



# SMART SYSTEMS With SPI Technology



**WATER QUALITY**  
Accurate & Precise Control.

*SPI simplifies water safety, risk management and process control. SMART control is key to achieving and managing optimal water quality.*

SPI technology offers advanced, SMART, on-line colorimetric, monitoring and controlling functions for important process and water quality parameters, like pH, flow, clarity, disinfection demand and temperature. The automated colorimetric method ensures that external factors – like pH, water impurities and flow – do not affect measurements.

SMART Systems are fully automated after initial set-up and can enable remote, real-time monitoring and control.



## Benefits

- Rapid, SMART water quality analysis
- Accurate and precise measurement of key parameters
- Automated control of disinfectant dosing or pH control to maintain residual or analyze demand
- Remote and real-time reporting via network connections
- Remote and real-time control insight and operation
- Integrates easily into PLC/SCADA environment
- Advanced analytics through charts/reports for trend evaluation

## Applications

- Public drinking water systems
- Premise plumbing and rental buildings
- Irrigation and fertigation
- Water cooling
- Heating and hot water systems
- Industrial process water
- Public and regulated pools



SanEcoTec® is a Canadian clean-tech company that creates healthy water programs and SMART systems for better water management.

The Company is known for innovation in sustainable technologies.

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# Comparative Properties of Some Key Parameters

Measurement	Method	Range	Accuracy
Hydrogen Peroxide	Colorimetric	0-100 ppm	± 3%
Chlorine	Colorimetric	0-5.00 ppm	± 3%
pH	Electrode	2-14	± 0.05
Flow	Pulse or Current	0-100%	± 5%
Temperature	Probe	0-60°C	± 1%

## Measurement Methodologies

SPI Technology	Other Technology	
Colorimetric Measurement	Amperometric Measurement	Ion Selective Measurement
<ul style="list-style-type: none"> <li>• Measurement of free available chlorine, free active chlorine, ozone, peroxide and other parameters</li> <li>• 100% comparable to a digital hand-meter DPD measurement but in real-time and on-line</li> <li>• Measurement independent of pH</li> <li>• Stable measurement with little variation at the zero value/ measurement</li> <li>• Immediately dependable measurement at start-up, no additional time for reliable measurement of cell needed</li> <li>• Not dependent on external factors such as flow and pH or water matrix effects</li> <li>• Incorporates water clarity, disinfection demand and other key measurements with advanced analytics and actionable feedback</li> <li>• Remote monitoring and control capabilities through Remote platform</li> </ul>	<ul style="list-style-type: none"> <li>• Measurement of free available chlorine</li> <li>• Measurement independent of pH</li> <li>• Measurement must be calibrated frequently with respect to zero value</li> <li>• Start-up requires period of adjustment and system requires frequent re-calibration</li> <li>• Very susceptible to interference from external matrix effects</li> <li>• Flow must be constant to ensure consistent measurement</li> </ul>	<ul style="list-style-type: none"> <li>• Measurement of free active chlorine</li> <li>• Measurement deviates from the hand meter</li> <li>• Measurement is pH dependent</li> <li>• Measurement is stable only if pH is stable</li> </ul>