



Conductivity Transmitters

CDTX-90 Series
Starts at
\$576



Electronics
Only

- ✓ Display in μS , mS , $\text{k}\Omega$, $\text{M}\Omega$, ppm (TDS)
- ✓ Simulate Function
- ✓ Programmable Temperature Compensation
- ✓ Relay Options
- ✓ Dual Output Option Allows Temperature and Process Signal Transmission
- ✓ 2 x 16 Character Dot Matrix LCD
- ✓ Chemical Resistant Enclosure and Self-Healing Window
- ✓ Large Pushbuttons
- ✓ Clearly Marked Terminal Labels

Applications

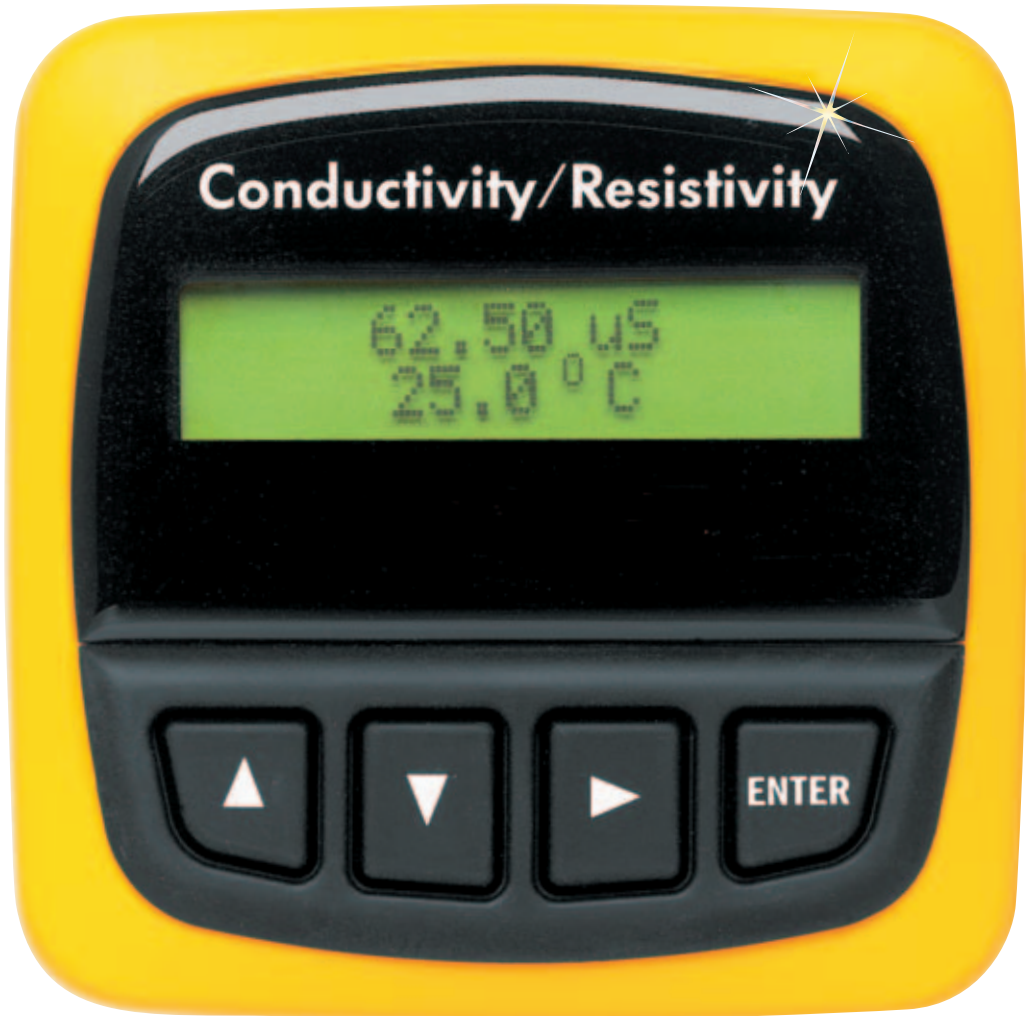
- ✓ RO/DI System Control
- ✓ Rinse Tank Control
- ✓ Cooling Tower, Scrubber or Blowdown Control
- ✓ Environmental Study (TDS)
- ✓ Desalination Monitor
- ✓ Water Quality Monitoring
- ✓ Leak Detection
- ✓ Chemical Concentration

The CDTX-90 Series Conductivity/Resistivity Transmitter is designed for broad application and ease of setup and use. The unit can be used for conductance, resistance, or TDS signal transmission and display. Mounting can be accomplished in several options best tailored to your application requirements. Full microprocessor based electronics allow wide operating range, and long term signal stability due to the elimination or potentiometers, jumpers and dip switches.

Specifications

General

Compatible Electrodes:
OMEGA® CDCE-90-X Series Conductivity/Resistivity Electrodes (see page E-37)
Accuracy: $\pm 2\%$ of reading



Shown larger than actual size.

Enclosure:

Rating: NEMA 4X (IP65) front
Case: PBT

Window: Polyurethane coated polycarbonate

Keypad: Sealed 4-Key Silicone Rubber

Weight: Approx. 325 g (12 oz)

Display:

Alphanumeric: 2 x 16 LCD

Contrast: User selected, 5 levels

Environmental

Operating Temperature:

-10 to 70°C (14 to 158°F)

Storage Temperature:

-15 to 80°C (5 to 176°F)

Relative Humidity:

0 to 95% non-condensing

Standards and Approvals:

CSA, CE, UL listed and manufactured under ISO9001

Electrical

Sensor Input Range:

Conductance: 0.055 to 400,000 μS

Resistivity: 10 $\text{K}\Omega$ to 18.2 $\text{M}\Omega$

TDS: 0.023 to 200,000 ppm

Temperature:

PT1000, -25 to 120°C (-13 to 248°F)

Current Output: 4 to 20 mA, isolated, fully adjustable and reversible

Power: 12 to 24 Vdc $\pm 5\%$ regulated

Max Loop Impedance:

50 Ω max @ 12 V,

325 Ω max @ 18 V,

600 Ω max @ 24 V

Update Rate: 0.5 seconds

Accuracy: ± 0.03 mA @ 25°C, 24 V

Relay Output:

Mechanical SPDT Contacts:

Hi, Lo, Pulse, Off

Maximum Voltage Rating:

5 A @ 30 Vdc, or 5 A

@ 250 Vac resistive load

Hysteresis: User Adjustable

Max 400 pulses/min

Open Collector Output:

Hi, Lo, Pulse, Off.

Open collector, optically isolated,

50 mA max, sink, 30 Vdc max.

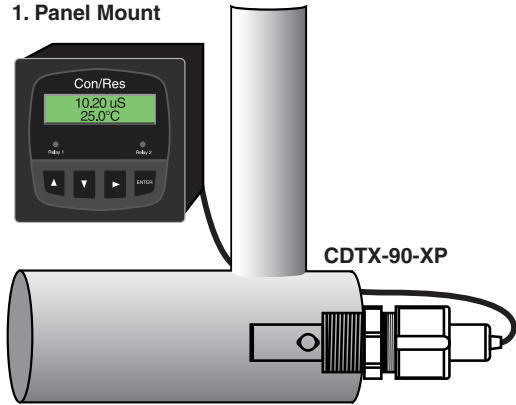
pull-up voltage. Max 400 pulses/min



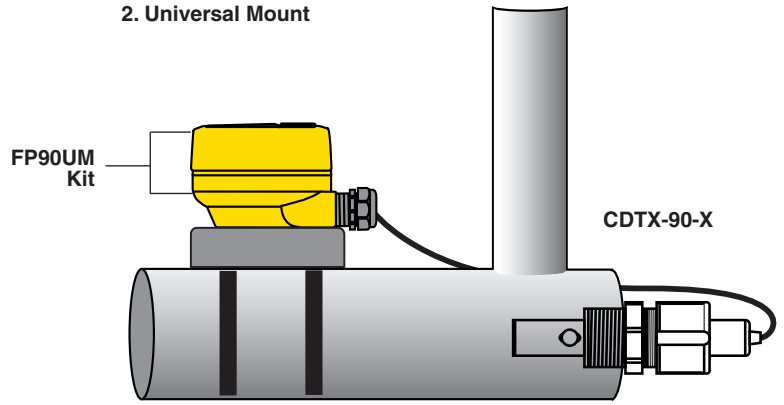
Installation

The transmitter is available in a panel mount or a field version. Select the universal mount kit FP90UM to mount the transmitter on a surface near the sensor.

1. Panel Mount



2. Universal Mount



All Panel mount transmitters CDTX-90-XP include a mounting bracket and gasket for a NEMA 4X (IP65) watertight panel installation. Panel mount transmitters fit into a standard 1/4 DIN panel cutout.

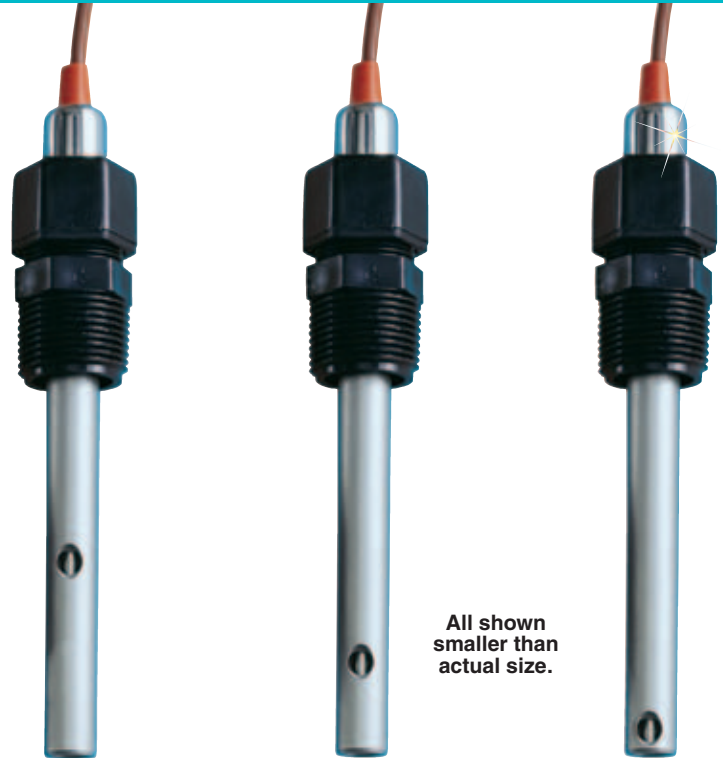
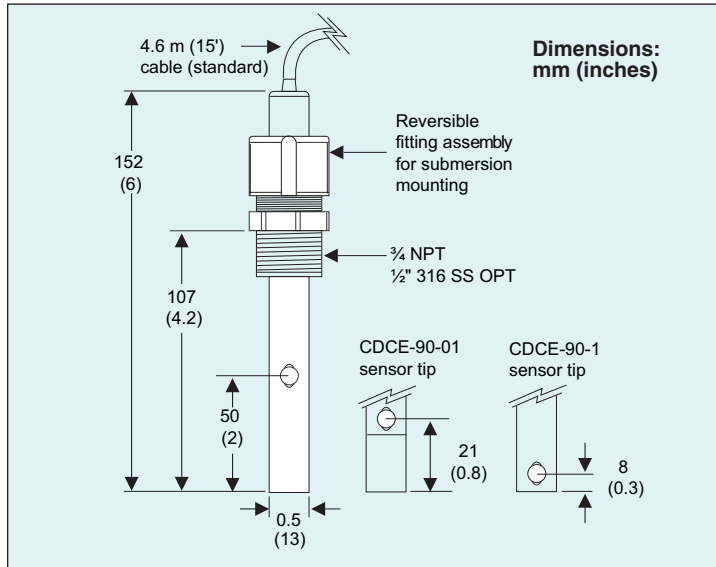
The Universal Mount Kit FP90UM can be ordered separately and includes a conduit base, locking ring, and universal adapter for mounting the transmitter on a pipe, wall, or other stationary surface.

<p>Conductivity/Resistivity Transmitter CDTX-90-XP includes: mounting bracket and panel gasket</p>	
<p>Conductivity/Resistivity Sensor</p>	
<p>Standard 3/4 in. NPT Fitting</p>	

<p>Conductivity/Resistivity Transmitter CDTX-90-X</p>	
<p>Universal Adapter Kit FP90UM includes: locking ring conduit base universal adapter (for pipe, wall)</p>	
<p>Conductivity/Resistivity Sensor</p>	
<p>Standard 3/4 in. NPT Fitting</p>	



Conductivity Cells for CDCN-91, CDTX-90 and CDCN-5800 Series



All shown smaller than actual size.

CDCE-90-001, \$298.

CDCE-90-01, \$298.

CDCE-90-1, \$298.

CDCE-90-001, CDCE-90-01, CDCE-90-1

Cell:

- CDCE-90-001: 0.01
- CDCE-90-01: 0.1
- CDCE-90-1: 1.0

Conductivity Range:

- CDCE-90-001: 0.010 to 100 μ S (10 K Ω to 100 M Ω)
- CDCE-90-01: 1 to 1000 μ S
- CDCE-90-1: 10 to 10,000 μ S

Temperature Compensation: Pt1000

Wetted Materials:

- O-Rings: EPR
- Insulator Material: PTFE

Electrodes: 316 SS

Standard Fitting: Polypropylene

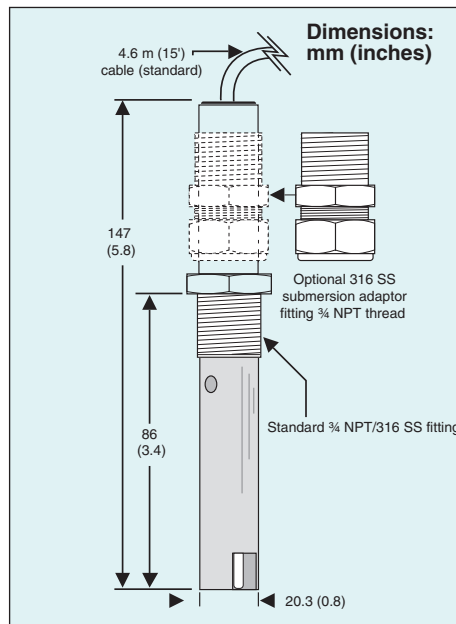
- Max. Pressure: 6.9 bar (100 psi)
- Max. Temperature: 100°C (212°F)

Optional Fitting:

- 316 SS 1/2 NPT
- Max Pressure: 13.8 bar (200 psi)
- Max Temperature: 120°C (248°F)

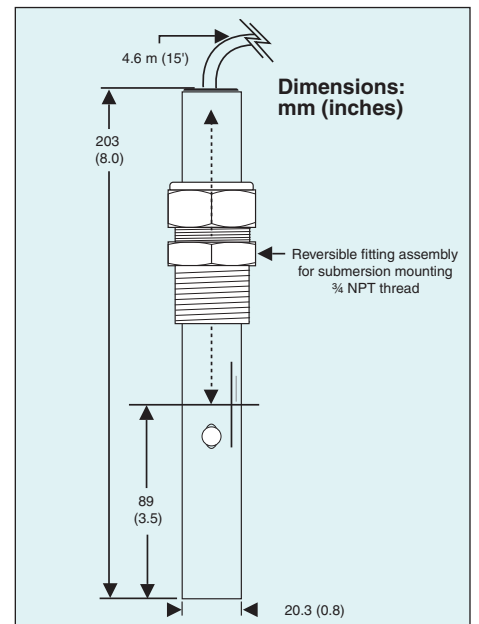


CDCE-90-10, \$511 (left), CDCE-90-20 (right), \$624, shown smaller than actual size.



CDCE-90-10

- Cell Constant: 10.0
- Conductivity Range: 100 to 200,000 μ S
- Temperature Compensation: Pt1000
- O-Ring: EPR
- Insulator Material: CPVC
- Electrodes: 316 SS
- Fitting Material: 316 SS
- Maximum Pressure/Temperature: 100 psig @ 95°C (203°F)



CDCE-90-20

- Cell Constant: 20.0
- Conductivity Range: 200 to 400,000 μ S
- Temperature Compensation: Pt1000
- O-Ring: EPR
- Insulator Material: PTFE
- Electrodes: 316 SS
- Fitting Material: 316 SS
- Maximum Pressure/Temperature: 100 psig @ 150°C (302°F)



CDCE-90S-001, CDCE-90S-01, CDCE-90S-1

Cell:

CDCE-90S-001: 0.01
CDCE-90S-01: 0.1
CDCE-90S-1: 1.0

Conductivity Range:

CDCE-90S-001: 0.010 to 100 μ S
(10 K Ω to 100 M Ω)
CDCE-90S-01: 1 to 1000 μ S
CDCE-90S-1: 10 to 10,000 μ S

Sanitary Fitting Size: 1, 1½, 2"

Temperature Compensation: Pt1000

Wetted Materials:

O-Ring: EPR

Insulator Material: PTFE

Electrodes: 316 SS or titanium

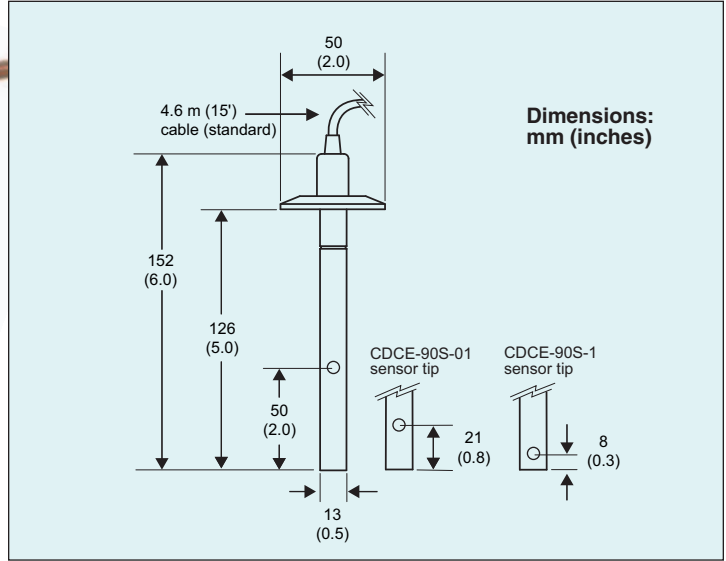
Sanitary Fitting: 316 SS or titanium

Maximum Pressure: 6.9 bar (100 psi)

Maximum Temperature: 120°C (248°F)



CDCE-90S-001-S15,
\$607, shown smaller
than actual size.



* Dimension shown for 1 and 1½" sanitary fittings.
Dimension for 2" sanitary fitting is 64 mm (2.5")

 MOST POPULAR MODELS HIGHLIGHTED!

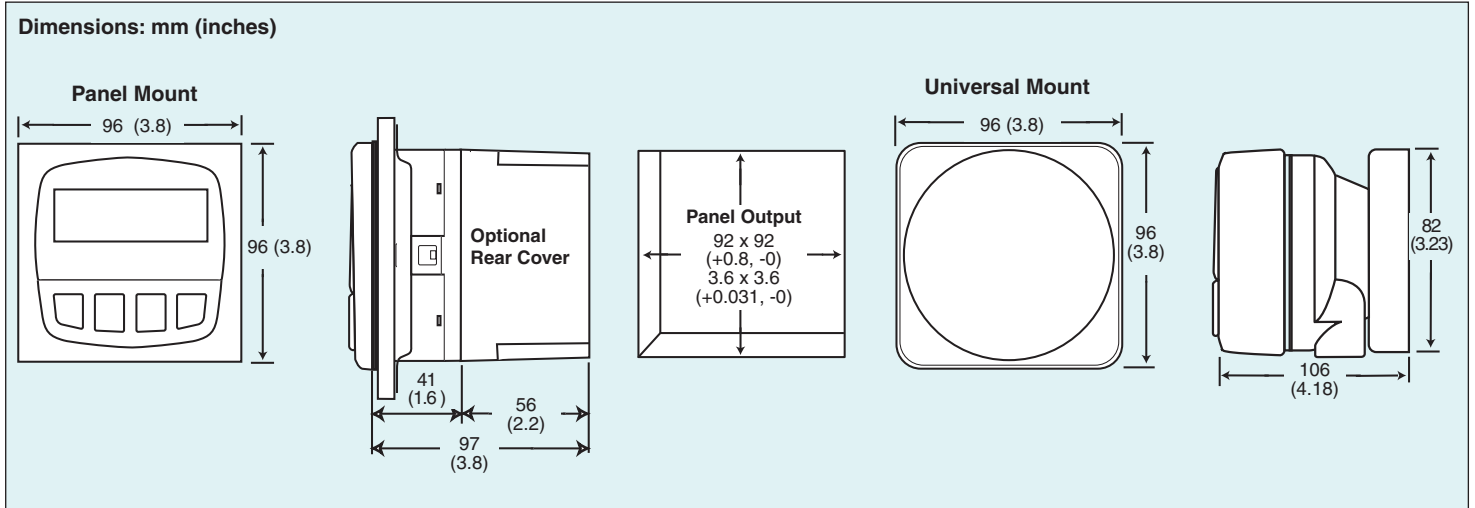
To Order (Specify Model Number)

Model No.	Price	Fitting	Cell Constant	Material
CDCE-90-001	\$298	¼ NPT	0.01	316 SS
CDCE-90-01	298	¼ NPT	0.1	316 SS
CDCE-90-1	298	¼ NPT	1	316 SS
CDCE-90-10	511	¼ NPT	10	316 SS
CDCE-90-20	624	¼ NPT	20	316 SS
CDCE-90S-001-S15	607	1.5" sanitary	0.01	316 SS
CDCE-90S-1-S15	607	1.5" sanitary	1	316 SS
CDCE-90S-001-S20	718	2.0" sanitary	0.01	316 SS
CDCE-90S-01-S20	718	2.0" sanitary	0.1	316 SS
CDCE-90S-1-S20	718	2.0" sanitary	1	316 SS
CDCE-90S-001-T15	850	1.5" sanitary	0.01	Titanium
CDCE-90S-01-T15	850	1.5" sanitary	0.1	Titanium
CDCE-90S-1-T15	850	1.5" sanitary	1	Titanium
CDCE-90S-001-T20	960	2.0" sanitary	0.01	Titanium
CDCE-90S-01-T20	960	2.0" sanitary	0.1	Titanium
CDCE-90S-1-T20	960	2.0" sanitary	1	Titanium

* For extended cable add "-100" to model number, consult Sales for price.



Dimensions



All panel mount transmitters CDTX-90P include a mounting bracket and gasket for a NEMA 4X (IP65) watertight panel installation. Panel mount transmitters fit into a standard ¼ DIN panel cutout. The Universal Mount Kit PF90UM can be ordered separately and includes a conduit base, locking ring, and universal adapter for mounting the transmitter on a pipe wall or other stationary surface.

MOST POPULAR MODELS HIGHLIGHTED!

To Order (Specify Model Number)

Model No.	Price	Description
CDTX-90-1	\$576	Conductivity/resistivity transmitter field mount with 4 to 20 mA and O.C. output*
CDTX-90-2	675	Conductivity/resistivity transmitter field mount with 4 to 20 mA and 2 relays*
CDTX-90-3	757	Conductivity/resistivity transmitter field mount with 4 to 20 mA and single input/dual output*
CDTX-90-1P	576	Conductivity/resistivity transmitter panel mount with 4 to 20 mA and O.C. output
CDTX-90-2P	675	Conductivity/resistivity transmitter panel mount with 4 to 20 mA and 2 relays
CDTX-90-3P	757	Conductivity/resistivity transmitter panel mount with 4 to 20 mA and single input/dual output

Comes complete with operator's manual.

* Field mount transmitters require **FP90UM** universal mounting kit.

Ordering Example: CDTX-90-1P conductivity transmitter panel mount, CDCE-90-1 conductivity cell, and U24Y101 power supply, \$576 + 298 + 169 = \$1043. Additional cells available, see pages E-37 and E-38.

Accessories

Model No.	Price	Description
FP90UM	\$50	Universal mounting kit
FP90-4X	45	NEMA 4X (IP65) cover (panel mount)
FPM-5000-LTCK	40	Liquid-tight kit for rear cover
U24Y101	169	1000 mA power supply

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