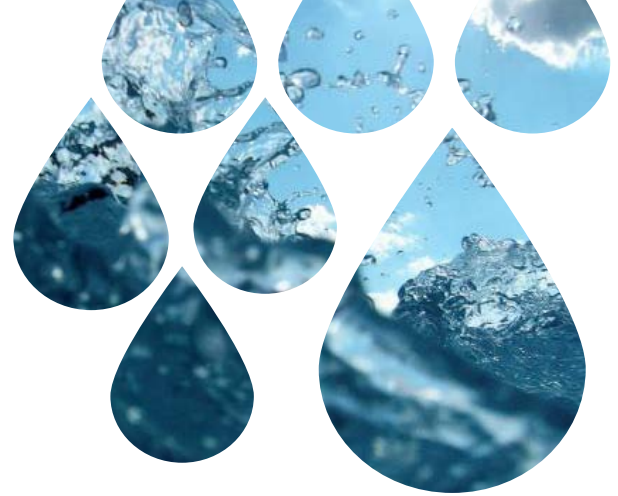


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Toroidal Conductivity Transmitter



Model Q45CT

ATI's Toroidal Conductivity Transmitter is designed for online monitoring of chemically aggressive process solutions. This sensor consists of two metallic ribbon coils that are fixed in place by the sensor jacket material. The drive coil is used to induce a current in the process solution. The second sensing coil is used to measure the current in the process solution, the magnitude of this current is proportional to the conductivity of the process solution.

The Q45CT is also available as a Concentration Monitor. The monitor comes with concentration/temperature tables for sodium hydroxide, potassium hydroxide, hydrochloric acid, nitric acid, and sulfuric acid. A user configurable table is also available for entering data points for a custom concentration curve.

This system is well suited for aggressive chemical processes, water application that coat or foul traditional sensors, and plating bath operations where high current densities are present.

Applications

Cooling Towers	Plating Baths
Acid & Base Dilution	Salt Water Aquariums
Brine Systems	Chemical Processing
Wastewater	Streams & Rivers
Salt Water Intrusion	

Features

- Measurement from 0-2000 uS to 0-2.000 S
- Option for NaCl, NaOH, or HCl concentration display
- Loop-powered or battery-operated
- External 5-17 VDC version for solar power applications
- Toroidal sensor resistant to fouling
- Submersion or In-line sensors
- Large, easy-to-read LCD display
- Total Dissolved Solids (TDS) on secondary display
- Clear, menu-driven user interface
- NEMA 4X (16-66) enclosure
- Wall or pipe mounting bracket standard
- Build-in PID controller

Sensor Option



Toroidal Sensor

Model Q45CT SPECIFICATIONS

ELECTRONIC MONITOR

Display Range	0-2000 μ S 0-2.000, 0-20.00, 0-200.0, 0-2000 mS 0-2.000 S
Accuracy	0.5% of selected range
Repeatability	0.2% of selected range
Sensitivity	0.05% of selected range
Linearity	0.1% of selected range
Temperature Drift	0.04% of span/ $^{\circ}$ C
Sensor Type	Toroidal
Temperature Input	Pt1000 in sensor for temperature compensation
Power	2-Wire unit: 17-30 VDC, 25 mA maximum Battery unit: Two AA alkaline batteries External DC: 5-17 VDC, 10 mA maximum
Analog Outputs	2-Wire unit: Single 4-20 mA DC, 450 ohms maximum Battery unit: Two 0-2.5 VDC, 50K ohms minimum External DC: Two 0-2.5 VDC, 50K ohms minimum
Output Isolation	600 V Galvanic isolation
Enclosure	NEMA 4X (IP-66) Polycarbonate, V-0 flammability
Mounting Options	Wall or pipe mounting bracket supplied
Conduit Entries	Two PG-9 cord grips, 0.16-0.31" diameter cable
Ambient Temperature	Operating: -40 $^{\circ}$ to + 60 $^{\circ}$ C Storage: -40 $^{\circ}$ to + 70 $^{\circ}$ C
Ambient Humidity	0-95%, Non-condensing
Size	4.4"H x 4.4"W x 3.5"D (111 x 111 x 90 mm)
Weight	2-Wire or External DC unit: 1 lb (0.45 Kg) Battery unit: 2 lbs (0.9 Kg)
Certifications	CE marked to BS EN 61326-1:2006 Standard UL and CSA General Purpose

SENSOR SPECIFICATIONS

Sensor	Toroidal sensor
Wetted Materials	Polypropylene
Sensor Cable	20ft. (6.1 m) standard, maximum 200 ft. (61 m)
Response Time	Two seconds to 90% of full scale
Temp Limits	0 - 105 $^{\circ}$ C
Pressure Limits	150 psig
Process Connection	3/4" MNPT rear thread, optional 2" keyed tee fitting
Temp Element	PT1000 RTD
Minimum Conductivity	100 microSiemens

ORDERING INFORMATION

Model Q45CT-A-B-C Torodial Conductivity

Suffix A - Power

- 1 - 24 VDC, 2-wire (single output only)
- 4 - Battery-operated with two 0-2.5 VDC outputs
- 5 - External 5-17 VDC with two 0-2.5 VDC outputs

Suffix B - Sensor Type

- 1 - Polypropylene with 20 ft. cable

Suffix C - Monitor Type

- 1 - Conductivity

ACCESSORIES

- 07-0100** Universal junction box, NEMA 4X
- 31-0068** Sensor interconnect cable
- 63-0083** Tee fitting, CPVC
- 47-0005** 2" U-bolt, 304SS
- 00-0628** Submersible sensor handrail mounting kit
- 09-0048** Conductivity standard, 1,500 μ S, 500 mL
- 09-0049** Conductivity standard, 8,974 μ S, 500 mL
- 09-0050** Conductivity standard 80,000 μ S, 500 mL

NOTES:

- 1 - All sensor cable lengths greater than 20 ft. require a junction box (07-0100) and sensor interconnect cable (31-0068).
- 2 - Pipe mount requires two 2" U-bolts (47-0005).



Visit Us on the Web: www.analyticaltechnology.com

B / Q45CT / R-1 (5/2014)

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