

5000TC Series Toroidal (Electrodeless) Conductivity Sensors

Highly-reliable, corrosion-resistant cells

5000TC Series

THE FEATURES AND RELIABILITY YOU EXPECT FROM HONEYWELL

- Variety of material types to meet most application needs – PEEK, PFA Teflon®, PVDF, and Polypropylene.
- Increased cell reliability due to high chemical resistance and low friction factor in the materials of construction
- Flexibility of installations with four mounting types – Immersion, Union-mount, Insertion/Removal, and Sanitary
- Temperature compensated measurement with Pt1000 ohm RTD
- Convenient for most applications – 20 ft. cable standard
- 3A-approved materials of construction and CIP (clean-in-place) fitting makes the sanitary type cells suitable for most sanitary applications



Convertible Style



Sanitary Style



The Honeywell 5000TC toroidal (electrodeless) conductivity sensors measure the conductivity of solutions from 0.2 to 2000 milliSiemens/cm. The sensors can also be used for monitoring chemical concentration as well as salinity. The corrosion and fouling-resistant probes are available with a variety of mounting assemblies to ensure compatibility for applications in the chemical, food and dairy, refinery, pulp and paper, metal finishing and wastewater industries.

SPECIALLY-DESIGNED FOR TOUGH APPLICATIONS

The Honeywell 5000TC sensors are specifically designed for the monitoring of conductivity, chemical concentration, or salinity in difficult applications where coating, fouling, corrosion, or high temperatures/pressures are a concern. The sensor's 1½-inch diameter bore minimizes rough surfaces to ensure that flow impedance is minimized. A 1000Ω Platinum RTD provides accurate temperature measurement to ensure proper temperature compensation. Two types of basic sensor forms are available with the Honeywell 5000TC – the convertible or the sanitary style.

CONVERTIBLE STYLE

The 5000TC convertible style toroidal sensor includes both a ¾-inch and a ½-inch fitting to allow direct fastening to the end of a pipe for either immersion mounting or a union-mount adapter for a standard 2-inch pipe tee. The convertible style can also be insertion mounted into a 2-inch ball valve assembly.

SANITARY STYLE

The 5000TC sanitary style toroidal sensor includes a clean-in-place style fitting and is constructed of 3A-approved materials. It has an integral 2-inch sanitary-mount flange which mates to Honeywell sanitary tee mounting hardware. The sanitary-style sensor includes a special cap and EPDM compound gasket. The gasket is also available separately for mounting to a 2-inch sanitary clamp-type ferrule or butt-weld tee.

A VARIETY OF MOUNTING TYPES

The 5000TC sensors are available with a number of different mounting types. These include immersion mounting (CPVC or PVDF materials, also PVC junction box), union mounting (316 SS, CPVC or PVDF materials with optional 2-inch tee), sanitary mounting (316 SS 2-inch tee with heavy-duty clamp), or insertion/removal mounting (316 SS or CPVC material).

CHEMICAL COMPATIBILITY ISSUES MINIMIZED

To simplify chemical resistance problems, these sensors are constructed so that only one material is wetted by the process. The wetted material is non-conductive to insure that the sensor is electrically isolated from the process fluid. Convertible sensors are available in PEEK, PVDF, PFA Teflon®, and Polypropylene materials. Sanitary sensors are available in PVDF, PFA Teflon®, and Polypropylene materials.

®Teflon is a trademark of DuPont

WORKS WITH HONEYWELL'S APT2000 TC TRANSMITTER

All 5000TC cells work with the APT2000 Toroidal Conductivity process transmitter from Honeywell. This two-wire, loop-powered transmitter is designed to continuously measure conductivity, chemical concentration and salinity in industrial processes within the chemical, food and dairy, pulp and paper, refinery, and metals industries.



SENSOR SPECIFICATIONS

Wetted Materials	PFA Teflon®, Polypropylene, PVDF, or PEEK
Operating Temperature Range	10 to 125°C (14 to 257°F)
Maximum Flow Rate	10 ft. (3 m) per second
Measuring Range	0.2 to 2000 milliSiemens/cm
Temperature Compensator	Pt 1000Ω RTD
Sensor Cable	5 conductor (plus two isolated shields) cable with XLPE (cross-linked polyethylene) jacket; rated to 150°C (302°F); 20 ft. (6 m) long
Bore Size	1.5-inch diameter, 0.4-inch hole
PRESSURE/TEMPERATURE LIMITS:	
Sensor Only (no hardware)	Polypropylene 100 psi at 212°F (6.9 bar at 100°C)
	PVDF 100 psi at 248°F (6.9 bar at 120°C)
	PEEK 200 psi at 302°F (13.8 bar at 150°C)
	PFA Teflon® 200 psi at 302°F (13.8 bar at 150°C)

For more information on Honeywell's 5000TC toroidal (electrodeless) conductivity sensors, as well as the Honeywell APT2000 TC Series transmitter and other

analytical products, contact your local Honeywell representative, or call 1-800-343-0228. Visit our website at: www.honeywell.com/sensing.

Honeywell

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