A Badger Meter® Brand

Water Quality Monitor

Q45/85 Peracetic Acid Transmitter

OVERVIEW

Peracetic Acid (PAA) is an extremely strong oxidizer that is widely used in the food industry for disinfection of piping systems and processing equipment. It is also used for spray washing food products and for disinfection of cooling water systems. As a disinfecting agent, PAA is often preferred because it produces no harmful disinfection byproducts.

As with any disinfection system, maintaining proper residual values is the key to effective pathogen control. To facilitate reliable chemical feed control, Badger Meter has an online monitor capable of providing real time measurement of low levels of PAA in solution. The Q45/85 Peracetic Acid transmitter uses a direct sensing polarographic probe mounted in a flow cell to measure PAA residuals in a flowing water stream. A permeable diffusion membrane isolates the sensing electrodes from the measured sample, providing long-term stability without electrode fouling problems. The measurement is selective for PAA and is not affected by changes in hydrogen peroxide in solution.

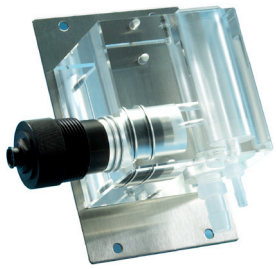

Figure 1: Constant head flow cell

FEATURES

- Low maintenance membraned sensor
- Loop-powered or battery-operated
- External 5…17V DC version for solar power applications
- Interference-free measurement
- Measurement from 0…20 ppm to 0…2000 ppm or mg/L
- Constant head flow cell (*Figure 1*) simplifies operation
- Sealed flow cell option (*Figure 2*) for recirculation systems
- Large, easy-to-read LCD display
- Clear, menu-driven user interface
- NEMA 4X (IP66) enclosure
- Wall or pipe mounting bracket standard
- Built-in PID controller

APPLICATIONS

- Egg washing systems
- Ground water decontamination
- Oil and gas recovery systems
- Wastewater treatment
- Bleaching systems
- Cooling towers cleaning

Figure 2: Sealed flow cell

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Product Data Sheet

SPECIFICATIONS

Electronic Transmitter

Display Range	0…20.00, 0…200.0, 0…2000 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

Sensor and Flow Cell

PAA Sensor	Membrane-covered amperometric (polarographic)
Materials	PVC
Response Time	90% in 60 seconds
Temperature Limits	32…122° F (0…50° C)
Pressure Limit	0…50 psig
Sensor Cable	25 ft (7.5 m) standard
Sensor Flow Cell	Clear acrylic constant-head overflow or sealed acrylic flow cell
Sample Flow Rate	7…15 gph (0.5…1.0 lpm)

ORDERING INFORMATION

Q5 A-B Peracetic Acid 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 Style

WW	None
1A	Sensor with constant head flow cell (*Figure 1*) and 25 ft cable
2A	Submersible sensor (*Figure 3*) with 25 foot cable (Chloramine sensor only))
5A	Sensor with sealed flow cell

Accessories

07-0100	Universal junction box, NEMA 4X
31-0038	Sensor interconnect cable, maximum 100 ft
00-0572	Sensor polarizer, flow cell style
47-0005	2 in. U-bolt, 304 SS
55-0057	Fixed flow regulator, 400 cc/min., 1/4 in. inlet & outlet, Viton

Notes

1. All systems are supplied with one package of membranes, one 120 cc bottle of electrolyte, and one spare parts kit containing three (3) each of all O-rings and special screws.
2. Flow cell for systems should be kept within 25 feet of the monitor.
3. For 1/2 DIN panel mount, select option 07-0201.
4. Pipe mount requires two 2 inch U-bolts (47-0005).

Figure 3: Submersible sensor