

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

Contents

Ordering Information.....	3
Specifications.....	3
Dimensional Drawing.....	4
Accessories.....	4
Engineering Specification for 225 Sensor.....	5

Ordering Information



Rosemount 225 Sanitary Toroidal Conductivity Sensors work well in high conductivity liquids up to 2 S/cm (2,000,000 μ 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
Body Material & Mounting Type	
03	Glass-filled PEEK with tri-clamp
07	Unfilled PEEK with tri-clamp
08	USP Class VI unfilled PEEK with tri-clamp ¹
09	Unfilled Tefzel ¹
Transmitter Compatibility	
54	Standard integral cable
56	Integral cable with additional shielding for improved EMI/RFI protection ²
Typical model number: 225-03-56	

(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 μ S/cm (15 μ 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)

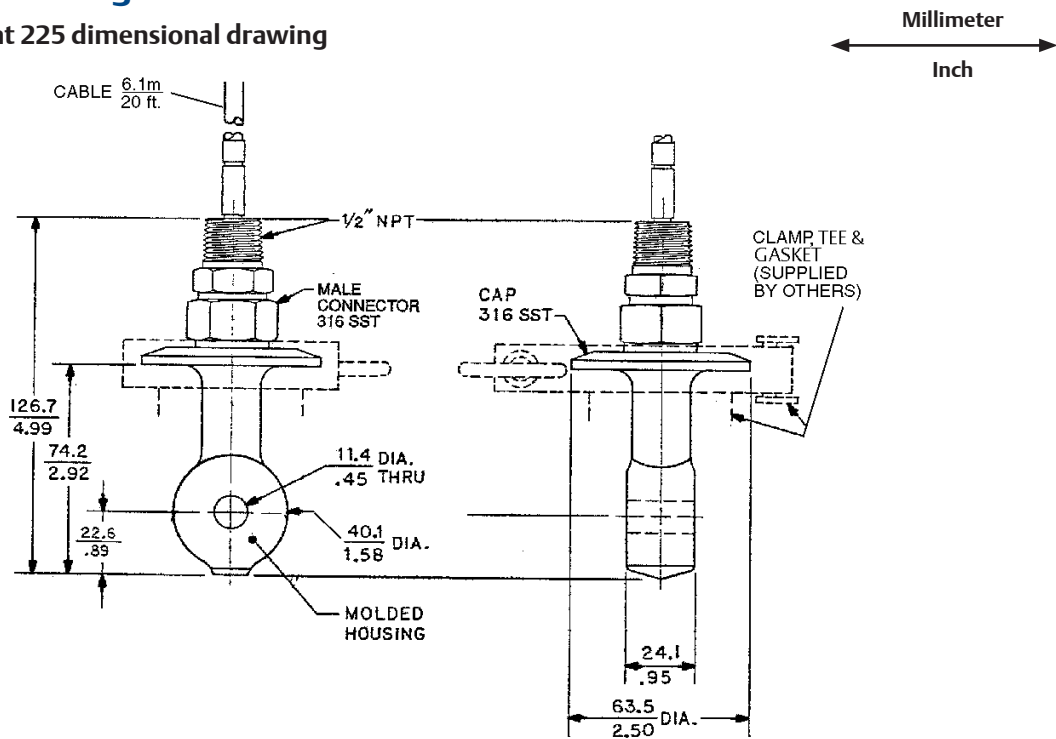
Maximum Cable Length: 200 ft (61 m)

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

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

liquid.csc@emerson.com

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

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

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

©2017 Emerson. All rights reserved.

The Emerson logo is a trademark and service mark of Emerson Electric Co. Rosemount is a mark of one of the Emerson family of companies. All other marks are the property of their respective owners. The contents of this publication are presented for information purposes only, and while effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, expressed or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available on request. We reserve the right to modify or improve the designs or specifications of our products at any time without notice.