



## Complete Water Treatment Controller Systems

CDCN13 Series  
Starts at  
**\$2550**



- ✓ Conductivity/TDS Control with Choice of Bleed Programs
- ✓ Temperature Monitoring
- ✓ Make Up and Bleed Watermeter Totalizers
- ✓ Langelier Saturation Index for Water Balance
- ✓ Six Feed Programs for 4 Chemical Additives
- ✓ "Booster" Chemical Feed to Schedule a Delayed One Time Feed Event
- ✓ Time Based Low Chemical Level Alarm
- ✓ Probe Failure Indication and Alarm
- ✓ Automatic Probe Rinse to Clean Sensors
- ✓ Integral Data Logging for up to 999 Points with RS232 Communications
- ✓ NEMA 4X Wall Mount Enclosure
- ✓ Water Test for Alkalinity and Hardness
- ✓ Remote Computer Operation with Windows Software
- ✓ Quick Release Enclosure Design for Fast Access and Wiring

### Options Include:

- ✓ pH Control
- ✓ ORP Monitoring and Control
- ✓ 4 to 20 mA Analog Outputs
- ✓ RS485 Communications

The CDCN13 is a fully programmable controller designed for complete chemical automation (conductivity, pH and ORP) as well as control of chemical additives, all with data logging, RS232 communications, and available RS485. This controller can easily handle cooling tower, boiler, industrial process water, food processing, drinking water and wastewater treatment applications. Featuring high accuracy and easy installation and operation, engineering units can be displayed in either US or metric values using the 16-button keypad and the large, 8-line LCD readout with simple scroll-through menus. Standard features include conductivity control, with the ability to control 4 additive feed programs. You can get a readout of the probe temperature, pH and ORP measurement and control is available, as is a safety flow switch contact, and RS485 communications.

CDCN13, \$2550, shown smaller than actual size.



The CDCN13 has 8 control relay outputs, for up to 4 chemical additives, fill valve, bleed valve, probe rinse, and remote alarm. Standard features also include 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. The automatic probe rinse can be used for either manual or automatic cleaning of pH or ORP electrodes.

## Specifications

### Measurement Range:

**Conductivity:** 0 to 20000  $\mu\text{S}/\text{cm}$  or ppm; conversion factor for TDS  
**pH:** 0 to 14 pH; setpoint for acid or base feed  
**ORP:** 0 to 999 mV; programmable shock treatment

### Accuracy:

**Conductivity:**  $\pm 1\%$  rdg  
**pH:**  $\pm 0.1$  pH  
**ORP:**  $\pm 10$  mV

### Resolution:

**Conductivity:**  $1\mu\text{S}$   
**pH:** 0.01 pH  
**ORP:** 1 mV



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

**Watermeter Input:** For totalizer function

**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; 4 chemical additive, one each: bleed, fill, probe rinse and alarm

**Probe Sensor Failure:** For pH or ORP electrode

**Mechanical:** NEMA 4X enclosure

**Display:** Eight line LCD; 16-button keypad

**Dimensions:** 336 x 285 x 167 mm (13.21 x 11.21 x 6.59")

**Shipping Weight:** 8.2 kg (18 lb)

☐ **MOST POPULAR MODELS HIGHLIGHTED!**

To Order (Specify Model Number)			
Model No.	Price	Input	Communications
CDCN13	\$2550	Conductivity	RS232
CDCN13-PH	3200	Conductivity/pH	RS232
CDCN13-485	3100	Conductivity	RS232, RS485
CDCN13-PH-485	3750	Conductivity/pH	RS232, RS485
CDCN13-ORP	3350	Conductivity/ORP	RS232
CDCN13-PH-ORP	4000	Conductivity/pH/ORP	RS232
CDCN13-ORP-485	3900	Conductivity/ORP	RS232, RS485
CDCN13-PH-ORP-485	4550	Conductivity/pH/ORP	RS232, RS485
CDCN13-A	3100	Conductivity	RS232, 4 to 20 mA
CDCN13-PH-A	3750	Conductivity/pH	RS232, 4 to 20 mA
CDCN13-ORP-A	3900	Conductivity/ORP	RS232, 4 to 20 mA
CDCN13-PH-ORP-A	4550	Conductivity/pH/ORP	RS232, 4 to 20 mA

## Accessories (Recommended Buffer and Conductivity Solutions)

Model No.	Price	Description
CDE10	\$205	Conductivity sensor
CDE10HP	375	High pressure conductivity sensor
PHE10	195	pH electrode
PHE10HP	335	High pressure pH electrode
ORE10	215	ORP sensor
ORE10HP	390	High pressure ORP sensor
FSW10S	170	Shuttle style flow switch
FSW10B	170	Blade style flow switch
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
CDSA-45	10	45 µS conductivity solution
CDSA-1413	23	1413 µS conductivity solution
CDSA-1500	10	1500 µS conductivity solution

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 µS/cm.

**Ordering Examples:** **CDCN13**, conductivity controller, **CDE10**, conductivity sensor, **CDSA-1413**, conductivity standard solution, 1413 µS/cm, \$2550 + 205 + 23 = **\$2778**.

**CDCN13-PH-A**, conductivity/pH controller with 4 to 20 output, **PHE10**, pH electrode, **PHA-7**, pH 7 buffer solution, \$3750 + 195 + 5 = **\$3950**.

Order Online

**omega.com**

Over 100,000 Products Available!

To download information and to order Conductivity Instrument products online, visit **omega.com**

# omega.co.uk®

Your One-Stop Source for Process Measurement and Control!

Freephone 0800 488 488 | International +44(0) 161 777 6622 | Fax +44(0) 161 777 6622 | Sales@omega.co.uk

**www.omega.co.uk**



#### UNITED STATES

[www.omega.com](http://www.omega.com)

1-800-TC-OMEGA  
Stamford, CT.

#### CANADA

[www.omega.ca](http://www.omega.ca)

Laval(Quebec)  
1-800-TC-OMEGA

#### GERMANY

[www.omega.de](http://www.omega.de)

Deckenpfronn, Germany  
0800-8266342

#### UNITED KINGDOM

[www.omega.co.uk](http://www.omega.co.uk)

Manchester, England  
0800-488-488  
+44-(0)161-777-6611

#### FRANCE

[www.omega.fr](http://www.omega.fr)

0800-466-342

#### BENELUX

[www.omega.nl](http://www.omega.nl)

0800-099-33-44



## More than 100,000 Products Available!

### • Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders, Relative Humidity Measurement Instruments, PT100 Probes, PT100 Elements, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples, Thermowells and Head and Well Assemblies, Transmitters, Thermocouple Wire, RTD Probes

### • Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

### • pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

### • Data Acquisition

Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485, Ethernet and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

### • Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Pressure Transmitters, Strain Gauges, Torque Transducers, Valves

### • Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters