Overview

Walchem's WDIS Series controller will reliably and economically control your water treatment disinfection process. There are no reagents, and the user may select from four sensor inputs: free chlorine, chorine dioxide, ozone, and peracetic acid.

The WDIS Series controller takes the guesswork out of your disinfection process. The chemical concentration is continuously monitored and controlled to the precise range required for proper system control and regulatory compliance.

Designed to be flexible and versatile, the WDIS Series controller is the ideal solution for disinfection applications in cooling towers, food & beverage, drinking water, wastewater, and swimming pools.

WDIS Series

Disinfection Controller

Summary of Benefits

- Rugged wall mount enclosure with panel mounted flow assembly for quick and easy installation - only two process connections!
- Economically priced with no costly reagents
- A choice of four industrial grade disinfection sensors in one controller provides unmatched flexibility
- Probe wash relay mode – allows for automatic sensor cleaning and continuous operation in harsh conditions, which improves productivity and reduces costly downtime
- Alarm relay notifies plant personnel of alarm conditions as soon as they occur
- Optional 4-20 mA output – continuously sends data to a WebMaster®, WebAlert®, chart recorder or data logger to document compliance and reduce liability

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WDIS310 Series Features

WDIS310 Series Controllers are commonly used in a wide variety of applications to assure proper disinfection and regulatory compliance. Automatic process control increases process safety, increases efficiency, and reduces chemical cost. Unlike other devices that sample the process at set intervals and require costly reagents, the WDIS controller provides continuous monitoring and control.

- Cooling Towers
- Wastewater
- Swimming Pools
- Scrubbers
- Drinking water
- Food & Beverage
- RO systems
- Pulp and Paper




WDIS Series Sensors

- Long-lasting amperometric electrode with rugged membrane
- Integrated temperature compensation
- Relatively insensitive to changes in sample flow rate
- Large openings in flow cell prevent clogging
- Excellent long-term stability

Free Chlorine

Chlorine is the most common disinfectant used in water treatment. It's readily available, inexpensive, and typically used in drinking water, swimming pools, cooling towers, and process water applications.

Chlorine Dioxide

Chlorine dioxide is a very strong oxidant that is often used for disinfection in drinking water, food & beverage, and cooling tower applications. It's preferred for some uses since it doesn't affect the taste and odor of the water being treated.

Peracetic Acid

Peracetic acid has been used for decades as a disinfectant in the food & beverage industry. Its use has grown to many other applications, including bottling, CIP (Clean In Place), laundry, pulp & paper, and agriculture.

Ozone

Ozone is the strongest oxidant used in water treatment. It is commonly used in drinking water (disinfection, oxidation, taste and odor control), food & beverage, swimming pools (therapy pools), zoos and aquariums.

WDIS Series Features

Versatile relay configuration

Control outputs can be set as high or low set points via key-pad. Auxiliary outputs can be set as:

- High alarm
- Low alarm
- In-range output
- Out-of range alarm
- Probe wash

Probe wash feature

For applications that require frequent electrode cleaning, automatic probe wash extends the time between maintenance interruptions.

Programmable access code

Secures set point parameters and prevents unauthorized use. Program any four digit access number or disable the code requirement.

Display status at a glance

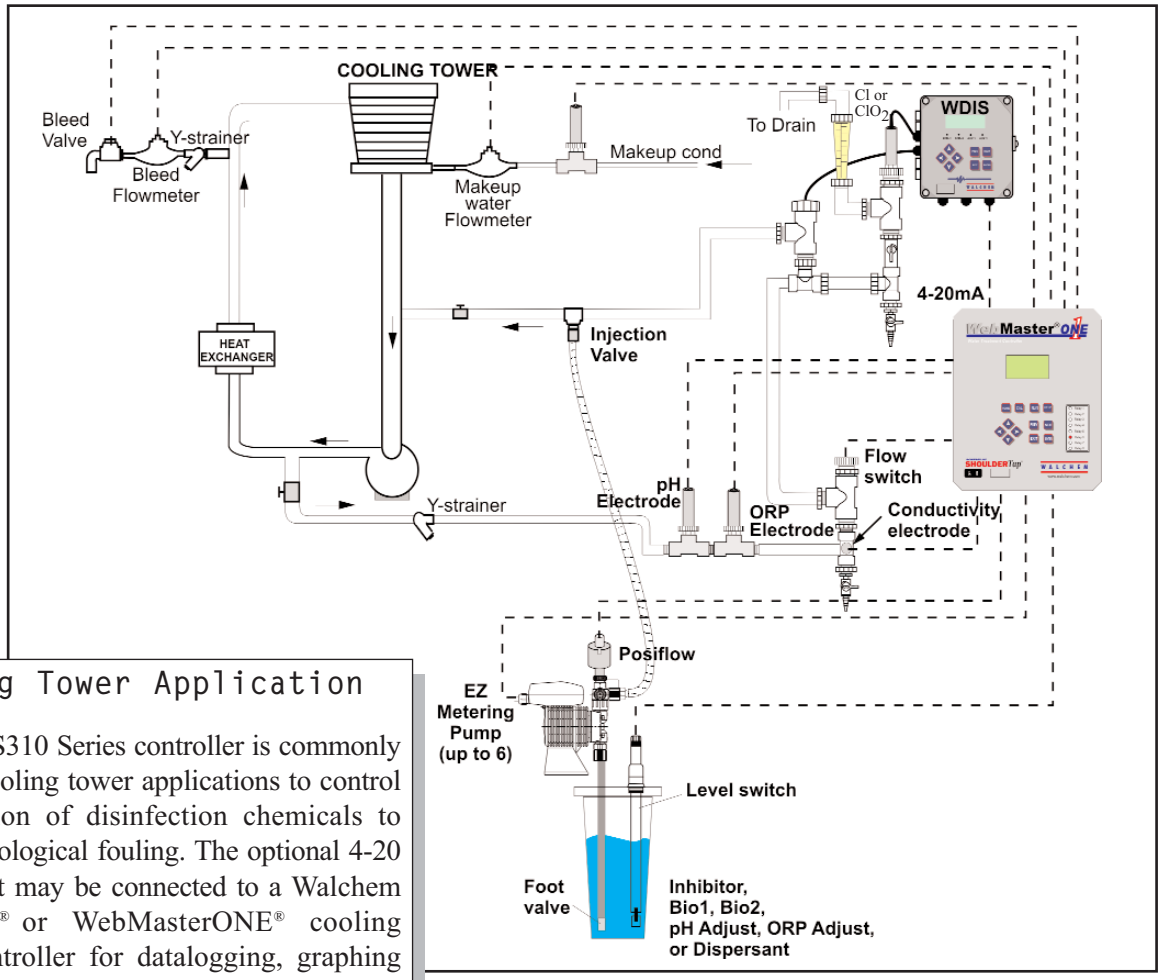
Look at any set point without interrupting control or needing access code. Top Level View:

- Analog graph relative to set points
- Free chlorine, chlorine dioxide, peracetic acid or ozone values
- Status of alarms, outputs

Self diagnostics

Software and electronics are constantly monitored, without having to take the controller off line. Any error messages are clearly displayed. A fifth relay is activated by any diagnostics failures.

WDIS310 Installation

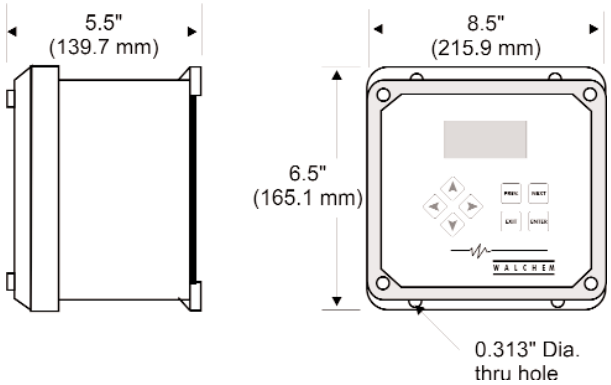


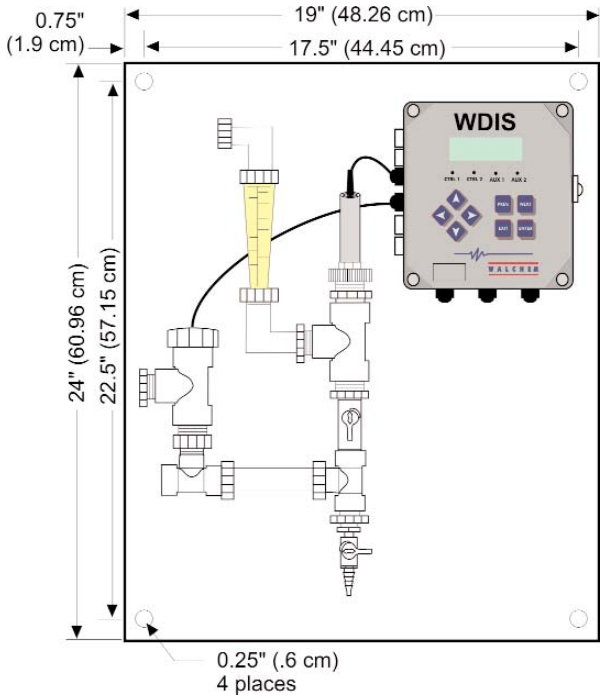
Cooling Tower Application

The WDIS310 Series controller is commonly used in cooling tower applications to control the addition of disinfection chemicals to prevent biological fouling. The optional 4-20 mA output may be connected to a Walchem WebAlert® or WebMasterONE® cooling tower controller for datalogging, graphing and alarming.

Quick and Easy Installation

Panel mounted systems are compact and pre-wired. The NEMA 4X system is ready to hang on the wall and requires only two process connections.





Specifications

Inputs

Power:	115VAC ±15% 50/60 Hz, 60 mA 230VAC ±15%, 50/60 Hz, 30 mA
Interlock (Optional):	Isolated dry contact closure required (i.e. flow, level, etc)

Outputs

Control (On/Off):	Two internally power relays 115VAC, 10A resistive, 1/8 HP 230VAC, 6A resistive, 1/8 HP
Aux1, Aux 2, Alarm:	Dry contact relays 115VAC, 10A resistive, 1/8 HP 230VAC, 6A resistive, 1/8 HP
4-20mA (Optional):	Fully isolated, internally powered 600Ω maximum resistive load. Resolution 0.001% of span, accuracy ± 1% of reading

Mechanical(controller)

Enclosure:	Polycarbonate
NEMA Rating:	NEMA 4X (IP65)
Display:	2 x 16 character backlit liquid crystal
Ambient Temp:	32 to 158°F (0 to 70°C)
Storage Temp:	-20 to 180°F (-29 to 80°C)
Shipping Weight:	7lbs (3kg) approx.

Agency Certifications

UL:	ANSI/UL 61010-1:2004, 2nd Edition*
CAN/CSA:	C22,2 No.61010-1:2004 2nd Edition*
CE Safety:	EN 61010-1 2nd Edition(2001)*
CE EMC:	EN 61326 :1998 Annex A*

Note: For EN61000-4-6,3 the WDIS® met performance criteria B.

*Class A equipment: Equipment suitable for use in establishments other than domestic, and those directly connected to a low voltage (100-240 VAC) power supply network which supplies buildings used for domestic purposes.

Sensors

	Chlorine Dioxide	Peracetic Acid	Ozone	Chlorine
Measurement Performance				
Range	0-10 mg/l	0-1000 mg/l	0-10 mg/l	0-10 mg/l
Resolution	0.01 mg/l	1 mg/l	0.01 mg/l	0.01 mg/l
Cross Sensivity	Free chlorine (5%), Ozone		Free chlorine (5%)	Bromine, Ozone, Iodine, ClO2, Di-/Trichloramine, or Bromamine
Flow rate of sample	30 to 100 liters/hour (7.9 to 26.4 gallons/hour)			
pH Range of Sample	1.0 – 14.0			6.8 – 8.0
Conductivity Range of Sample	50 to 10,000 µS/cm			
Response Time	30 sec.	3 min.	30 sec	30 sec
Electrical				
Power Requirements	± 5 VDC, 5 mA maximum			
Signal	0 to -1000 mVDC			
Maximum Cable Length	305 m (1000 ft)			
Cable Required	2 twisted pair, 24 AWG, shielded, 15 pF/ft			
Mechanical				
Operating Temperature	0 to 50 °C (41 to 122 °F)			0 to 45 °C (41 to 113 °F)
Operating Pressure	0 to 1 atm (0 to 14.7 psi)			
Storage Temperature	0 to 50 °C (41 to 122 °F)			
Shelf Life	1 year			
Flow Cell Inlet	¼" NPTF			
Flow Cell Outlet	¾" NPTF			
Wetted Materials of Construction				
Sensor Body	PVC, Polycarbonate			
Membrane	Silicone			PTFE
Flow cell body	Isoplast			
O-ring	FKM			

Ordering Information

WDIS310- ☐ ☐ ☐

Wiring Options | Data Output | Sensor Options

WIRING OPTIONS

1 = 115VAC, Prewired w/USA power cord and 6" pigtails

4 = 115VAC, Hardwired, cable glands

5 = 230VAC, Hardwired, cable glands

DATA OUTPUT

N = No data output

4 = Powered, isolated 4-20 mA

SENSOR OPTIONS

N = No sensor

1 = Free chlorine sensor with flow cell and 20 ft cable

2 = Chlorine dioxide sensor with flow cell and 20 ft cable

3 = Ozone sensor with flow cell and 20 ft cable

4 = Peracetic acid sensor with flow cell and 20 ft cable

5 = Free chlorine sensor with flow manifold and 5 ft cable on panel

6 = Chlorine dioxide sensor with flow manifold and 5 ft cable on panel

7 = Ozone sensor with flow manifold and 5 ft cable on panel

8 = Peracetic acid sensor with flow manifold and 5 foot cable on panel

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