

INW TempHion™ ISE
SMART SENSOR WITH DATA LOGGING



APPLICATIONS

Single- or multi-well tracer tests

Saltwater intrusion tracking

Tidal influence studies

Wastewater treatment discharge

Features

- Measures & records specific ions, and temperature
- Low power
- Modbus® RTU (RS485) and SDI-12
- 6-month sensor stability*
- Solution ground for excellent noise protection
- Small diameter — 0.75" (1.9 cm)
- 200,000 records in non-volatile memory
- Wireless connectivity
- Free, easy-to-use software

* may vary due to environmental factors

Contact Your Supplier

The **INW TempHion™ ISE** Smart Sensor is a microprocessor-based submersible sensor with built-in data logging. This device stores thousands of records of specific ion and temperature data.

The internal processor in the TempHion allows for easy calibration, using the calibration utilities in Aqua4Plus/Aqua4Plus Lite. Once calibrated, this calibration data is stored in non-volatile memory within the Smart Sensor. When data is collected, this calibration information is applied to the data, resulting in highly accurate readings at a wide range of temperatures.

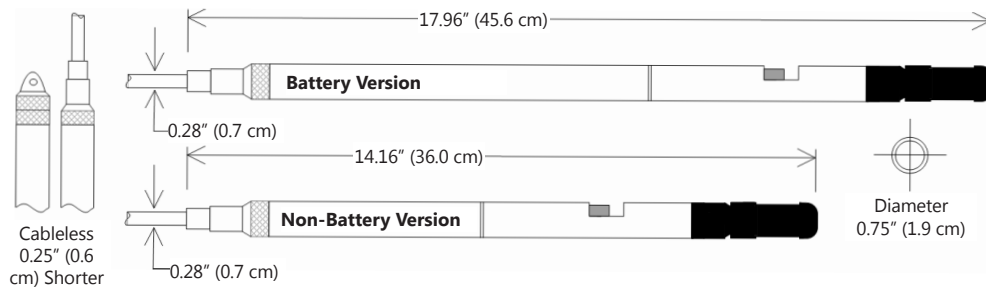
The TempHion is powered internally with two AA batteries. Alternately it can be powered with an external auxiliary power supply for data intensive applications. The unit is programmed using INW's easy-to-use Aqua4Plus or Aqua4Plus Lite control software. Once programmed the unit will measure and collect data on a variety of time intervals.

Several TempHions, or a combination of TempHions and other INW Smart Sensors, can be networked together and controlled from one location, either directly from a single computer or via INW's Wireless Data Collection System.

While most will use the TempHion with our free, easy-to-use Aqua4Plus Lite or Aqua4Plus software, it is by no means limited to that software. You can use your own Modbus® RTU or SDI-12 software or logging equipment to read measurements, thus tying into your existing systems and data bases.



Dimensions



Specifications*

Housing & Cable	Weight	0.8 lb. (0.4 kg)	
	Body Material	Acetal & 316 stainless or titanium	
	Wire Seal Material	Fluoropolymer and PTFE	
	Cable	Submersible: polyurethane, polyethylene, or ETFE (4 lb./100 ft., 1.8 kg/30 m)	
	Field Connector	Standard	
Temperature	Operating Range	0° to 55°C (32° to 131°F)	
	Storage Range	Without batteries: -20° to 80°C (-4° to 176°F)	
Power	Internal Battery	Two lithium 'AA' batteries - Expected battery life: 18 months at 15 min. polling interval (may vary do to environmental factors)	
	Auxiliary	12 Vdc - Nominal, 6-16 Vdc - range	
Communication	Modbus®	RS485 Modbus® RTU, output=32bit IEEE floating point	
	SDI-12	SDI-12 (ver. 1.3) - ASCII	
Logging	Memory	4MB - 200,000 records	
	Logging Types	Variable, user-defined, profiled	
	Logging Rates	2x/sec maximum, no minimum	
	Baud Rates	9600, 19200, 38400	
	Software	Complimentary Aqua4Plus and Aqua4Plus Lite	
	Networking	32 available addresses per junction (Address range: 1 to 255)	
	File Formats	.a4d and .csv (also .xls in Windows 8 and earlier)	
Output Channels		Temperature	Bromide
	Probe Material	30K ohm thermistor, Epoxy bead/external housing	Ag/AgCl solid-state electrode
	Measurement Principle		Ion electrode method
	Accuracy	±0.2°C	±5.0% of measured value (typical)
	Resolution	0.1°C	0.1 ppm
	Units	Celsius, Fahrenheit, Kelvin	ppm, mV
	Range	0° to 55°C (32° to 131°F)	0-10,000 ppm
	Thermal Compensation	---	Isopotential point characterization
	Calibration	---	One or two point calibration w/ ionic strength adjustment
Reference	Ag/AgCl solid state electrode, capillary liquid junction, TempHion™ reference solution		
Maximum Depth	230 ft (70m) / 100psi		
Environmental	IP68, NEMA 6P		

*Specifications subject to change. Please consult our web site for the most current data (inwusa.com). Modbus is a registered trademark of Schneider Electric.