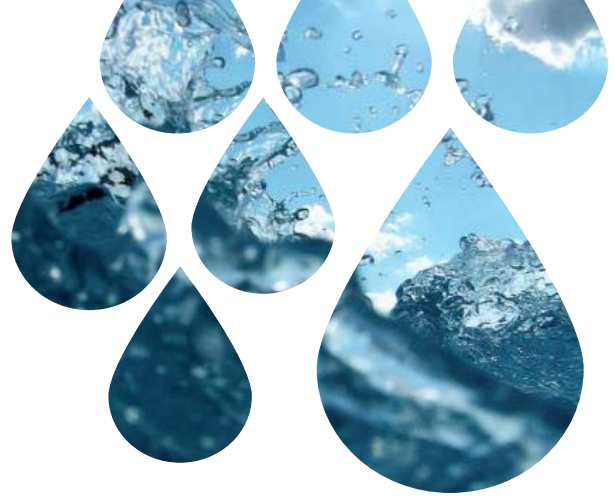


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# 2-Electrode Resistivity Transmitter



## Model Q45C2

ATI's 2-Electrode Resistivity Transmitter provides the reliable and accurate low-level measurements required for such high-purity water systems. Monitors provide large, easy-to-read LCD displays with a second display line for indication of temperature or other operational information. For those applications where results in resistivity units are preferred, Q45C2 monitors can be programmed to display readings in Meg-ohm units instead of microSiemens.

The monitor employs 2-Electrode conductivity sensors with low cell constants to provide continuous measurements from 0-20 to 0-2,000 microSiemens. The 2-Electrode sensors are specifically designed for use in ultra-pure water and nonfouling applications. The sensors are available in several mounting configurations including 316SS compression fittings or sanitary-style. These sensors may also be mounted submersion-style or in a hot-tap configuration.

## Applications

Reverse Osmosis Systems  
Boiler Feed Water  
Pharmaceutical Water  
Desalination Systems

Deionization Systems  
Return Condensate  
Semiconductor Water

## Features

- Display in conductivity or resistivity units
- Loop-powered or battery-operation
- External 5-17 VDC version for solar power applications
- Accepts 0.05, 0.5, or 1.0K cell constant sensors
- Titanium or 316ss electrodes for corrosion resistance
- Submersion, In-line, or sanitary-style sensors
- Large, easy-to-read LCD display
- Total dissolved solids (TDS) on secondary display
- Clear, menu-driven user interface
- NEMA 4X (IP-66) enclosure
- Wall or pipe mounting bracket standard
- Built-in PID controller

## Sensor Options



In-Line Sensor



1-1/2" Sanitary-Style Sensor



Submersion Sensor

# Q45C2 SPECIFICATIONS

## ELECTRONIC MONITOR

<b>Display Range</b>	<b>Conductivity:</b> 0-2.000, 0-20.00, 0-200.00, 0-2000 $\mu$ S <b>Resistivity:</b> 0-20.00 M $\Omega$ , 0-200.0 k $\Omega$
<b>Accuracy</b>	0.1% of selected range
<b>Repeatability</b>	0.1% of selected range
<b>Sensitivity</b>	0.05% of selected range
<b>Linearity</b>	0.1% of selected range
<b>Temperature Drift</b>	0.1% of span/ $^{\circ}$ C
<b>Sensor Type</b>	Two-Electrode, 0.05K, 0.5K, or 1.0K cell constant
<b>Temperature Input</b>	Either Pt1000 or Pt100 for temperature compensation
<b>Power</b>	<b>2-Wire unit:</b> 17-30 VDC, 25 mA maximum <b>Battery unit:</b> Two AA alkaline batteries <b>External DC:</b> 5-17 VDC, 10 mA maximum
<b>Analog Outputs</b>	<b>2-Wire unit:</b> Single 4-20 mA DC, 450 ohms maximum <b>Battery unit:</b> Two 0-2.5 VDC, 50K ohms minimum <b>External DC:</b> Two 0-2.5 VDC, 50K ohms minimum
<b>Output Isolation</b>	600 V Galvanic isolation
<b>Enclosure</b>	NEMA 4X (IP-66) Polycarbonate, V-0 flammability
<b>Mounting Options</b>	Wall or pipe mounting bracket supplied
<b>Conduit Entries</b>	Two PG-9 cord grips, 0.16-0.31" diameter cable
<b>Ambient Temperature</b>	Operating: -40 $^{\circ}$ to + 60 $^{\circ}$ C Storage: -40 $^{\circ}$ to + 70 $^{\circ}$ C
<b>Ambient Humidity</b>	0-95%, Non-condensing
<b>Size</b>	4.4"H x 4.4"W x 3.5"D (111 x 111 x 90 mm)
<b>Weight</b>	<b>2-Wire or External DC unit:</b> 1 lb (0.45 Kg) <b>Battery unit:</b> 2 lbs (0.9 Kg)
<b>Certifications</b>	CE marked to BS EN 61326-1:2006 Standard UL and CSA General Purpose

## SENSOR SPECIFICATIONS

<b>Sensor</b>	In-line or 1-1/2" Sanitary-style
<b>Cell Constants</b>	0.05K or 0.5K
<b>Wetted Materials</b>	Titanium Electrodes, 316SS fittings
<b>Temperature Element</b>	Pt1000 RTD
<b>Sensor Cable</b>	6 conductor plus 2 shields, HDPE jacket
<b>Temperature Range</b>	-10 to 125 $^{\circ}$ C (14 to 257 $^{\circ}$ F)
<b>Pressure Range</b>	0 to 100 psig
<b>Max. Flow Rate</b>	10 feet (3 meters) per second
<b>Max. Cable Length</b>	60 feet (18.3 meters)

## ORDERING INFORMATION

### Q45C2-A-B-C 2-Electrode Resistivity Transmitter

#### 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 Style

- 1 - 0.05 Cell, Titanium, 1/2" NPT Compression fitting
- 2 - 0.05K Cell, Titanium, 1/2" fitting, with connector (requires opt. C4)
- 3 - 0.5K Cell, Titanium, 1/2" fitting, with connector (requires opt. C4)
- 4 - 0.50 Cell, Titanium, 1/2" NPT Compression fitting
- 5 - 0.50 Cell, 316SS, 1-1/2" Sanitary fitting
- 6 - 0.05 Cell, 316SS, 1-1/2" Sanitary fitting

#### Suffix C - Cable Length

- 1 - 15 ft.
- 2 - 30 ft.
- 3 - 25 ft. (7.6 m) with quick-connect plug (for sensor type B2 and B3)
- 9 - Special

## ACCESSORIES

- 07-0100** Universal junction box, NEMA 4X
- 31-0057** Sensor interconnect cable
- 03-0029** Sensor cable with connector (25 ft.)
- 47-0005** 2" U-bolt, 304SS
- 07-0203** Sensor insertion assembly without assist, 1-1/4" NPT, 316SS
- 07-0228** Sensor insertion assembly with assist, 1-1/4" NPT, 316SS
- 51-0067** Conductivity Standard - 10  $\mu$ S, Pack of six 100 cc bottles
- 09-0047** Conductivity Standard - 447 microSiemens, 500 mL
- 09-0048** Conductivity Standard - 1,500 microSiemens, 500 mL

## NOTES:

- 1 - All sensor cable lengths greater than 30 feet require a Junction Box (07-0100) and Sensor Interconnect Cable (31-0057).
- 2 - Pipe mount requires two 2" U-bolts (47-0005).
- 3 - Sensor styles B2 & B3 are not for use in extremely wet environments.
- 4 - Sensor styles B1 & B4 may be used with ball valve insertion assemblies.



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Represented by:

**Analytical Technology, Inc.**

6 Iron Bridge Drive  
Collegeville, PA 19462

**Phone** 610.917.0991

**Toll-Free** 800.959.0299

**Fax** 610.917.0992

**Email** [sales@analyticaltechnology.com](mailto:sales@analyticaltechnology.com)

**Analytical Technology**

Unit 1 & 2 - Gatehead Business Park  
Delph New Road, Delph

Saddleworth OL3 5DE

**Phone** 01457 873 318

**Fax** 01457 874 468

**Email** [sales@atiuk.com](mailto:sales@atiuk.com)