



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: ± 0.1 pH
ORP: ± 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**.



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• 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

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• Data Acquisition

Auto-Dialers and Alarm Monitoring Systems, Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485 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, Strain Gages, 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