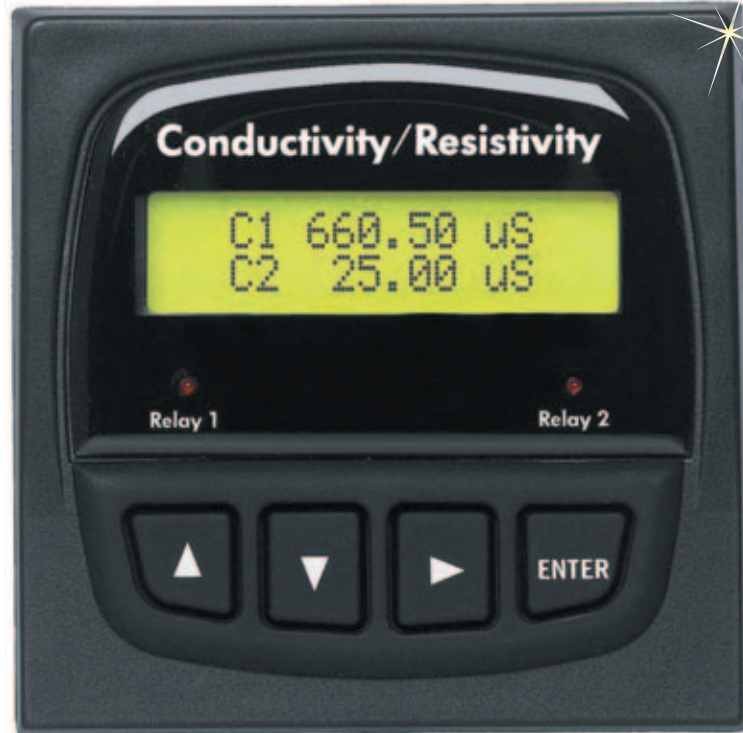




Dual Channel Conductivity/Resistivity Controller

CDCN-91, \$1004, shown actual size.

CDCN-91 Series
Starts at
\$1004



Features

- ✓ 2-Channel Input
- ✓ Simultaneous Display
- ✓ AC Line-Voltage or DC Powered
- ✓ Display and/or Control: μS , mS , PPM or PPB (TDS), $\text{k}\Omega$, $\text{M}\Omega$, % Rejection, Difference, Ratio, $^{\circ}\text{C}$ or $^{\circ}\text{F}$
- ✓ 3 Fully Scalable 4 to 20 mA Outputs
- ✓ Up to 4 Programmable Relays
- ✓ Time Delay Relay Function
- ✓ Proportional Pulse Control Capability
- ✓ Meets USP Requirements
- ✓ Programmable Temperature Compensation
- ✓ Output Simulation for Complete System Testing
- ✓ Simple Push-Button Operation
- ✓ 1/2 DIN, NEMA 4X (IP65) Enclosure with Self-Healing Window

Application

- ✓ RO/DI System Control
- ✓ Demineralizer Regeneration and Rinse
- ✓ Scrubber, Cooling Tower and Boiler Protection
- ✓ Chemical Concentration
- ✓ Rinse Tank Water Quality
- ✓ Desalination
- ✓ Leak Detection
- ✓ Aquatic Animal Life Support Systems
- ✓ Aquaculture
- ✓ Environmental Studies

The CDCN-91 Series dual channel conductivity/resistivity controller is a two-channel input device equipped with three scalable 4 to 20 mA outputs and four programmable relays. A selector switch activates two open collector outputs in place of two of the relays for extraordinary output versatility. Dual input and advanced control capability, including percent rejection, difference and ratio calculations, together with the CDCE-91 Series conductivity sensors listed below, form the perfect measurement and control system for water treatment applications and more. Two versions are available: one accepts AC line-voltage, the other low voltage DC for power. The four-button keypad arrangement with intuitive software design is user-friendly, and the NEMA 4X (IP65) integrity of the front panel can be extended to the entire enclosure by using the optional rear cover kit.

Specifications

General

Compatible Sensors: CDCE-90 Series standard conductivity/resistivity sensors

Operating Range:

Conductivity: 0.055 to 400,000 $\mu\text{S}/\text{cm}$
Resistivity: 10 $\text{k}\Omega/\text{cm}$ to 18.26 $\text{M}\Omega/\text{cm}$ (0.055 to 100 $\mu\text{S}/\text{cm}$)
TDS: 0.001 to 999999 ppm or ppb (display limit)
Temperature: PT1000: -25 to 120 $^{\circ}\text{C}$ (-13 to 248 $^{\circ}\text{F}$)

Accuracy:

Conductivity/Resistivity:

$\pm 2\%$ of reading

Temperature: $\pm 0.5^{\circ}\text{C}$

Power Requirements:

100 to 240 Vac:

$\pm 10\%$, 50 to 60 Hz, 20 VA

11 to 24 Vdc: $\pm 10\%$ reg., 0.5A max

Display: Alphanumeric 2 x 16 LCD

Contrast: User selected, 5 levels

Update rate: 1.5 seconds

Current Outputs: (3 each) 4 to 20 mA,

isolated, fully adjustable and reversible

Max Loop Impedance: 150 Ω @ 12V,

450 Ω @ 18V, 750 Ω @ 24V

Update Rate: Approx. 100 mS

Accuracy: ± 0.03 mA @ 25 $^{\circ}\text{C}$, 24 Vdc

Open Collector Outputs: (2 each)

Isolated, 50 mA sink or source, 30 Vdc

max pull-up voltage

Operational Settings: Hi, Lo, USP,

Pulse, Off

Hysteresis: User adjustable

Time Delay: 0 to 6400 seconds

Maximum Pulse Rate:

400 pulses/minute

Alarm Contacts: (up to 4 each)

SPDT Relays

Maximum Voltage Ratings:

5A @ 30 Vdc or 5A @ 250 Vac

Operational Settings: Hi, Lo, USP,

Pulse, Off

Hysteresis: User adjustable

Time Delay: 0 to 6400 seconds

Maximum Pulse Rate:

400 pulses/minute



Enclosure

Rating: NEMA 4X (IP65) front and back with optional NEMA 4X (IP65) rear cover kit

Materials:

Case: PBT

Window: Polyurethane-coated polycarbonate

Keypad: Sealed 4-key silicone rubber

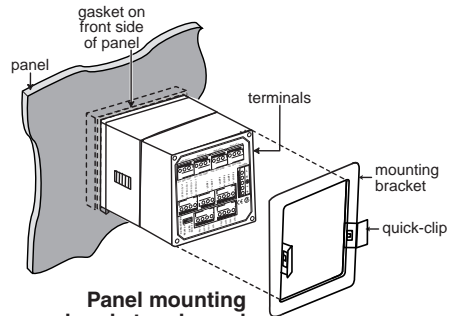
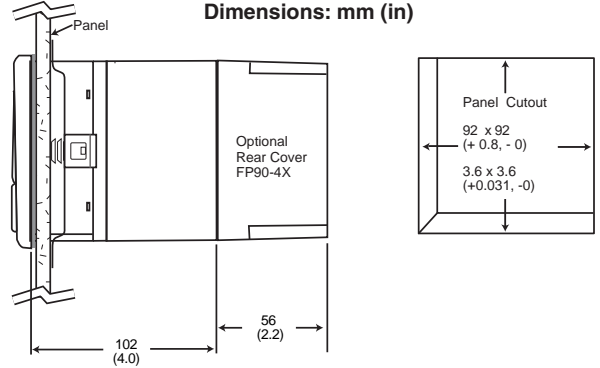
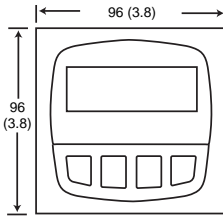
Weight:

CDCN-91AC: Approx. 581 g (20.5 oz)

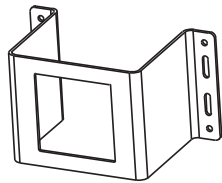
CDCN-91: Approx. 544 g (19.2 oz)

INSTALLATION

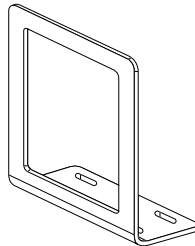
- ✓ Front Panel provides NEMA 4X (IP65) protection
- ✓ Standard ¼ DIN panel cutout
- ✓ 102 mm (4") mounting depth
- ✓ Optional NEMA 4X (IP65) rear cover kit with knockout ports for cable access
- ✓ 158 mm (6.3") mounting depth with optional rear cover installed



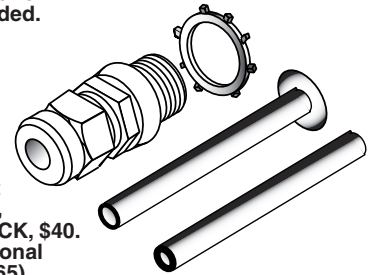
Panel mounting bracket and panel gasket are included.



Optional heavy-duty wall mount bracket CDCN-91-WMB, \$52.



Optional surface mounting bracket FPM-5000-MB, \$31.



Liquid tight connector kit 3 sets per kit, FPM-5000-LTCK, \$40. Use with optional NEMA 4X (IP65) rear cover kit, FP90-4X, \$45.

AVAILABLE FOR FAST DELIVERY!

To Order (Specify Model Number)

Model No.	Price	Description
CDCN-91	\$1004	Conductivity/resistivity controller DC power
CDCN-91AC	1012	Conductivity/resistivity controller AC/DC power

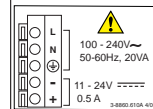
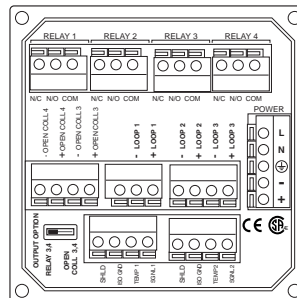
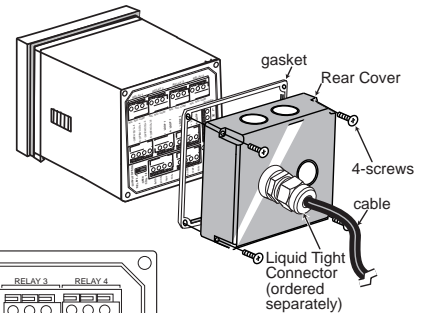
Accessories

Model No.	Price	Description
FP90-4X	\$45	NEMA 4X (IP65) rear cover kit
FPM-5000-LTCK	40	Liquid-tight kit for rear cover
CDCN-91-WMB	52	Wall mount bracket
FPM-5000-MB	31	Surface mount bracket
FP90RC	17	RC filter kit for relays
CDCE-90-001	298	Conductivity cell constant = 0.01
CDCE-90-01	298	Conductivity cell constant = 0.1
CDCE-90-1	298	Conductivity cell constant = 1.0
CDCE-90-10	511	Conductivity cell constant = 10.0
CDCE-90-20	624	Conductivity cell constant = 20.0

Comes complete with operator's manual.

Additional cells available, see pages E-27 and E-28.

Ordering Example: CDCN-91 conductivity/resistivity controller DC power, with CDCE-90-1 conductivity cell constant, \$1004 + 298 = \$1302.



Note: This label appears on the side of the instrument case



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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

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

• 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