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# 4-Electrode Conductivity Transmitter



## Model Q45C4

ATI's 4-Electrode Conductivity Transmitter is the answer for monitoring almost any water-based process. Drinking water, plating bath solutions, cooling water, process wash water, or virtually any other aqueous system can be monitored accurately and reliably. The unique drive/control scheme used in the 4-Electrode System allows a single sensor configuration to be used in conductivity ranges from 0-200  $\mu$ S to as high as 0-2,000 mS (0-2 S).

The "auto-ranging" feature enables the monitor to display the actual conductivity value during "overshoot" conditions. If your application involves very low conductivity/resistivity measurement, ATI can provide the Q45C2 system that is used in process waters with conductivities below 20  $\mu$ S.

## Applications

Cooling Towers  
Plating Baths  
Potable Water  
Streams & Rivers

Chemical Processing  
Fish Farms  
Wastewater  
Salt Water Intrusion

## Features

- Measurement from 0-200  $\mu$ S to 0-2,000 S.
- Loop-powered or battery-operated
- External 5-17 VDC version for solar applications
- 4-Electrode sensor design for fouling compensation
- Titanium electrodes for corrosion resistance
- Submersion, In-line, or Sanitary sensors
- Large, easy-to-read LCD display
- Clear, menu-driven user interface
- NEMA 4X (IP-66) enclosure
- Wall or pipe mounting bracket standard
- Built-in PID controller

## Sensor Options



Sanitary Sensor



Convertible Sensor



Insertion Sensor

# Q45C4 SPECIFICATIONS

## ELECTRONIC MONITOR

<b>Display Range</b>	0-200 $\mu$ S 0-2.000, 0-20.00, 0-200.0, 0-2000 mS 0-2.000 S
<b>Accuracy</b>	$\pm$ 0.5% of selected range
<b>Repeatability</b>	0.2% 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>	Q25C4 4-Electrode
<b>Temperature Input</b>	Pt1000 in sensor 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

## Short Term Conductivity Data Logger

### Model PQ45: Portable Conductivity Monitor

*The perfect solution for temporary monitoring  
from a few days to a few weeks!*



PQ45 Portable Conductivity Data Logger

## ORDERING INFORMATION

### Q45C4-A-B-C 4-Electrode Conductivity 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 - Mounting Style

- 1 - Convertible, PEEK body
- 2 - Insertion, 316SS body
- 3 - Sanitary-Style, 1-1/2", 316SS body
- 4 - Sanitary-Style, 2", 316SS body
- 5 - Convertible, PEEK body with connector (Notes 3 and 4)
- 6 - Flow type sensor with connector, noryl, for sealed flowcell 00-1522 (see notes 3 & 4)

#### Suffix C - Cable Length

- 1 - 15 ft.
- 2 - 30 ft.
- 9 - Special

## ACCESSORIES

- 07-0100** Universal junction box, NEMA 4X
- 31-0057** Sensor interconnect cable
- 03-0029** Sensor cable with connector (25 ft.)
- 00-0628** Mounting bracket kit for submersible sensor
- 00-1522** Sealed flowcell
- 47-0005** 2" U-bolt, 304SS
- 07-0209** 1" NPT Tee, CPVC
- 07-0210** 2" NPT Union/Tee mount, CPVC (uses existing 2" tee)
- 07-0221** 1-1/2" NPT Union/Tee mount, CPVC (uses existing 1-1/2" tee)
- 07-0203** Sensor insertion assembly without assist, 1-1/4" NPT, 316SS
- 07-0228** Sensor insertion assembly with assist, 1-1/4" NPT, 316SS
- 07-0223** Insertion assembly without assist, 1-1/4" NPT, 316SS
- 09-0047** Conductivity standard - 447 microSiemens, 500 mL
- 09-0048** Conductivity standard - 1,500 microSiemens, 500 mL
- 09-0049** Conductivity standard - 8,974 microSiemens, 500 mL
- 09-0050** Conductivity standard - 80,000 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 - Connector is not waterproof. Use only in protected areas.
- 4 - Suffix B, Option 5 and 6 requires sensor cable (03-0029).



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