

## 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 m/l 0-2,000 mg/l 0-20,000 mg/l	0-20 mg/l	0-200 m/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 <sub>2</sub> (900%) <b>NOT</b> for use with isocyanuric acid	HOCl (100%) HOBr (100%) Ozone ClO <sub>2</sub> (100%) HOCl with isocyanuric acid	Total Cl <sub>2</sub> (100%) ClO <sub>2</sub> (100%) Ozone (130%)	ClO <sub>2</sub> (100%) Free Chlorine (5%) Ozone (2500%)	PAA (100%) Ozone (250%) ClO <sub>2</sub> (100%) H <sub>2</sub> O <sub>2</sub> (0.5%)	Ozone (100%) ClO <sub>2</sub> (6%)	H <sub>2</sub> O <sub>2</sub> (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	50 to 10,000 µS/ cm	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
<b>Electrical</b>	
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

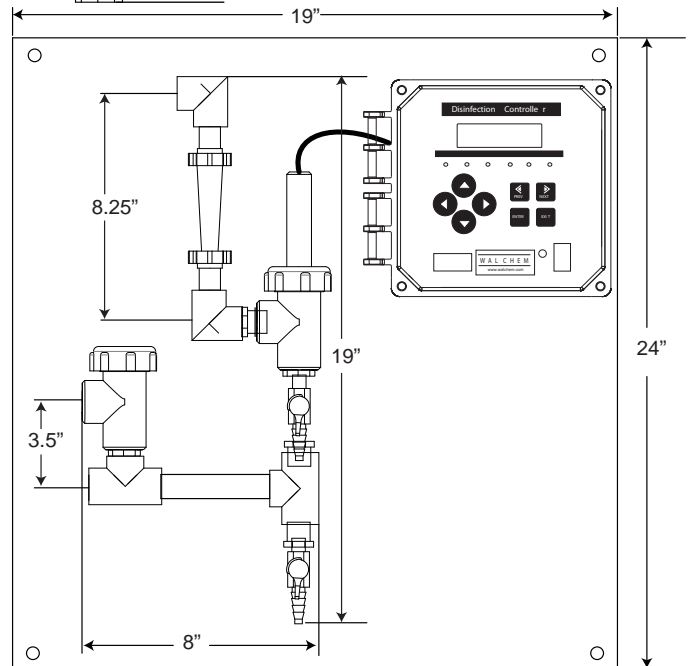
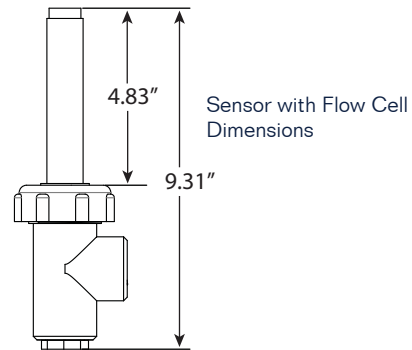
### Flow switch manifolds

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](http://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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