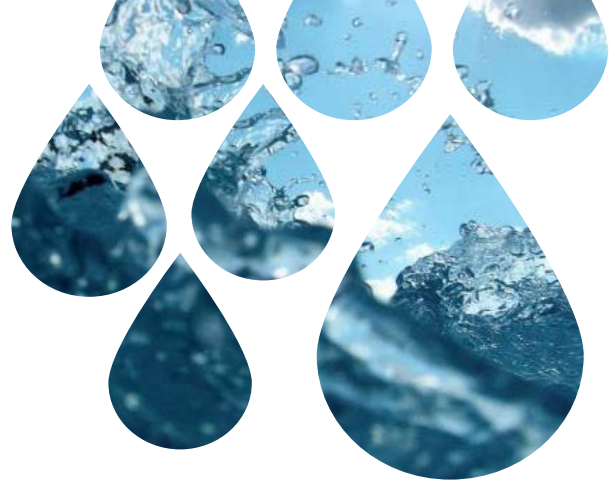


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# Chlorine Dioxide Transmitter



## Model Q45H/65

ATI's Chlorine Dioxide Transmitter is designed for on-line monitoring and control of industrial disinfection systems. Chlorine Dioxide is a powerful disinfecting agent used to treat potable water, cooling water, and food processing wash water. To ensure proper disinfection while minimizing disinfection by-products, the concentration of disinfectant must be precisely maintained.

The Chlorine Dioxide system features a unique membrane-covered polarographic sensor that does not require the addition of chemical reagents. All that's needed is a constant flow of water across the face of the sensor, and this is provided by a simple constant-head flowcell. The sample water is unaffected by the measurement and can be safely discharged back into the process.

The Q45H system has no moving parts, so there are no pumps or motors that burn out or tubing breaks that create maintenance nightmares. All normal maintenance items are included with each system. This model system responds to chlorine dioxide with minimal interference from any residual chlorine that may be present.

## Applications

Potable Water Treatment  
Poultry Processing  
Cooling Towers

Food Wash Water  
Wastewater Treatment  
Paper Mills

## Features

- Low maintenance membraned sensor
- Loop-Powered or battery-operation
- External 5-17 VDC version for solar power applications
- Interference-free measurement
- Measurement from 0-200 ppb to 0-200 ppm
- Constant-head flowcell simplifies operation
- Sealed flowcell option for recirculation systems
- 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



Sealed Flowcell



Constant Head Flowcell



Submersible Sensor

# Model Q45H/65 SPECIFICATIONS

## ELECTRONIC TRANSMITTER

<b>Display Range</b>	0-200 ppb; 0-2.000, 0-20.00, 0-200.0 ppm or mg/l
<b>Accuracy</b>	±0.5% of selected range or 0.02 ppm
<b>Repeatability</b>	0.3% of selected range or 0.01 ppm
<b>Sensitivity</b>	0.05% of selected range
<b>Linearity</b>	0.1% of selected range
<b>Temperature Drift</b>	0.1% of span/°C
<b>Sensor Type</b>	2E Amperometric (Polarographic) membraned sensor
<b>Temperature Input</b>	Pt100 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° to + 60°C Storage: -40° to + 70°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 & FLOWCELL SPECIFICATIONS

<b>Chlorine Dioxide Sensor</b>	Membrane-covered Amperometric (Polarographic)
<b>Optional pH Sensor</b>	pH sensor, with or without preamplifier
<b>Materials</b>	PVC & 316 stainless steel
<b>Response Time</b>	90% in 60 seconds
<b>Temperature Limits</b>	0-50°C
<b>Pressure Limit</b>	0-50 psig
<b>Sensor Cable</b>	25 ft. (7.5 m) standard
<b>Sensor Flowcell</b>	Clear acrylic constant-head overflow or sealed acrylic flowcell
<b>Sample Flow rate</b>	7-15 GPH (0.5-1.0 LPM)

## ORDERING INFORMATION

### Model Q45H-A-B-C Chlorine Dioxide 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 - Sensor with constant head flowcell and 25' cable
- 2 - Submersible sensor with 25' cable
- 3 - Sensor with sealed low-volume flowcell
- 4 - Sensor with 1-1/2" Flow "T"
- 5 - Sensor with sealed flowcell

#### Suffix C - pH Sensor Input

- 1 - None
- 2 - Q22 pH sensor with battery preamp, 25' cable
- 3 - Standard pH sensor with 25' cable & adapter for overflow cell
- 4 - Standard pH sensor with 25' cable & sealed flowcell

## ACCESSORIES

- 07-0100** Universal junction box, NEMA 4X
- 31-0001** 5-c sensor interconnect cable, max. 100 ft. (ClO<sub>2</sub> only)
- 31-0038** 7-c sensor interconnect cable, max. 100 ft. (ClO<sub>2</sub> / pH systems)
- 00-0628** Mounting bracket kit for submersible sensor
- 00-0930** Monitor pipe mounting bracket kit
- 00-0570** Chlorine Dioxide polarizer, flow cell style
- 00-0571** Chlorine Dioxide polarizer, submersible style
- 47-0005** 2" U-bolt, 304SS
- 55-0048** Fixed flow regulator, 400 cc/min., 1/4" inlet & outlet
- 03-0372** Fixed flow regulator assembly, 400 cc/min., 1/4" inlet & outlet

## NOTES:

- 1 - All systems are supplied with one package of membranes, one 120 cc bottle of electrolyte, and one spare parts kit containing 3 each of all o-rings and special screws.
- 2 - Flowcell for ClO<sub>2</sub> systems should be kept within 25 feet of monitor.
- 3 - Pipe mount requires two 2" U-bolts (47-0005).

B / Q45H65 / R-1 (5/2014)

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