

# Rosemount™ 225

## Toroidal Conductivity Sensors



### A Reliable Sensor for High Conductivity Sanitary Applications

Rosemount 225 toroidal conductivity sensors are intended to be used in many pharmaceutical and food and beverage applications where a sanitary design is required. These corrosion and fouling resistant sensors are ideal for measuring the concentration of CIP solutions, detecting product/water interfaces, checking product quality, and monitoring elements in chromatographic separations.



### Meet Various Sanitary Requirements

- USP Class VI compliant
- FDA food contact 21CFR177.2415 compliant
- 3-A Sanitary Standard 74-06 compliant

### Ease of Installation

- 2 inch tri-clamp process connection
- Installation flexibility with maximum cable lengths up to 200 ft (61 m) between sensor and transmitter when paired with remote junction box (sold separately)

### High Performance and Reliability

- Robust measurements - insensitive to process flow and direction
- Meet application compatibility requirements with a selection of chemical resistant body options including PEEK and Tefzel

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## Ordering Information



Rosemount 225 Sanitary Toroidal Conductivity Sensors work well in high conductivity liquids up to 2 S/cm (2,000,000  $\mu$ S/cm). These sensors include an integral Pt-100 RTD for temperature compensation and 20 ft of integral cable. Cables can be extended using a remote junction box PN 23550-00 (see Accessories).

Rosemount 225 Sanitary Toroidal Conductivity Sensor

**Table 1 -Rosemount 225 Sanitary Toroidal Conductivity Sensor Ordering Information**

Model	Sensor Type
225	Toroidal Conductivity Sensor
<b>Body Material &amp; Mounting Type</b>	
03	Glass-filled PEEK with tri-clamp
07	Unfilled PEEK with tri-clamp
08	USP Class VI unfilled PEEK with tri-clamp <sup>1</sup>
09	Unfilled Tefzel <sup>1</sup>
<b>Transmitter Compatibility</b>	
54	Standard integral cable
56	Integral cable with additional shielding for improved EMI/RFI protection <sup>2</sup>
<b>Typical model number: 225-03-56</b>	

(1) Only available with -56 option

(2) Recommended for use with Rosemount transmitter models 56, 1056, 5081, and 1066

## Specifications

**Cell Constant (Nominal):** 2.7/cm

**Minimum Conductivity:** 200  $\mu$ S/cm (15  $\mu$ S/cm when used with Rosemount 1056 and 56 transmitters)

**Maximum Conductivity:** 2 S/cm

**Process Connection:** 2 inch tri-clamp

**Conformance to 3-A Sanitary Standards:** Sensors with option -07 meet 3-A sanitary standards for sensors and sensor fittings and connections used on milk and milk products equipment (74-06).

**Compliance with FDA Food Contact Requirements:** Sensors with option -07 are molded from PEEK that meet 21CF177.2415.

**Compliance with USP Class VI:** Sensors with option -08 are molded from PEEK that meet USP Class VI requirements.

**Cable Length:** 20 ft (6.1 m)

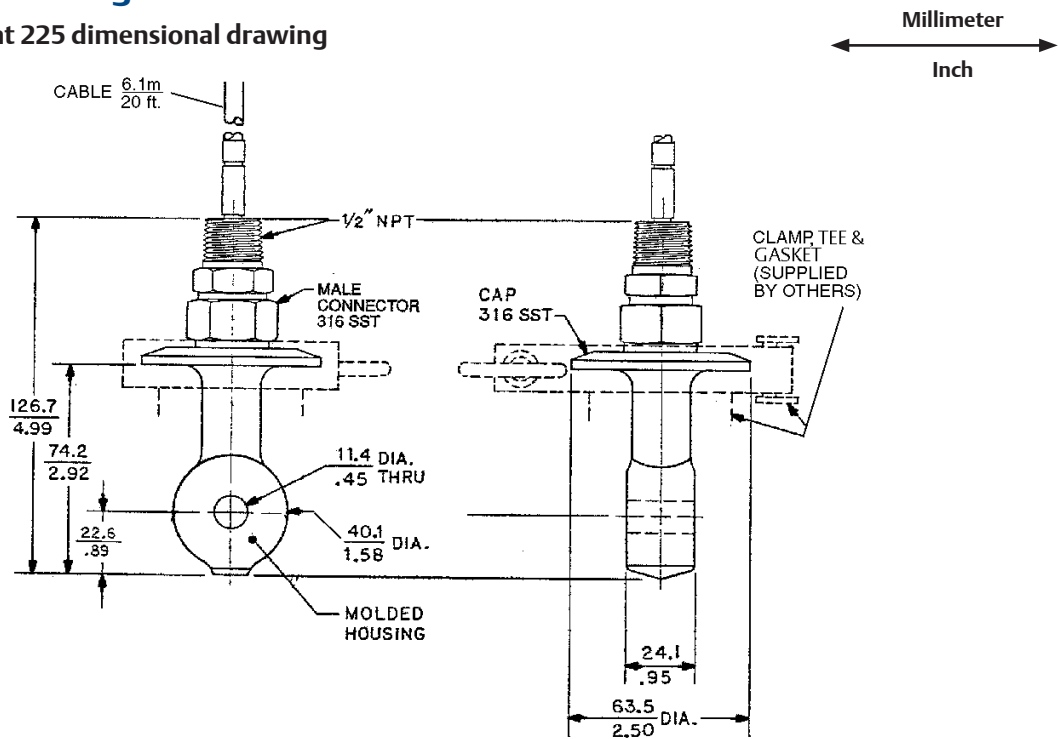
**Maximum Cable Length:** 200 ft (61 m)

**Weight/Shipping Weight:** 2 lb/3 lb (1.0 kg/1.5 kg)

Body Material Option	Wetted Materials	Maximum Temperature	Maximum Pressure
03	Glass-filled PEEK	230 °F (110 °C)	200 psig (1480 kpa [abs])
07	Unfilled PEEK (meets 21CFR177.2415 and 3A standard 74-06)	266 °F (130 °C)	
08	Unfilled PEEK (meets USP Class VI standards)		
09	Unfilled Tefzel	230 °F (110 °C)	

### Dimensional Drawing

Figure 1. Rosemount 225 dimensional drawing



### Accessories

Part Number	Description
23550-00	Remote junction box without preamplifier
23294-00	Interconnecting extension cable, unshielded, prepped (for use with remote junction box)
23294-05	Interconnecting extension cable, shielded, prepped (for use with remote junction box)
9200276	Interconnecting extension cable, shielded, unprepped (for use with remote junction box)

## Engineering Specification for 225 Sensor

1. The sensor shall measure electrolytic conductivity using the inductive or toroidal method.
2. The sensor shall be molded from glass-filled PEEK, unfilled PEEK, or unfilled Tefzel and have a 2-inch tri-clamp fitting.
3. The unfilled PEEK sensor shall be available in a version that meets 3A sanitary standard 74-06 and 21CFR177.2415.
4. The unfilled PEEK sensor shall also be available in an option that is molded from USP Class VI material.
5. The glass-filled PEEK and unfilled Tefzel sensor shall withstand 230 °F (110 °C) at 200 psig (1480 kPa abs).
6. The unfilled PEEK sensors shall withstand 266 °F (130 °C) at 200 psig (1480 kPa abs).
7. The sensor shall be Rosemount model 225 or approved equal.

## Notes

**Notes**

**[www.Emerson.com/RosemountLiquidAnalysis](http://www.Emerson.com/RosemountLiquidAnalysis)**

Rosemount  
8200 Market Blvd  
Chanhassen, MN 55317  
USA  
T +1 800 999 9307  
F +1 952 949 7001

**[liquid.csc@emerson.com](mailto:liquid.csc@emerson.com)**

**[www.Emerson.com/RosemountLiquidAnalysis](http://www.Emerson.com/RosemountLiquidAnalysis)**

**EUROPE**

Emerson  
Neuhofstrasse-19a P.O. Box 2046  
CH-6340 Baar  
Switzerland  
T +41 (0) 41 768 6111  
F +41 (0) 41 768 6300

**[liquid.csc@emerson.com](mailto:liquid.csc@emerson.com)**

**[www.Emerson.com/RosemountLiquidAnalysis](http://www.Emerson.com/RosemountLiquidAnalysis)**

**MIDDLE EAST AND AFRICA**

Emerson  
Emerson FZE  
Jebel Ali Free Zone  
Dubai, United Arab Emirates,  
P.O. Box 17033  
T +971 4 811 8100  
F +971 4 886 5465

**[liquid.csc@emerson.com](mailto:liquid.csc@emerson.com)**

**[www.Emerson.com/RosemountLiquidAnalysis](http://www.Emerson.com/RosemountLiquidAnalysis)**

**ASIA-PACIFIC**

Emerson  
Asia Pacific Private Limited  
1 Pandan Crescent  
Singapore 128461  
Republic of Singapore  
T +65 6 777 8211  
F +65 6 777 0947

**[liquid.csc@emerson.com](mailto:liquid.csc@emerson.com)**

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