



Conductivity or Resistivity Controller

CDCN441



- ✓ Analyzer/Transmitter/Controller
- ✓ Self-Guided Menu
- ✓ Auto-Range Scales
- ✓ Automatic Calibration and Check
- ✓ Recognizes Standard and Cell
- ✓ Automatic Temperature Compensation
- ✓ On-Off/PWM Control
- ✓ Programmable Transmitter Output
- ✓ RS485 Output

The CDCN441 conductance/resistance analyzer-controller is designed for online monitoring of process solutions and water applications. Applications include: waste water treatment, power plants, thermo electric plants, pharmaceutical, photographic industries and soft drinks industries. The menus are self guiding with simple three button programming. Available control outputs include ON-OFF or pulse width modulation. The transmitter output is also programmable from the keypad eliminating the need for potentiometer or dip-switch settings. The calibration function automatically recognizes the cell used and the buffer solution resulting in a simple and straight forward system calibration.

Equipment is built with solid state technology, electronic contacts and not electrical contacts, avoiding mechanical movement and off course no sparks.

Specifications

General

Construction/Materials:

Case: Aluminum (SAE323)

Faceplate: ABS

Anti-Corrosion Treatment: Finished with electrostatic epoxy paint

Case Rating: NEMA 4 (IP68)

Power Consumption: 3.5 VA

Power: 90/240 Vac; 50/60Hz

LCD Readout: 2 lines x 16 characters

Reading Modes: Continuous, average or hold

Assembly in 51 mm (2") Tube or Flat Surface or Panel:

144 x 144 x 100 mm DIN (5.7 x 5.7 x 4")

Weight: 1.3 kg (2.8 lb)

RS485 Output: MODBUS® and proprietary communication protocol

Analyzer

Conductivity Range: 1µS/cm to 2S/cm

Resistivity Range: 10 MΩ/cm to infinity

Resolution: 0.1 or 0.01

Automatic or Manual Temperature Compensation: 0 to 100°C (32 to 212°F)

Temperature Compensation: NTC-R typical 5 Ω at 25°C (77°F)

Operating Temperature: 5 to 40°C (41 to 104°F)

Cell Constants Offered: K = 0.01/0.1/5/5/10



CDCN441 shown smaller than actual size.

Transmitter

Analog Output: 4 to 20 mA (2), this output can be programmed for transmission

Impedance: 600 Ω

Optical Galvanic Isolation: 2000 Vac

Controller Outputs: 2 N.O. (1A/240 Vac) on/off alarm or PWM; 4 to 20 mA for PID control or retransmission

Cells

CDE-440-001:

Range: 0.01 µS to 2mS, K = 0.01, 0 to 100°C (32 to 212°F), 10 kg/cm²

Insertion Length: 54 mm (2.1")

Thread: 316 SS, ¼ NPT

CDE-440-01:

Range: 0.1 µS to 20 mS, K = 0.1, 0 to 130°C (32 to 266°F), 10 kg/cm²

Insertion Length: 42 mm (1.7")

Thread: 316 SS, ¼ NPT

CDE-440-1:

Range: 0.1 µS to 100 mS, K = 1, 0 to 130°C (32 to 266°F), 10 kg/cm²

Insertion Length: 60 mm (2.4")

Thread: 316 SS, ¼ NPT

CDE-440-5:

Range: 1 µS to 150 mS, K = 5, 0 to 130°C (32 to 266°F), 10 kg/cm²

Insertion Length: 60 mm (2.4")

Thread: 316 SS, ¼ NPT (PVDF body)

CDE-440-01T:

Range: 0.1 µS to 20 mS, K = 0.1, 0 to 200°C (32 to 392°F), 10 kg/cm²

Insertion Length: 90 mm (3.5")

Thread: 316 SS, ¼ NPT



CDSA calibration solutions, see accessories chart below.



CDE-440-001, shown smaller than actual size.



CDE-440-01T shown smaller than actual size.



CDE-440-5 shown smaller than actual size.

To Order	
Model No.	Description
CDCN441	Conductivity/resistivity controller with relay and 4 to 20 mA outputs
CDE-440-001	Conductivity sensor, K = 0.01, 0.01 μ S to 2 mS, 0 to 100°C (32 to 212°F)
CDE-440-01	Conductivity sensor, K = 0.1, 0.1 μ S to 20 mS, 0 to 130°C (32 to 266°F)
CDE-440-1	Conductivity sensor, K = 1, 0.1 μ S to 100 mS, 0 to 130°C (32 to 266°F)
CDE-440-5	Conductivity sensor, K = 5, 0.1 μ S to 150 mS, 0 to 130°C (32 to 266°F)
CDE-440-01T	Conductivity sensor, K = 0.1 heavy duty, 0.1 μ S to 20 mS, 0 to 200°C (32 to 392°F)

Accessories

Model No.	Description
CDSA-10	10 μ S calibration solution 940 mL (1 qt)
CDSA-45	45 μ S calibration solution 940 mL (1 qt)
CDSA-450	450 μ S calibration solution 940 mL (1 qt)
CDSA-1500	1500 μ S calibration solution 940 mL (1 qt)
CDSA-4500	4500 μ S calibration solution 940 mL (1 qt)
CDSA-45000	45000 μ S calibration solution 940 mL (1 qt)

Comes complete with 316 SS hardware for 51 mm (2") tube installation and wall mount brackets and operator's manual. Sensors sold separately.

Ordering Examples: CDCN441, conductivity/resistivity controller.

CDE-440-5, sensor K = 5 (PVDF material).