Industrial Water Treatment Controllers

WebMaster® WIND

WebMaster® WIND sets a new standard for Industrial Water Treatment Controllers. The WIND has a flexible multi-input/output platform, a wide range of analytical sensor measurement capabilities, and an extensive assortment of integrated communications and data handling features.

Beyond the extensive list of capabilities, WIND has set an industry-wide ease-of-use benchmark. All together, it represents the perfect balance between Innovation, Flexibility, and Simplicity.

Summary of Key Benefits

- Fully integrates functions of a transmitter, PLC, datalogger and auto-dialer into a rugged, industrial, NEMA 4X package
- No proprietary software required to view live data - just a web browser
- Access live or stored data remotely within the facility (LAN connection) or from anywhere in the world (cell or landline modem)
- No expensive PLC programming and re-programming – all changes made intuitively using a standard web browser
- VTouch® provides quick, centralized 24/7 awareness of account status with the ability to LIVE Connect to any of your controllers in the field with one simple mouse-click.
- Extensive built-in Plug & Play communications options:
  - Ethernet
  - Landline modem
  - USB (Laptop and FlashDisk support)
  - Cell modem
- A wide range of direct sensor measurements:
  - pH
  - Chlorine Dioxide
  - ORP
  - Ozone
  - Conductivity
  - Peracetic Acid
  - Free Chlorine
  - Electrodeless Conductivity
- PID control for relay and analog outputs
- Instant alarm notification via cell phone text message, email, or local alarm relay
- System status reports and datalog files can be emailed automatically

Disinfection

Water Treatment

Wastewater Treatment

Pools/Spas

WALCHEM
IWAKI America Inc.

Features

Innovation

WebMaster® WIND has been designed with convenience and ease-of-use in mind. It has extensive built-in data-logging capability so there's no need for a separate datalogging device. The data can be retrieved automatically (email Excel file attachment) or manually, through the convenience of a standard USB flash disk.

Simplicity and Flexibility

Unlike PLC's or similar devices, WebMaster® WIND does not require a software programmer for customization to your application. This reduces upfront costs and eliminates recurring expenses for software maintenance. Commissioning is as simple as connecting with a laptop and following the intuitive menus to configure the WebMaster® WIND to meet your needs.

SCR Mapping

WebMaster® WIND provides the flexibility of SCR mapping (Sensor – Control – Relay) to allow you to select any Sensor input (direct analytical, 4–20mA, flowmeter or discrete) and the Control method (from a wide range of choices) and assign them to a Relay. With up to 21 user-defined inputs, the WebMaster® WIND has the flexibility to be programmed for virtually any water treatment application.

1. Sensor: User selects type of sensor
2. Control: User selects control method for each relay
3. Relay: User assigns sensor, analog input or digital input to desired relay

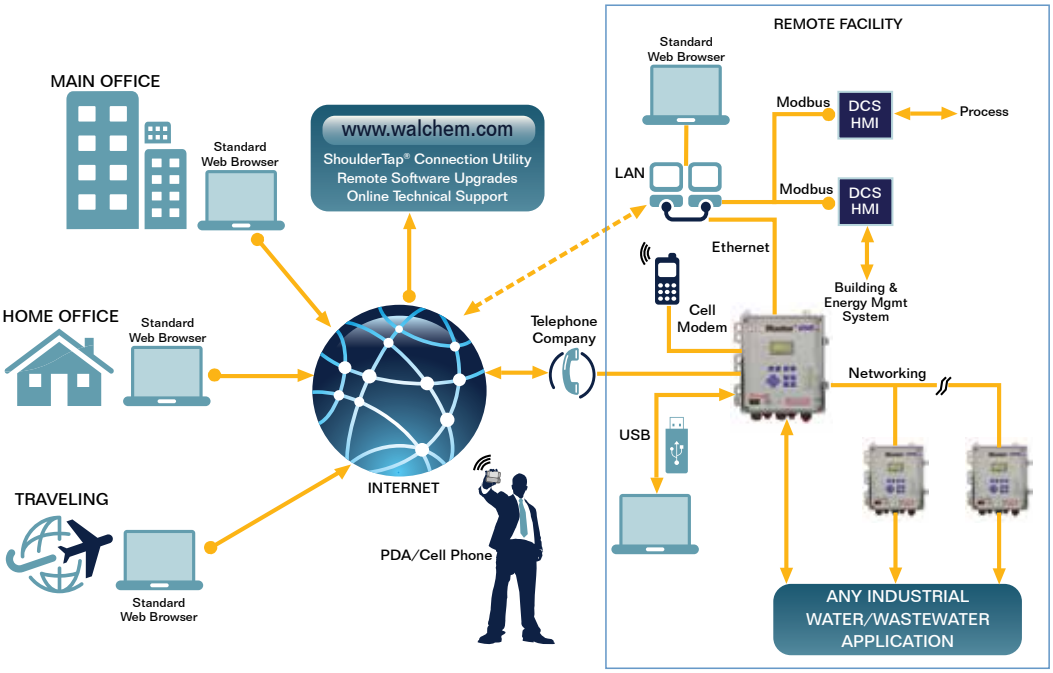
Each sensor input can be assigned to a relay for control. In addition to the 4 direct analytical sensor inputs, WebMaster® WIND has the ability to bring in 8 analog inputs and 9 digital inputs, and is equipped with 8 relay outputs. Sensor inputs can be assigned to any one of up to four 4-20mA outputs.

Report Options

A variety of reporting options can be utilized to meet your needs. A system summary report provides a snapshot of current conditions and alarms. A datalog report can be sent on a regular basis for historical trending. In addition, email and cell phone text alarm messages can be sent.

Receive spreadsheet datalogs as an attachment to an email at user-defined time periods.

Receive alarms via cell phone text messaging



Specifications

Measurement Performance

*Not suitable for stabilized Bromine

	Range	Resolution	Calibration
Contacting Conductivity	10 to 10,000 µS/cm	1 µS/cm	Single point, scalable to read in ppm
Chlorine Dioxide or Ozone	0 to 10 mg/l	0.01 mg/l	Single point and zero
Chlorine/Bromine*	0 to 8 mg/l	0.01 mg/l	Single point and zero
Peracetic Acid	0 to 1000 mg/l	1 mg/l	Single point and zero
pH	-2 to 16 pH	0.01 pH	Single or dual point
ORP	± 1400 mV	1 mV	Single or dual point
Electrodeless Conductivity	50 to 1000 µS/cm	1 µS/cm or 1 mS/cm (range dependent)	Single point and zero, scalable to read in ppm or % concentration
	1 to 10 mS/cm		
	10 to 100 mS/cm		
	100 to 1000 mS/cm		
Temperature	32 to 392°F (0 to 200°C)	1°F (1°C)	Single point; degrees C or F

Inputs

Power
100-120/220-240 VAC +/-10%
12 amp, 50/60 Hz
Fuse 1.6A, 5 x 20mm

Sensors (1 standard, up to 4 optional)
Signal: +/- 1.4 VDC (isolated)
Temperature: 1Kohm, 10 Kohm or 100 Kohm

Digital Inputs (6 standard, additional 6 optional)
Isolated dry contact, 0-300 Hz, 1.5 msec minimum width

Analog (4-20 mA) Inputs (8 optional)
2 or 3 wire, internally powered by 24 VDC loop power available, 25 ohm input resistance, 1000 ohm maximum load

Outputs

Mechanical relays (8 standard)
115VAC, 10 amp resistive, 1/8 HP
230VAC, 6 amp resistive, 1/8 HP
May be dry contact or powered by line voltage.
R1-R4 fused together, current not to exceed 5.5 amp
R5-R8 fused together, current not to exceed 5.5 amp
Only powered relays are fused. N.O. and N.C. contacts provided.

Analog (4-20 mA) Outputs (up to 4 optional)
Isolated, 500 ohm maximum load, internally powered by 24 VDC

Mechanical

Enclosure:	Thermoplastic
NEMA Rating:	NEMA 4X
Display:	64 x 128 pixel backlit LCD
Ambient Temp:	0 to 49°C (32 to 120°F)
Storage Temperature:	-29 to 80°C (-20 to 176°F)
Shipping Weight:	Approx. 22 lbs (10 kg)

Sensor Specifications

Sensor	Range	Temperature	Pressure	Process Connection	Materials
Electrodeless Conductivity	50 to 1000 µS/cm 1 to 10 mS/cm 10 to 100 mS/cm 100 to 1000 mS/cm	CPVC: 32 to 158°F PEEK: 32 to 190°F	0 to 140 psi	1" NPTM submersion 2" NPTM in-line adapter	CPVC, FKM in-line o-ring PEEK, 316SS in-line adapter
pH	-2 to 16 pH	50 to 158°F	0 to 100 psi	1" NPTM submersion ¾" NPTF in-line tee	CPVC, Glass, FKM o-rings, HDPE, Titanium rod, glass filled PP tee
ORP	-1400 to 1400 mV	32 to 158°F	0 to 100 psi	1" NPTM submersion ¾" NPTF in-line tee	CPVC, Glass, FKM o-rings, HDPE, Titanium rod, glass filled PP tee
Contacting Conductivity (High Pressure Tower)	10 to 10,000µS/cm	32 to 392°F	0 to 300 psi	¾" NPTM	316 SS, PEEK
Contacting Conductivity (High Pressure Boiler)	10 to 10,000µS/cm	32 to 392°F	0 to 250 psi	¾" NPTM	316 SS, PEEK
Contacting Conductivity (Graphite)	10 to 10,000µS/cm	32 to 158°F	0 to 140 psi	¾" NPTF tee	Graphite, glass-filled PP, FKM o-ring
Contacting Conductivity (SS)	10 to 10,000µS/cm	32 to 158°F	0 to 140 psi	¾" NPTF tee	316 SS, glass-filled PP, FKM o-ring
pH (High Pressure)	0 to 14 pH	32 to 275°F	0 to 300 psi	½" NPTM gland	Glass, Polymer, PTFE, 316 SS, FKM
ORP (High Pressure)	-1400 to 1400 mV	32 to 275°F	0 to 300 psi	½" NPTM gland	Platinum, Polymer, PTFE, 316 SS, FKM
Flow Switch Manifold Assy	Open < 0.7 gpm	32 to 140°F	150 psi up to 100°F 50 psi @ 140°F	¾" NPTF	Glass-filled PP, PVC, FKM, Isoplast
Flow Switch Manifold Assy (High Pressure)	Open < 0.75 gpm	32 to 158°F	0 to 300 psi	¾" NPTF	Carbon steel, Brass, 316 SS, FKM
Free Chlorine/Bromine High pH Range	0 to 8 mg/l 0 to 7.5 mg/l	41 to 113°F	0 to 14.7 psi	¼" NPTF Inlet ¾" NPTF Outlet	PVC, Polycarbonate, silicone rubber, SS, PEEK
Chlorine Dioxide	0 to 10 mg/l	41 to 122°F	0 to 14.7 psi	¼" NPTF Inlet ,¾" NPTF	PVC, Polycarbonate, silicone rubber, SS, PEEK
Ozone	0 to 10 mg/l	41 to 122°F	0 to 14.7 psi	¼" NPTF Inlet ,¾" NPTF	PVC, Polycarbonate, silicone rubber, SS, PEEK
Peracetic Acid	0 to 10 mg/l	41 to 113°F	0 to 14.7 psi	¼" NPTF Inlet, ¾" NPTF	PVC, Polycarbonate, silicone rubber, SS, PEEK

Communications

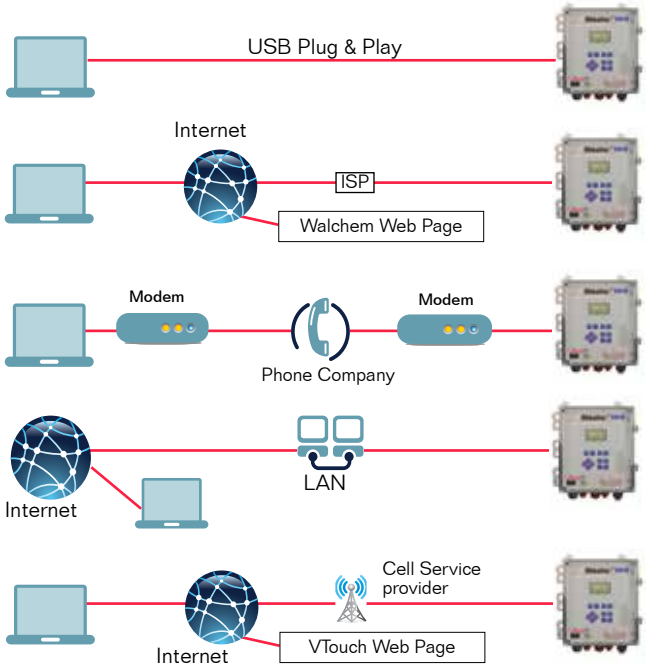
With an embedded web server, WebMaster® WIND utilizes standard TCP/IP Internet communications. Remote communications can be established with WebMaster® WIND via the Internet or on a direct line with modem-to-modem capability. USB Plug and Play and Ethernet are included to allow easy on-site access for plant personnel and system operators. Multiple users can access the controller simultaneously. A graduated password protection system allows users varied degrees of access from view only to full system configuration. In addition, WIND delivers a range of user-friendly information reporting tools including email notifications for datalogs, alarms and system summaries.

Walchem has made use of the Internet as a remote access communications platform for industrial control equipment a practical reality. While others just attempt to reduce the cost of embedded web server hardware, Walchem has solved the problem of the high cost and lack of availability of a permanent connection to the Internet.

WebMaster® WIND makes programming your process simple and fast and does not require any proprietary software to reside on your computer. Set-up and programming are all done via a standard web browser.

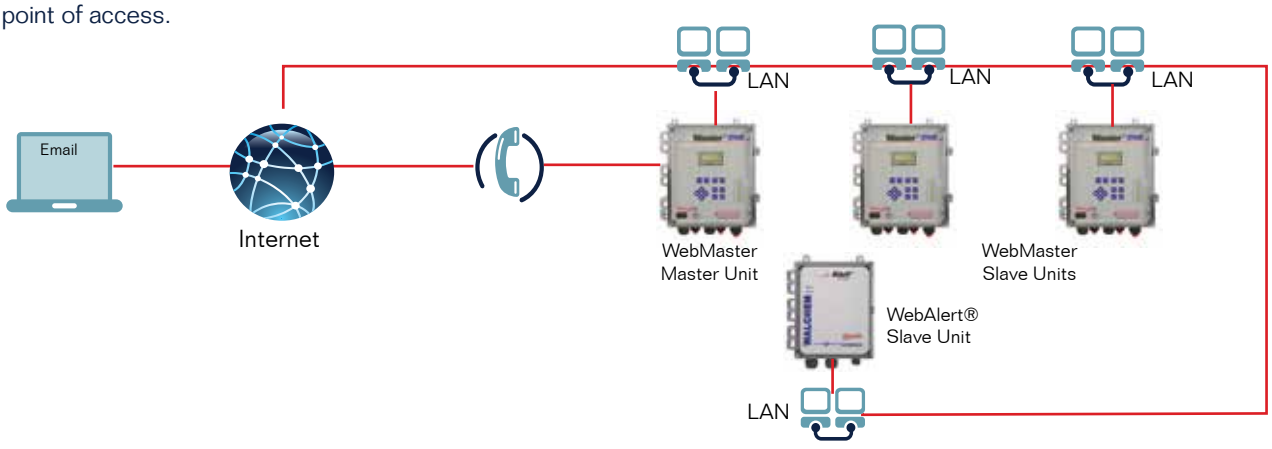
Easy to follow menus and system set-up screens make programming user friendly and intuitive. Once WebMaster® WIND is installed, the Start-up menu jump-starts you through the top level set-up. The Input, Output and Utility menus guide you through the rest of the programming.

- USB Plug and Play: For local monitoring and reconfiguration of your WebMaster® WIND via LapTop or dedicated on-site PC.
- ShoulderTap® Internet Communications: For monitoring and reconfiguration of your WebMaster® WIND remotely via the Internet (requires landline modem card option).
- DirectTap Modem-to-Modem: For remote monitoring and reconfiguration of your WebMaster® WIND using traditional modem-to-modem communications (requires landline modem card option).
- Ethernet: For monitoring and reconfiguration of your WebMaster® WIND via Local Area Network or remotely via the Internet. Modbus TCP/IP is available to seamlessly connect to building energy & process management, distributed control, and SCADA systems
- Cellular: For monitoring and reconfiguration of your WebMaster® WIND remotely via the Internet (requires cell modem and VTouch option).



ETHERNET NETWORKING

Walchem's Ethernet Networking allows you to leverage the power of the WebMaster® WIND communications abilities. By using the Local Area Network (LAN) or by connecting the WebMasters together via Ethernet, you can access all the controllers on the network from a single phone line. By utilizing the existing LAN, wiring can be minimized. The controller simply plugs into the nearest LAN connection via a standard Ethernet cable. The Master controller detects the other Walchem devices on the network and provides a single point of access.



VTouch® Account Manager

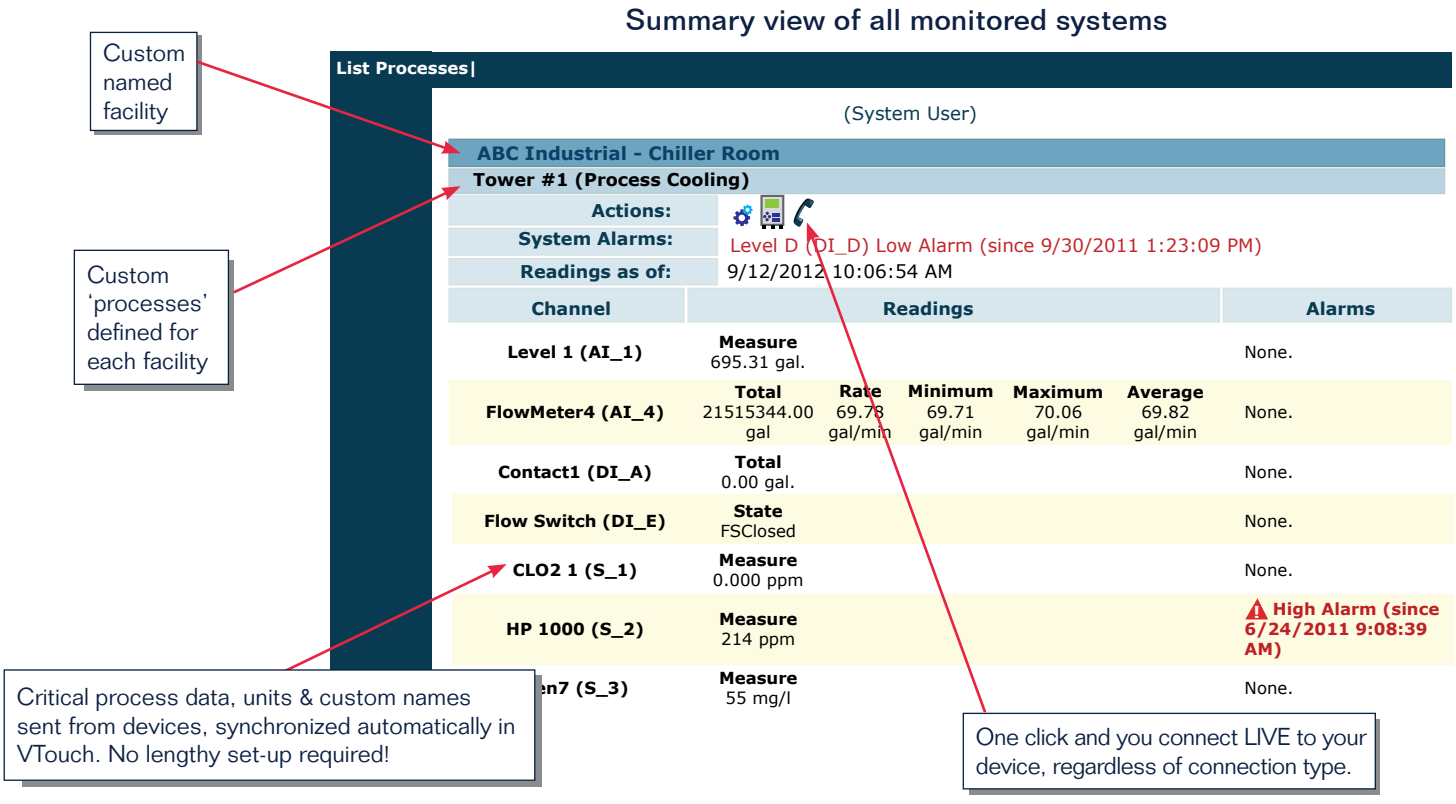
'Smart' Service:

- On-line, web-based summary of account status
  - Process values continuously updated including past 24 hour min, max and average values
  - Alarm status
- One-click LIVE Connect to any device in the field for full view and reconfiguration
  - Analysis, troubleshooting, adjustments
- Seamlessly organize devices according to a process(es), facility, customer, etc.
- User "access" and "permissions" management
- Eliminates surprises during 'routine' visits
- Makes service PROACTIVE not reactive
- SAVES TIME! Plain & Simple

VTouch is a collection of technologies designed for companies offering managed water treatment services. The VTouch solution allows service companies to more effectively manage remote accounts by significantly reducing the complexities associated with the deployment of water treatment service programs based around communicating products.

The VTouch Account Manager is fully synchronized with Walchem's web based controllers, making set-up and configuration simple and fast. Just specify the type of remote communications needed for new or existing controllers and Walchem takes care of the rest. No need to sort out and track complicated and constantly moving cellular data or dial-up ISP plans from large companies with poor customer service and unpredictable monthly charges. VTouch solves these problems by bundling the communications services, giving you a completely turn-key solution.

The innovative, fully synchronized nature of VTouch provides you with a quick, centralized 24/7 awareness of account status with the ability to LIVE Connect to any of your controllers in the field with one simple mouse-click, regardless of connection type! No phone numbers or IP addresses to remember.



Ordering Information

WIND8 [ ] – [ ] [ ] [ ] [ ] [ ]
1 2 3 4 5 6
Sensors System Options

1 SENSOR INPUTS REQUIRED

1 = One sensor input
2 = Two sensor inputs
3 = Three sensor inputs
4 = Four sensor inputs

2 VOLTAGE CODE

0 = Prewired w/USA power cord, 0 powered relays, 8 dry contact relays
1 = Prewired w/USA cords, 7 powered relays, 1 dry contact relay
2 = Prewired w/USA cords, 8 powered relays
3 = Prewired w/USA cords, 4 powered relays, 4 dry contact relays
4 = Hardwired, 0 powered relays, 8 dry contact relays
5 = Hardwired, 8 powered relays
6 = Hardwired, 7 powered relays, 1 dry contact relay
7 = Hardwired, 4 powered relays, 4 dry contact relays
E = Prewired w/ USA power cord, 4 powered relays, 4 opto-isolated (pulse) relays
F = Prewired w/ USA cords, 4 dry contact relays, 4 opto-isolated (pulse) relays
G = Hardwired, 4 powered relays, 4 opto-isolated (pulse) relays
H = Hardwired, 4 dry contact relays, 4 opto-isolated (pulse) relays

3 ANALOG OUTPUTS

N = No electrode
1 = One 4-20 mA output board
2 = Two 4-20 mA output boards
3 = Three 4-20 mA output boards
4 = Four 4-20 mA output boards

4 INPUT OPTIONS

N = None
A = Analog Input board (8 inputs)
D = Digital Input board (6 inputs)
B = Both Analog and Digital Input boards

5 DIGITAL COMMS HARDWARE (USB & ETHERNET STANDARD)

N = No additional communications
M = Modem landline card
G = Cellular Modem card (GPRS)

6 DIGITAL COMMS SOFTWARE

N = No additional communications
1 = Ethernet networking (Master capability)
2 = Modbus TCP
3 = Ethernet networking (Master capability + Modbus TCP)

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Webmaster®ONE

WebMasterONE is the most advanced online cooling tower and boiler controller in the water treatment industry. The flexible multi-I/O platform allows you to control multiple cooling towers, boilers, closed loops, and condensate lines with just one controller. An extensive assortment of integrated communications and data handling features are included that enable water treatment professionals to provide more effective water management services to their customers.

Metering Pumps

The E-Class is the most innovative and comprehensive metering pump product line in the world. Over 50 years of pump experience and a commitment to superior mechanical design has led to development of many industry firsts, including 360 stroke-per-minute technology, IP67 waterproof construction, and the world's highest capacity solenoid metering pumps.

WebAlert® Remote Monitor

Walchem's WebAlert is the first stand alone remote monitoring device that can web enable your installed equipment without having to replace or upgrade it.

AGENCY CERTIFICATIONS

Safety	UL 61010-1:2012 3rd Ed.
	CSA C22.2 No. 61010-1:2012 3rd Ed.
	IEC 61010-1:2010 3rd Ed.
	EN 61010-1:2010 3rd Ed.
EMC	IEC 61326-1:2005
	EN 61326-1:2006

Note: For EN61000-4-6,-3 the controller 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.

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.

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