

OVERVIEW

Walchem's amperometric disinfection sensors offer a cost effective and reliable solution to your disinfection control requirements. Compatible with the WDIS and WebMaster® series controllers, the sensors continuously and directly measure the chemical concentration, without the use of reagents.

We offer sensors, in varying ranges of concentration, for free chlorine/bromine, total chlorine, chlorine dioxide, ozone, peracetic acid and hydrogen peroxide. Whether the application is a cooling tower, food and beverage, drinking water, wastewater, or swimming pool, these sensors are the ideal solution.

SUMMARY OF KEY BENEFITS

- Low maintenance - no costly reagents or tubing to replace
- Broad range of applications - wide variety of oxidizers and measurement ranges
- Fast response - continuous measurement technique
- No waste - the sample can be returned to the process



SPECIFICATIONS

| | Free Chlorine/ Bromine | Free Chlorine/Bromine - Extended pH Range | Total Chlorine | Chlorine Dioxide | Peracetic Acid | Ozone | Hydrogen Peroxide |
|---------------------------------|---|---|---|--|---|---------------------------------------|--|
| Range (Nominal) | 0-2 mg/l 0-20 mg/l 0-200 mg/l | 0-20 mg/l | 0-20 mg/l | 0-2 mg/l 0-20 mg/l 0-200 mg/l | 0-200 mg/l 0-2,000 mg/l 0-20,000 mg/l | 0-20 mg/l | 0-200 mg/l 0-2,000 mg/l 0-20,000 mg/l |
| Range (WDIS) | 0-1.33 mg/l 0-13.25 mg/l 0-132.5 mg/l | 0-12.5 mg/l | 0-16.75 mg/l | 0-1.67 mg/l 0-16.75 mg/l 0-167.5 mg/l | 0-167.5 mg/l 0-1,675 mg/l 0-16,750 mg/l | 0-16.75 mg/l | 0-167.5 mg/l 0-1,675 mg/l 0-16,750 mg/l |
| Range (WIND) | 0-0.8 mg/l 0-8 mg/l 0-80 mg/l | 0-7.5 mg/l | 0-10 mg/l | 0-1.0 mg/l 0-10 mg/l 0-100 mg/l | 0-100 mg/l 0-1000 mg/l 0-10,000 mg/l | 0-10 mg/l | 0-100 mg/l 0-1000 mg/l 0-10,000 mg/l |
| Range (WM1) | 0-8 mg/l | 0-7.5 mg/l | 0-10 mg/l | 0-10 mg/l | | | |
| Resolution | 0.001 mg/l 0.01 mg/l 0.1 mg/l | 0.01 mg/l | 0.01 mg/l | 0.001 mg/l 0.01 mg/l 0.1 mg/l | 0.1 mg/l 1 mg/l 10 mg/l | 0.01 mg/l | 0.1 mg/l 1 mg/l 10 mg/l |
| Sensitivity | HOCl (100%) HOBr (100%) Ozone ClO ₂ (900%) NOT for use with isocyanuric acid | HOCl (100%) HOBr (100%) Ozone ClO ₂ (100%) HOCl with isocyanuric acid | Total Cl ₂ (100%) ClO ₂ (100%) Ozone (130%) | ClO ₂ (100%) Free Chlorine (5%) Ozone (2500%) | PAA (100%) Ozone (250%) ClO ₂ (100%) H ₂ O ₂ (0.5%) | Ozone (100%) ClO ₂ (6%) | H ₂ O ₂ (100%) Chlorine PAA Ozone (none may be present) |
| Flow rate of sample | 30 to 100 liters/hour (0.13 to 0.44 gal/min) | | | | | | |
| pH range of sample | 6.8 – 8.0 (pH must be stable within ± 0.10) | 4.0 – 12.0 | | 1.0-11.0 | 1.0-7.0 | 2.0-11.0 | 2.0-11.0 |
| Conductivity range of sample | Up to 4% NaCl | 50-10,000 µS/cm | | | | | |
| Response time | 30 seconds | 2 minutes | 2 minutes | 30 seconds | 3 minutes | 50 seconds | 5-10 minutes |
| Conditioning time | 60 minutes | 120 minutes | 120 minutes | 60 minutes | 60 minutes | 60 minutes | 180 minutes |

SPECIFICATIONS

| | |
|---------------------|---|
| Calibration | Weekly |
| Change electrolyte | 3-6 months |
| Change membrane cap | 1 year |
| Electrical | |
| Power requirements | ±5 VDC, 5 mA maximum |
| Signal | 0 to -2000 mVDC |
| Max cable length | 1000 feet (305 meters) |
| Extension cable | 2 twisted pair, 22 AWG, shielded, 35 pF/ft (Walchem 100084 or Belden 8723) |

Mechanical

| | Operating Temperature | Wetted Materials of construction |
|---|-------------------------|--|
| Free Chlorine/Bromine | 0 to 45°C (32 to 113°F) | PVC, Polycarbonate, Silicone rubber |
| Free Chlorine/Bromine (Extended pH Range) | 0 to 45°C (32 to 113°F) | PVC, Polycarbonate, Silicone rubber, Stainless Steel |
| Total Chlorine | 0 to 45°C (32 to 113°F) | |
| Chlorine Dioxide | 0 to 50°C (32 to 122°F) | |
| Peracetic Acid | 0 to 55°C (32 to 131°F) | |
| Ozone | 0 to 50°C (32 to 122°F) | |
| Hydrogen Peroxide | 0 to 45°C (32 to 113°F) | |
| Flow cell body | | |
| O-Ring | | FKM |

| | |
|---------------------|-----------------------------------|
| Operating Pressure | 0 to 1 atmosphere (0 to 14.7 psi) |
| Storage temperature | 0 to 50°C (32 to 122 °F) |
| Shelf life | 3 years |
| Flow cell inlet | ¼" NPTF |
| Flow cell outlet | ¾" NPTF |

ORDERING INFORMATION

Complete disinfection sensor, 20 ft. cable and flow cell assemblies (used without flow switch manifolds)

| | |
|-----------|---|
| WFCB-20 | Free Chlorine/Bromine Sensor, 20 ppm |
| WFCBL-20 | Free Chlorine/Bromine Sensor, 2 ppm |
| WFCBH-20 | Free Chlorine/Bromine Sensor, 200 ppm |
| WFCXB-20 | Free Chlorine/Bromine Sensor, ext. pH range, 20 ppm |
| WTCB-20 | Total Chlorine Sensor, 20 ppm |
| WCDB-20 | Chlorine Dioxide Sensor, 20 ppm |
| WCDBL-20 | Chlorine Dioxide Sensor, 2 ppm |
| WCDBH-20 | Chlorine Dioxide Sensor, 200 ppm |
| WOZB-20 | Ozone Sensor, 20 ppm |
| WPAB-20 | Peracetic Acid Sensor, 2000 ppm |
| WPABL-20 | Peracetic Acid Sensor, 200 ppm |
| WPABH-20 | Peracetic Acid Sensor, 20,000 ppm |
| WPAPKL-20 | Peracetic Acid Sensor, PEEK, 2000 ppm (Acrylic Flow Cell) |
| WPAPK-20 | Peracetic Acid Sensor, PEEK, 20,000 ppm (Acrylic Flow Cell) |
| WHPB-20 | Hydrogen Peroxide Sensor, 2000 ppm |
| WHPBL-20 | Hydrogen Peroxide Sensor, 200 ppm |
| WHPBH-20 | Hydrogen Peroxide Sensor, 20,000 ppm |

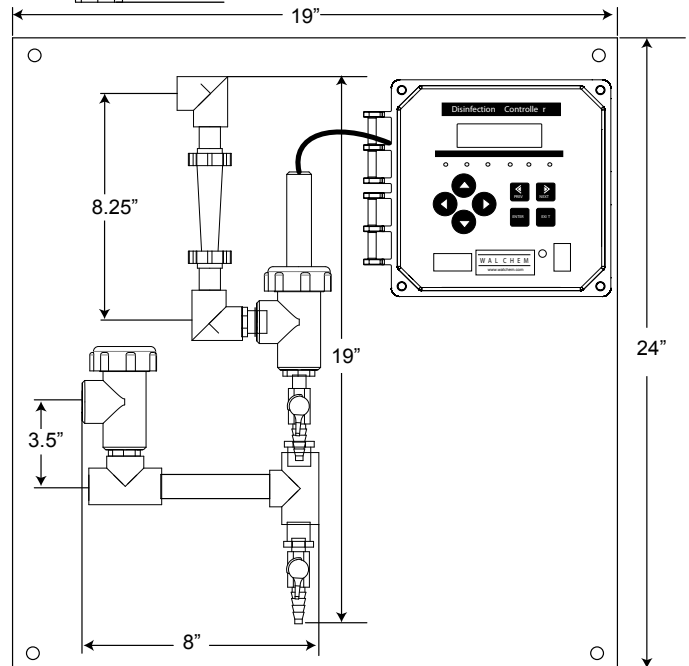
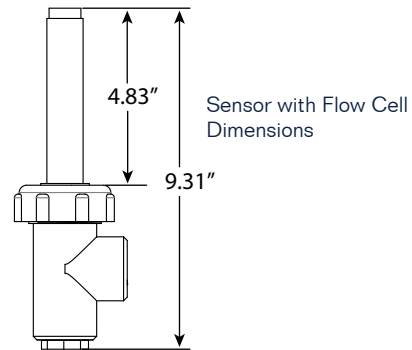
Flow switch manifolds

| | |
|--------|---|
| 191349 | Disinfection manifold, loose |
| 191348 | Disinfection manifold, on polypro panel |

ABOUT US

Walchem integrates its advanced sensing, instrumentation, fluid pumping and communications technologies to deliver reliable and innovative solutions to the global water treatment market.

Our in-house engineering is driven by quality, technology and innovation. For more information on the entire Walchem product line, visit: www.walchem.com



Disinfection sensor and 20 ft. cable assemblies (purchased in conjunction with flow switch manifolds)

| | |
|--------|--|
| 191361 | Free Chlorine/Bromine, 20 ppm |
| 191531 | Free Chlorine/Bromine, 2 ppm |
| 191442 | Free Chlorine/Bromine, 200 ppm |
| 191446 | Free Chlorine/Bromine, ext. pH range, 20 ppm |
| 191499 | Total Chlorine, 20 ppm |
| 191362 | Chlorine Dioxide, 20 ppm |
| 191533 | Chlorine Dioxide, 2 ppm |
| 191535 | Chlorine Dioxide, 200 ppm |
| 191363 | Ozone, 20 ppm |
| 191350 | Peracetic Acid, 2000 ppm |
| 191500 | Peracetic Acid, 200 ppm |
| 191513 | Peracetic Acid, 20,000 ppm |
| 191540 | Hydrogen Peroxide, 2000 ppm |
| 191538 | Hydrogen Peroxide, 200 ppm |
| 191542 | Hydrogen Peroxide, 20,000 ppm |

WALCHEM

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