input pH controller

Each unit comes with NEMA-4X enclosure, appropriate number of pH transmitter(s), K-79 pocket thermometer, and operator's manual. Models that include a pH recorder also supplied with one roll of 30-day chart paper. To order 230 Vac power input, add suffix "-230VAC" to part number, for additional cost.

**Ordering Examples:** PHCN-52, single input pH controller/recorder.

PHCN-51, single input pH controller.

## Optional Ranges

Order Suffix	Description
-ORP	ORP controller, 0 to 1000 mV range
-14	0 to 14 pH display range

## Replacement Accessories

Model No.	Description
PHCN-45-CHART	One 30-day chart (2 to 12 range)
PHCN-45-CHART-0-14	0 to 14 range chart paper
SL-652	Generic ORP chart paper
PHTX-212	Replacement 4 to 20 mA pH transmitter, (2 to 12 range)
PHTX-014	Replacement pH transmitter (0 to 14 range)

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