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

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, % 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, % 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, % 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, % 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, % NPT

Our Conductivity Instruments product line continues to expand, visit omega.com for new details!
To Order

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

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<td>CDSA-10</td>
<td>10 µS calibration solution 940 mL (1 qt)</td>
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<tr>
<td>CDSA-45</td>
<td>45 µS calibration solution 940 mL (1 qt)</td>
</tr>
<tr>
<td>CDSA-450</td>
<td>450 µS calibration solution 940 mL (1 qt)</td>
</tr>
<tr>
<td>CDSA-1500</td>
<td>1500 µS calibration solution 940 mL (1 qt)</td>
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<tr>
<td>CDSA-4500</td>
<td>4500 µS calibration solution 940 mL (1 qt)</td>
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<td>45000 µS calibration solution 940 mL (1 qt)</td>
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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).