



INDUSTRIAL pH INSTRUMENTATION & ELECTRODES

Conductivity and pH Water Treatment Controllers

Common Features

- ✓ Digital Conductivity Display and Control
- ✓ Temperature Display
- ✓ Three Chemical Feed Programs (Conductivity, pH and Additive)
- ✓ Langelier Saturation Index for Water Balance
- ✓ Chemical Level Alarm
- ✓ Integral Data Logging for up to 999 Points With RS232 Communications
- ✓ Time-Based Chemical Level Alarm
- ✓ NEMA 4X Wall Mount Enclosure
- ✓ Remote Computer Operation with Windows Software

Model CDCN11

- ✓ One Line LCD Readout with 5-Button Keypad
- ✓ Relays for 3 Additive Programs, Bleed and Alarm
- ✓ Conductivity/Temperature, Water Meter and Flow Switch Inputs
- ✓ Watermeter Totalizer Function

Model CDCN12

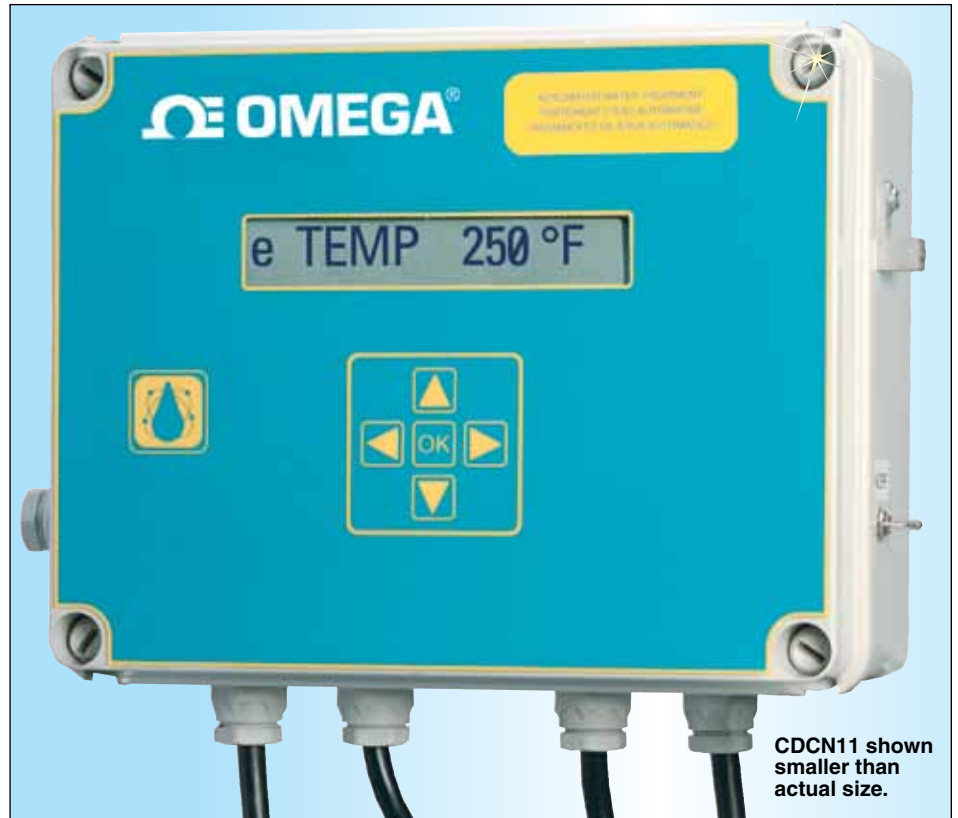
- ✓ 4-Line LCD Readout with 16-Key Numeric Keypad
- ✓ Probe Failure Indication and Alarm
- ✓ 4 Relays for Additives and/or Alarm
- ✓ Quick Release Enclosure Design for Fast Access and Wiring

Options Include

- ✓ pH Control
- ✓ Safety Flow Switch
- ✓ RS485 Communications

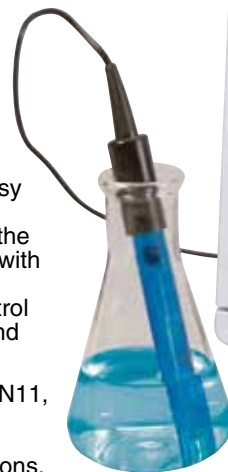
The CDCN10 Series is specifically designed to measure conductivity/dissolved solids and pH in cooling towers, boilers, industrial process water, food processing, drinking water and wastewater treatment applications. The CDCN10 Series conductivity/pH controllers are highly accurate and easy to install and operate. Engineering units can be displayed in either US or metric values using the pushbutton keypad and the simple scroll-through menus. Both units control conductivity, with the ability to control 3 additive feed programs. You can get a readout of the probe temperature, pH measurement and control is optional on both units, as is a safety flow switch contact, and RS485 communications.

The CDCN12 has additional features over the standard CDCN11, including dynamic probe failure testing for pH/ORP sensors, allowing the controller to detect a probe failure quickly after it occurs, so the user can avoid dangerous out-of-range conditions. For convenience, the CDCN12 features a large 4-line LCD readout and 16-button keypad.



CDCN11 shown smaller than actual size.

CDCN Series



CDCN12-PH with PHE10 pH electrode shown smaller than actual size.



Specifications

Measurement Range:

Conductivity: 0 to 20,000 $\mu\text{S/cm}$ or ppm; conversion factor for TDS
pH: 0 to 14 pH; setpoint for acid or base feed

Accuracy:

Conductivity: $\pm 1\%$ rdg

pH: ± 0.1 pH

Resolution:

Conductivity: $1\mu\text{S}$

pH: 0.01 pH

Temperature Range: -18 to 60°C (0 to 140°F)

Watermeter Input: For totalizer function, CDCN11 only

Sensor Calibration: 1, 2 or 3 points

Control Modes: Off, manual, auto, timer, bleed and feed, bleed-then-feed, daily schedule

Langelier Index: Water balance display calculated from pH, temp, total alkalinity and calcium hardness

Alarms: High/low, out-of-range, overfeed and total run time; visual, audible and external (5 A) alarms

Data Logging: On-board memory for 999 tests; RS232 communication port for local download and printing

Networking: RS485 port for multiple connections (optional)

Remote Operation: Software and graphical display for Windows®

Power: 115/230 Vac, 10 A

Control Outputs: 5 A relays, SPST

CDCN11 Relays: 3 additive, one alarm, one bleed

CDCN12 Relays: 2 additive, one additive/alarm (selectable), one bleed

Probe Sensor Failure: CDCN12 only, for pH/ORP electrode

Display:

CDCN11: One line LCD; 5-button keypad

CDCN12: Four line LCD; 16-button keypad

Mechanical: NEMA 4X enclosure

Dimensions:

CDCN11: 240 x 190 x 90 mm (9.5 x 7.5 x 3.5")

CDCN12: 285 x 234 x 155 mm (11.21 x 9.21 x 6.09")

Shipping Weight:

CDCN11: 2.7 kg (6 lb)

CDCN12: 6.0 kg (13 lb)

To Order			
Model No.	Input	Communications	Keypad/Display
CDCN11	Conductivity	RS232	5-button/one line
CDCN11-PH	Conductivity/pH	RS232	5-button/one line
CDCN11-485	Conductivity	RS232, RS485	5-button/one line
CDCN11-PH-485	Conductivity/pH	RS232, RS485	5-button/one line
CDCN12	Conductivity	RS232	16-button/four line
CDCN12-PH	Conductivity/pH	RS232	16-button/four line
CDCN12-485	Conductivity	RS232, RS485	16-button/four line
CDCN12-PH-485	Conductivity/pH	RS232, RS485	16-button/four line

Accessories (Recommended Buffer and Conductivity Solutions)

Model No.	Description
CDE10	Conductivity sensor
CDE10HP	High pressure conductivity sensor
PHE10	pH electrode
PHE10HP	High pressure pH electrode
FSW10S	Shuttle style flow switch
FSW10B	Blade style flow switch
PHA-4	4.00 pH buffer solution, 500 mL (1 pt) bottle
PHA-7	7.00 pH buffer solution, 500 mL (1 pt) bottle
PHA-10	10.00 pH buffer solution, 500 mL (1 pt) bottle
CDSA-45	45 $\mu\text{mho/cm}$ conductivity solution, 946 mL (1 qt)
CDSA-1413	1413 $\mu\text{mho/cm}$ conductivity solution, 946 mL (1 qt)
CDSA-1500	1500 $\mu\text{mho/cm}$ conductivity solution, 946 mL (1 qt)

Comes complete with operator's manual and 3V lithium battery. Probes sold separately.

Note: When ordering the conductivity or pH controller, it is recommended to purchase pH buffer solution, such as PHA-7, pH buffer 7 and conductivity standard solution, such as CDSA-1413, 1413 $\mu\text{S/cm}$.

Ordering Examples: CDCN11, conductivity controller, CDE10, conductivity sensor, CDSA-1413, conductivity standard solution, 1413 $\mu\text{S/cm}$. CDCN12-PH, conductivity/pH controller with 4 to 20 output, PHE10, pH electrode, PHA-7, pH 7 buffer solution.