

# NON-INDICATING TWO-WIRE RESISTIVITY TRANSMITTERS



## RSTX-200 Series

**\$630**  
Basic Unit

The OMEGA® RSTX-201-202 non-indicating two-wire transmitter for use with a matching conductivity sensor requires only two wires for output and power transmission. Current to operate the transmitter is provided by a two-wire receiver, or by an appropriate dc power supply. This controlled current loop has high noise immunity, permitting use of a simple twisted pair of wires. Since current is used instead of voltage, the resistance of the wire does not affect accuracy.

The transmitter electronics are fully encapsulated. Terminal strips are provided for field connections. The transmitter can be surface-mounted in any position. The unit is supplied with a resistivity sensor. An optional polycarbonate NEMA-4X enclosure is available for environmental protection.

The resistivity sensor is made of titanium and PFA. To ensure the best possible measurement accuracy, the transmitter and sensor have been factory calibrated.

## SPECIFICATIONS OPERATIONAL

**Ambient Conditions:** -30 to 70°C (-22 to 158°F), 0-100% RH

**Sensor-to-Transmitter Distance:** 30 m (100 ft) max

**Transmission Distance:** Limited only by wire resistance and power

**Power Requirements:** 16 to 40 Vdc, connections via terminals

**Measuring Range:** 0-20 megohm/cm

**Temperature Compensation:** Automatic, 0-35°C (32-95°F), or fixed at 2% per °C

**Dimensions:** 122 W x 119 H x 56 mm D (4.8 x 4.7 x 2.2")

## PERFORMANCE (electrical, 4-20 ma output)

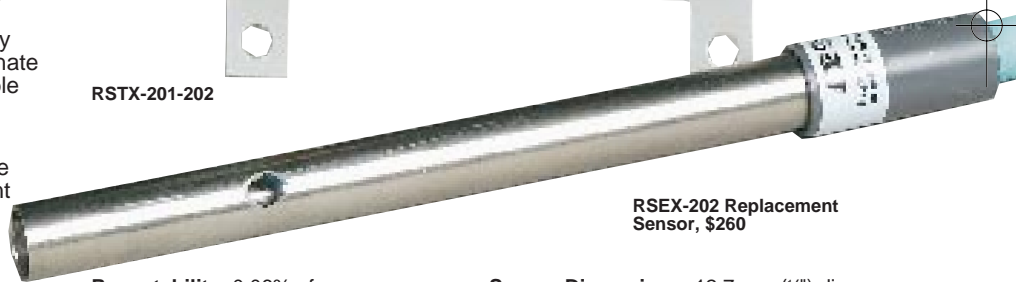
**Sensitivity:** Less than 0.01% of span

**Stability:** 0.06% of span per 24 hr, non-cumulative

- ✓ Epoxy Encapsulated
- ✓ Two-Wire System Simplifies Wiring
- ✓ Small Size for Convenient Mounting



RSTX-201-202



RSEX-202 Replacement  
Sensor, \$260

**Repeatability:** 0.06% of span

**Temperature Drift:** Zero, 0.013% of span/°C; Span, 0.013% of span/°C

**Non-Linearity:** 0.125% of span

**Response Time:** 10 sec (to 90% of value upon step change)

**Insertion Loss at 20 mA:** 14.6 Vdc (730 ohms). Insertion loss represents a maximum resistance (listed above) in the 4-20 mA loop

**Sensor Dimensions:** 12.7 mm (½") dia; 178 mm (7") overall length, 104 mm (4.1") max insertion length; 3.04 m (10 ft) cable

## MECHANICAL

**Enclosure (optional):** NEMA-4X, polycarbonate, surface mount

**Net Weight (less enclosure):** 270 g (9.5 oz)

## To Order (Specify Model Number)

Model No.	Price	Description
RSTX-201-202	\$630	Resistivity transmitter with sensor
RSTX-201-202-CDC-201	750	Resistivity transmitter/sensor and NEMA-4X enclosure
RSEX-202	325	Replacement sensor
U24Y101	128	Unregulated 24 Vdc, 1,000 mA power supply, 110 V input power

Each unit supplied with sensor and complete operator's manual.

**Ordering Example:** RSTX-201-202-CDC-201, resistivity transmitter with sensor and NEMA-4X polycarbonate enclosure, \$750



#### UNITED STATES

[www.omega.com](http://www.omega.com)  
1-800-TC-OMEGA  
Stamford, CT.

#### CANADA

[www.omega.ca](http://www.omega.ca)  
Laval(Quebec)  
1-800-TC-OMEGA

#### GERMANY

[www.omega.de](http://www.omega.de)  
Deckenpfronn, Germany  
0800-8266342

#### UNITED KINGDOM

[www.omega.co.uk](http://www.omega.co.uk)  
Manchester, England  
0800-488-488

#### FRANCE

[www.omega.fr](http://www.omega.fr)  
Guyancourt, France  
088-466-342

#### CZECH REPUBLIC

[www.omegaeng.cz](http://www.omegaeng.cz)  
Karviná, Czech Republic  
596-311-899

#### BENELUX

[www.omega.nl](http://www.omega.nl)  
Amstelveen, NL  
0800-099-33-44



## More than 100,000 Products Available!

### • Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Glass Bulb Thermometers, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders Relative Humidity Measurement Instruments, RTD Probes, Elements and Assemblies, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples Thermowells and Head and Well Assemblies, Transmitters, Wire

### • 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