WALCHEM

IWAKI America Inc.

# Remote Access

Drinking Water System

## OVERVIEW

Clean, sanitary drinking water is essential for good health. For companies that are responsible for treating drinking water, clean water is essential to prevent sick customers and litigation.

The most effective method to treat drinking water is by on-line measurement and control of chlorine residual. Remote monitoring and control of the system provides visibility to status and alarms, which gives operators the opportunity to respond immediately to out-of-range conditions, thereby reducing the possibility of contamination. Data logging of measurements and events helps to better understand the performance of the treatment system, as well as prove compliance to regulations.

The INT-9 controller was developed specifically for these types of applications, but with simplicity and reliability for people who are not well versed in automation.The simplicity of the interface allows rapid corrections to be performed without the use of programmers.The direct reading sensor reduces maintenance and provides continuous readings. Walchem has been producing systems since 2001 and now has over 20,000 controllers in 21 countries. The cost of a total system is typically under $10,000, and can be considerably less depending on the complexity.

Many small drinking water systems consist of just a flow switch or flowmeter and a chemical metering pump. These systems don't adjust to changes in chlorine demand or varying flow rates unless a flowmeter is used. The chlorine residual is not accurately controlled, and there is no visibility of the system when the process is out of compliance.

## INT-9 CONTROL SYSTEM

The INT-9 has features that are required for optimization of a drinking water system:

- Sensor Inputs for the control of pH and free chlorine, conductivity or salinity
- Ability to monitor- chemical tanks, pump function, flow, filter pressure, turbidity, as well as other devices with 4-20 milliamps or digital outputs
- Rapid data logging- for graphing to increase efficiencies and troubleshoot systems
- Rapid alarm notification through cell phone text messaging and e-mails
- Communication via LAN, or cellular gateway


## OTHER WALCHEM PRODUCTS FOR DRINKING WATER

INT-6 Free Chlorine Controllers:

- Backup chlorine pump control
- Completely Programmable from Touch Screen
- On-Screen Graphing and Variable Data Logging
- Variable Sensor Input Configurations- Walchem or 4-20 mA sensors
- Remote Communications-via Ethernet
- (6) Relays- Powered, Pulse Proportional or Dry Contacts
- Optional Dual Analog Output Card


EWN-EFS-Self-Priming Chemical Pump System:

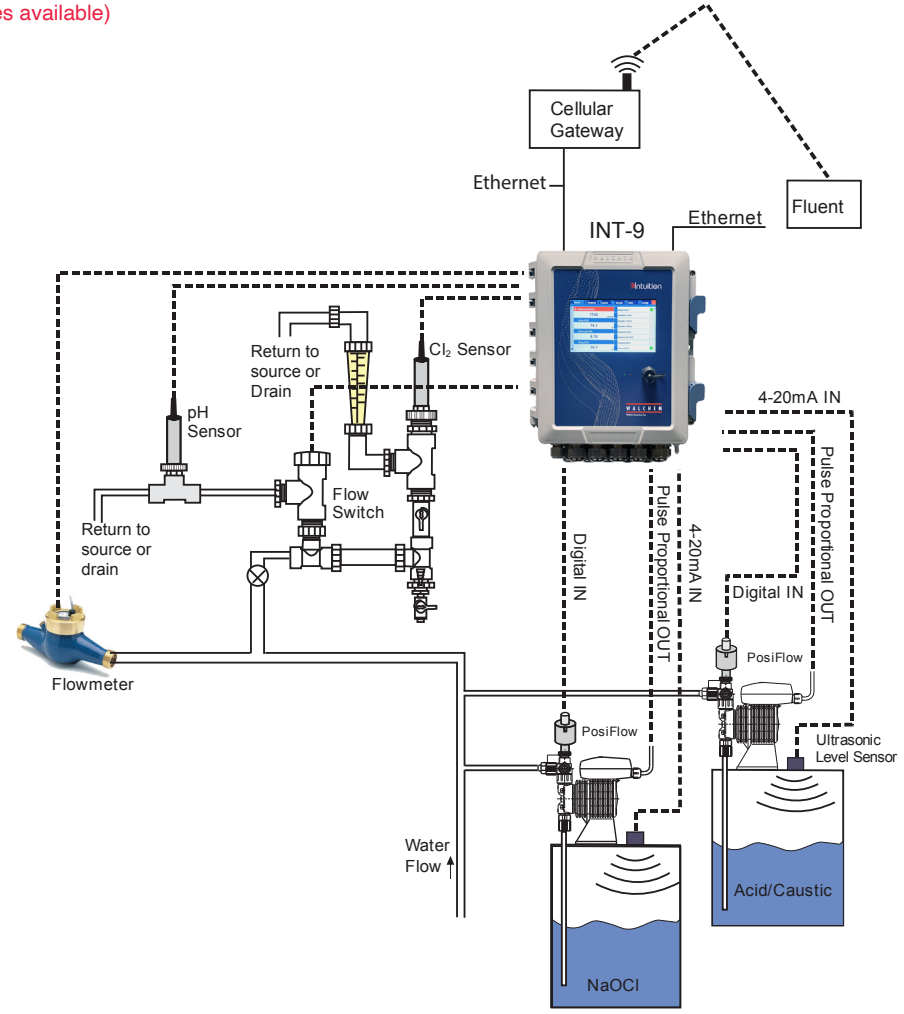
This pump system can be connected to a flow meter to provide proportional control based on the system flow. The pump control module has the capability to monitor the output of the chemical pump and increase the speed when the pump begins to lose prime, as is often the case when using sodium hypochlorite. An auto-degassing valve is included to help purge gas from the chemical pump. This type of control ensures a continuous and stable output of chlorine to the system without the need of having a person on-site.

Walchem has been involved in the control of water quality in various types of water systems for over 35 years. We have developed control products for very simple to complex water management systems. All of our products are designed to work together and with most other manufacturers' control products. We manufacture chemical pumps, mag drive pumps and controllers for all of these systems.

## SENSOR SPECIFICATIONS

| Sensor | Range | Temperature | Pressure | Process Connection | Materials |
|---|---|---|---|---|---|
| Electrodeless Conductivity | 500 to 12,000 µS/cm | CPVC: 32 to 158°F<br>PEEK: 32 to 190°F | 0 to 140 psi | 1" NPTM submersion<br>2" NPTM in-line adapter | CPVC, FKM in-line o-ring<br>PEEK, 316SS in-line adapter |
| | 3000 to 40,000 µS/cm | | | | |
| | 10,000 to 150,0000 µS/cm | | | | |
| | 50,000 to 500,000 µS/cm | | | | |
| | 200,000 to 2,000,000 µS/cm | | | | |
| pH | -2 to 16 pH | 50 to 158°F | 0 to 100 psi | 1" NPTM submersion<br>¾" NPTF in-line tee | CPVC, Glass, FKM o-rings, HDPE,<br>Titanium rod, glass filled PP tee |
| ORP | -1500 to 1500 mV | 32 to 158°F | 0 to 100 psi | 1" NPTM submersion<br>¾" NPTF in-line tee | CPVC, Glass, FKM o-rings, HDPE,<br>Titanium rod, glass filled PP tee |
| 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 |
| Free Chlorine/Bromine<br>Extended pH Range | 0 to 8 mg/l<br>0 to 7.5 mg/l | 32 to 113°F | 0 to 14.7 psi | ¼" NPTF Inlet<br>¾" NPTF Outlet | PVC, Polycarbonate, silicone rubber, SS, FKM,<br>Isoplast |
| Total Chlorine | 0 to 10 mg/l | 32 to 113°F | 0 to 14.7 psi | ¼" NPTF Inlet<br>¾" NPTF Outlet | PVC, Polycarbonate, silicone rubber, SS, FKM,<br>Isoplast |
| Ozone | 0 to 2000 mg/l | 32 to 122°F | 0 to 14.7 psi | ¼" NPTF Inlet ,¾" NPTF | PVC, Polycarbonate, silicone rubber, SS, FKM, Isoplast |

(Other sensor ranges available)



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