

Economy Toroidal Conductivity Sensor

- TOROIDAL SENSOR TECHNOLOGY eliminates electrode corrosion.
- CHEMICALLY RESISTANT CPVC BODY.
- STANDARD PVC* adapters are compatible.
- CPVC MOUNTING ADAPTERS are available as accessories.
- SUBMERSION OR FLOW-TEE MOUNTING
- INTEGRAL PT 100 RTD provides accurate temperature compensation



FEATURES AND APPLICATIONS

Rosemount Analytical Toroidal Conductivity Sensors are ideal for use in processes where conventional sensors — those with electrodes exposed to the measured solution — would corrode or become fouled.

The Model 247 Economy Toroidal Conductivity Sensor consists of wire-wound toroids that are isolated from the process. One toroid acts as a transmitter and the other as a receiver. Energizing the transmitter toroid induces an electric current into the process solution which induces an electric current into the receiver toroid. The strength of that induced current is directly proportional to the conductivity of the solution.

The Model 247 sensor is constructed with a solvent-welded CPVC body which makes it durable and chemically resistant

to most dilute acids, bases, and inorganic salt solutions. The sensor's integral Pt 100 RTD ensures accurate temperature compensation.

The Model 247 sensor is easy to install. The toroidal sensor is not sensitive to flow rate or direction. It can be installed using PVC* fittings readily available at local hardware stores or with CPVC fittings offered here as accessories.

All these features make the sensor ideal for applying to **cooling water treatment, boiler blowdown, and metal plating** processes.

The Model 247 CPVC Toroidal Conductivity Sensor is compatible with Rosemount Analytical instrument Model 1055-21 or -31.

SPECIFICATIONS

| | |
|----------------------------|-----------------------------------|
| Installation Type | Submersion, Flow-Tee |
| Conductivity Range | 500 microSiemen/cm to 1 Siemen/cm |
| Maximum Temperature | 165°F (75°C) |
| Maximum Pressure | 100 psig (790 kPa abs) |
| Wetted Material | CPVC |
| Shipping Weight | 1.9 lbs (0.9 kg) |

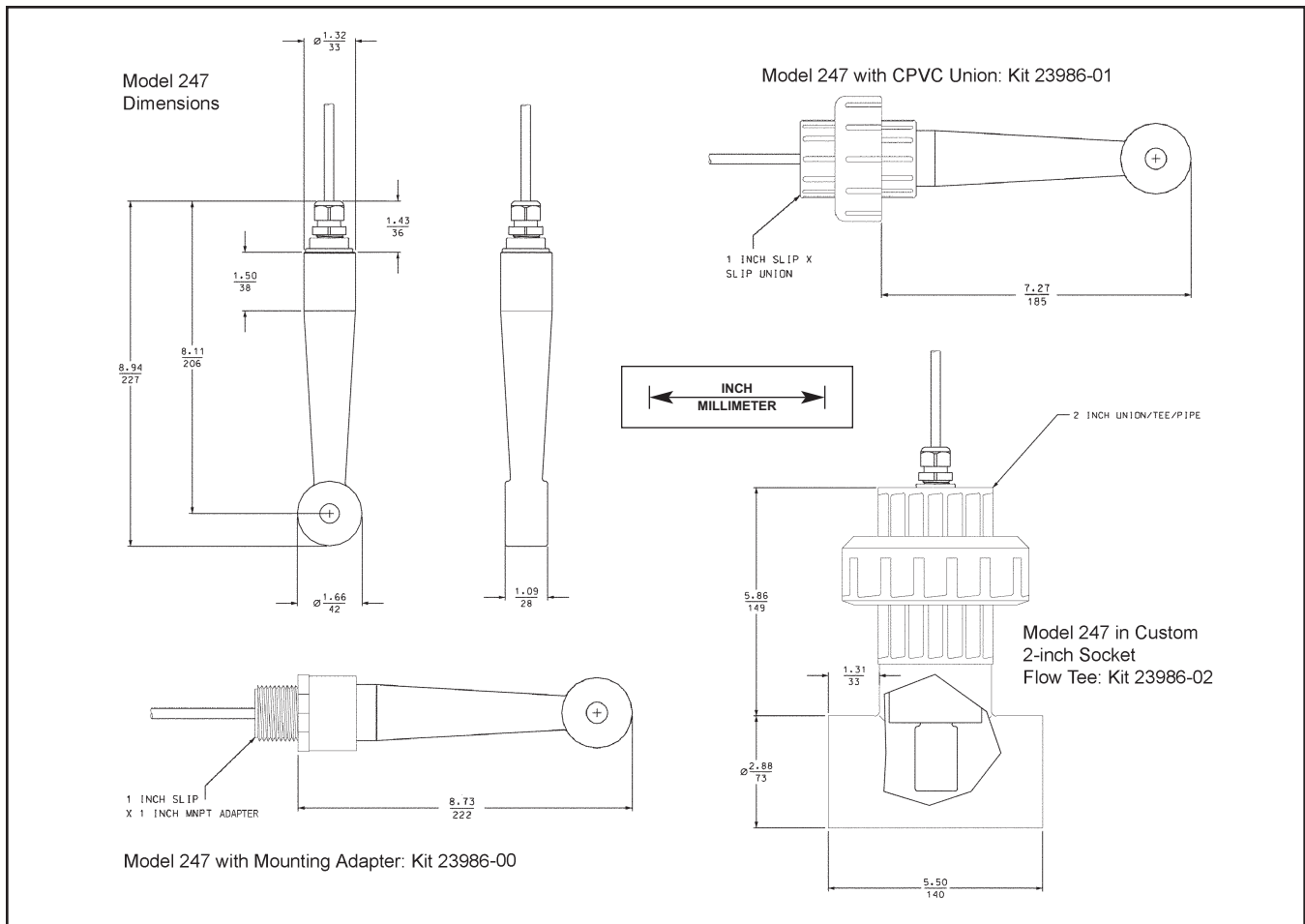
**Carefully check the manufacturer's pressure and temperature limits for any adapters not supplied by Rosemount Analytical. PVC adapters typically have lower pressure and temperature ratings than those specified here for CPVC.*

Specifications subject to change without notice.

ADAPTERS

| Model | Description | Materials of Construction | Temperature | Pressure |
|----------|---------------------------------------|---------------------------|--------------|------------------------|
| 23986-00 | Mounting Adapter, 1" slip x 1" MPT | CPVC | 165°F (75°C) | 100 psig (790 kPa abs) |
| 23986-01 | Union, 1" slip x 1" slip | CPVC, Viton® | 165°F (75°C) | 100 psig (790 kPa abs) |
| 23986-02 | Tee, Flow-through, 2" with slip union | CPVC, Viton® | 150°F (66°C) | 100 psig (790 kPa abs) |

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ORDERING INFORMATION

The **Model 247 Economy Toroidal Conductivity Sensor** is constructed with a CPVC body and includes an integral Pt 100 RTD and a 20' cable. The back end fits into standard 1" plumbing fittings. The sensor can be installed in the process via submersion using either the CPVC fittings (sold separately) or more commonly available PVC* fittings. For flow-tee installation, the custom-made 2" CPVC Tee kit sold below is required. The sensor is compatible with instrument Model 1055.

| MODEL | ECONOMY TOROIDAL CONDUCTIVITY SENSOR |
|-------|--------------------------------------|
| 247 | CPVC Toroidal Sensor |

ACCESSORIES

| PART # | DESCRIPTION |
|----------|---|
| 23986-00 | Mounting Adapter, CPVC, 1" slip x 1" MPT |
| 23986-01 | Union, CPVC, 1" slip x 1" slip |
| 23986-02 | Tee, Flow-through, 2" CPVC with slip union (custom) |

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Emerson Process Management

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