

Water Quality Monitor

Q45H-65 Chlorine Dioxide Transmitter

OVERVIEW

The 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 flow cell. 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**
- **Food Wash Water**
- **Poultry Processing**
- **Wastewater Treatment**
- **Cooling Towers**
- **Paper Mills**

FEATURES

- Low maintenance membraned sensor
- Loop-powered or battery operation
- External 5...17V DC 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 AND FLOW CELL OPTIONS



Figure 1: Sealed flow cell



Figure 2: Constant head flow cell



Figure 3: Submersible sensor

SPECIFICATIONS

Electronic Monitor

Display Range	0...200 ppb 0...2,000, 0...20.00 0...200.0 ppm or mg/l
Accuracy	±0.5% of selected range or 0.02 ppm
Repeatability	0.3% of selected range or 0.01 ppm
Sensitivity	0.05% of selected range
Linearity	0.1% of selected range
Temperature Drift	0.1% of span/°C
Sensor Type	2E Amperometric (Polarographic) membraned sensor
Temperature Input	Pt100 in sensor for temperature compensation
Power	2-wire unit: 17...30V DC, 25 mA maximum Battery unit: Two AA alkaline batteries External DC: 5...17V DC, 10 mA maximum
Analog Outputs	2-wire unit: Single 4...20 mA DC, 450 Ω maximum Battery unit: Two 0...2.5V DC, 50K Ω minimum External DC: Two 0...2.5V DC, 50K Ω minimum
Output Isolation	600V galvanic isolation
Enclosure	NEMA 4X (IP66) polycarbonate, V-0 flammability
Mounting Options	Wall or pipe mounting bracket supplied
Conduit Entries	Two PG9 cord grips, 0.16...0.31 in. diameter cable
Ambient Temperature	Operating: -40°...140° F (-40°...60° C) Storage: -40°...158° F (-40°...70° C)
Ambient Humidity	0...95%, non-condensing
Size	4.4 (H) × 4.4 (W) × 3.5 (D) in. (111 × 111 × 90 mm)
Weight	2-wire or External DC unit: 1 lb (0.45 kg) Battery unit: 2 lb (0.9 kg)
Certifications	CE marked to BS EN 61326-1:2006 standard UL and CSA general purpose



Notes

- All systems are supplied with one package of membranes, one 120 cc bottle of electrolyte, and one spare kit containing 3 each of all O-rings and special screws.
- Flow cell for ClO₂ systems should be kept within 25 feet of monitor.
- Pipe mount requires two 2 in. U-bolts (47-0005).

ORDERING INFORMATION

Model QW-A-BB-C Dissolved Ozone Transmitter

Suffix A - Power

5	24V DC, 2-wire (single output only)
6	Battery operated with two 0...2.5V DC outputs
7	External 5...17V DC with two 0...2.5V DC outputs

Suffix B - Sensor Type

1A	Sensor with constant head flow cell and 25 ft cable
2A	Submersible sensor with 25 ft cable
3A	Sensor with sealed low-volume flow cell
4A	Sensor with 1-1/2 in. flow "T"
5A	Sensor with sealed flow cell
6A	Flow sensor only, no flow cell
WW	None

Suffix C - pH Sensor Input

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

Accessories

07-0100	Universal junction box, NEMA 4X
31-0001	5-c sensor interconnect cable, max. 100 ft (ClO ₂ only)
31-0038	7-c sensor interconnect cable, max. 100 ft. (ClO ₂ /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 in. U-bolt, 304SS
55-0048	Fixed flow regulator, 400 cc/min., 1/4 in. inlet and outlet
03-0372	Fixed flow regulator assembly, 400 cc/min., 1/4 in. inlet and outlet