Pan America Environmental, Inc.

Intell-i-Watch

Multi-Sensor Transmitter Monitor





Intell-i-Watch: A feature packed, interactive data collection/concentration platform for monitoring multiple sensor inputs for municipal and industrial wastewater and facility process equipment.

Sensed Water Parameters

With models that provide between 4 and 48 standard analog, pulse, temperature inputs, process sensors, serial & bus network interfacing the Watch systems can acquire data for the following and other parameters:

- ❖ Flow
- ❖ Conductivity
- ❖ Pressure
- ❖ TSS/turbidity
- ❖ ORP
- ❖ Sludge level
- ❖ Conductivity
- ❖ Metals
- ❖ pH
- ❖ Level
- ❖ Temperature
- ❖ Chlorine
- ❖ DO
- ❖ TDS
- ❖ O&G
- ❖ Gasses
- ❖ Ion selective for ammonium ions, nitrites, magnesium, sodium, potassium, chloride, calcium, fluoride, metals and more.

Flowmeters based on electromagnetic, paddlewheel, turbine and other such designs can provide 4-20mA, pulse and frequency wave outputs to the Watch.

Manage Compliance

- ❖ Data management for reporting
- ❖ History tracking
- ❖ Establish/maintain procedural inputs in response/action recording

Alarm Monitoring

- ❖ Alarm management
- ❖ Alert via email, messaging & others

Programmable smart alarms for any feedback signal/data origin

Feedback Datalogging

Harvesting sensor feedback data can be used to interpret, trend and analyze that information from one or multiple sensors to:

- ❖ Optimize and improve processes
- ❖ Create predictive results to improve proactive actions
- ❖ Avoid cyclical system upset

Motor Condition Monitoring

Monitor, detect, predict, manage

In addition to water/gasses sensing Watch systems can identify potential failures, repairs and replacements to be proactive with the following:

Motors:

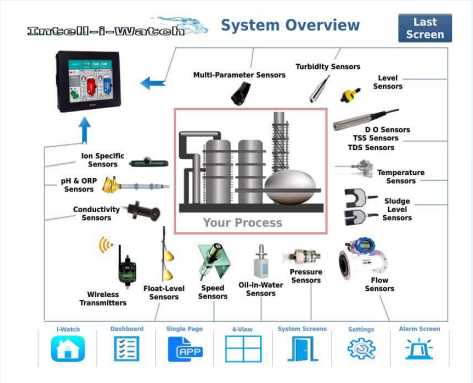
- ❖ Pumps
- ❖ Gearmotors
- ❖ Blowers
- ❖ Valves
- ❖ Mixers
- ❖ Aerators
- ❖ VFDs
- ❖ Vibrators

Others:

- ❖ Actuators
- ❖ Solenoids
- ❖ Air operated pumps (AOD)
- ❖ Generators
- ❖ Machine tools
- ❖ Solar panel installations
- ❖ Wind turbines
- ❖ Sluice gates
- ❖ Hatches
- ❖ Sewer covers
- ❖ Transformers

Monitor motors & actuators for (partial list):

- ❖ Vibration
- ❖ Current signature analysis
- ❖ Temperature
- ❖ Electrical stress
- ❖ Partial discharge
- ❖ Rotor flux
- ❖ Rotor winding
- ❖ Rotation
- ❖ Shaft voltage
- ❖ End winding vibration
- ❖ Overload/underload
- ❖ Middle motor load range
- ❖ Optimum/lower load range
- ❖ Run time
- ❖ Speed



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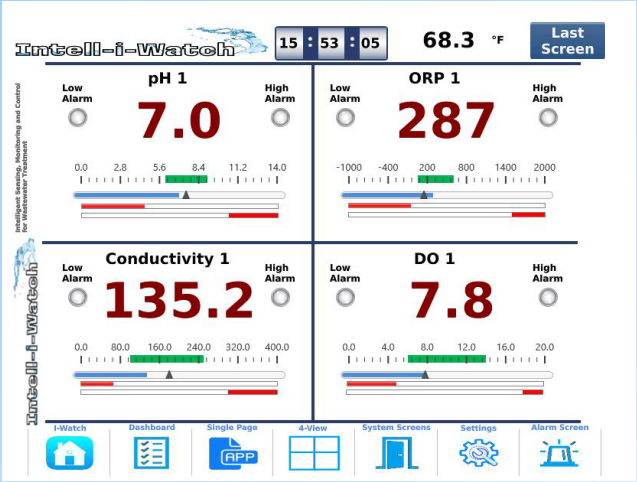
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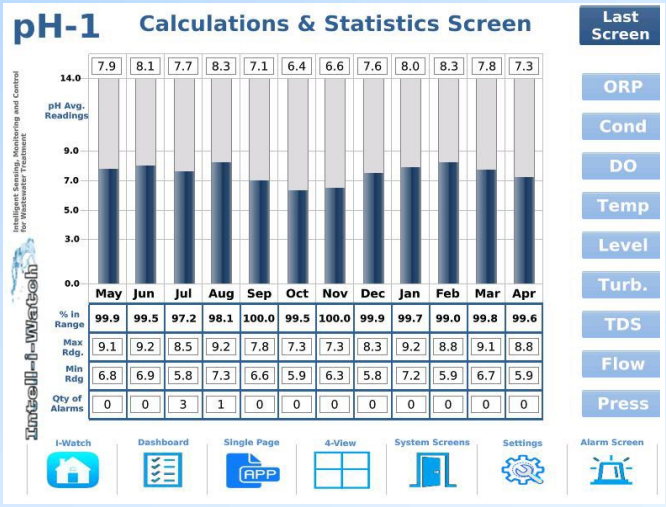
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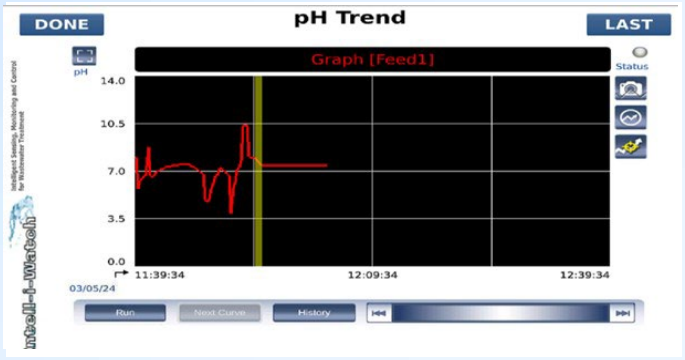
Data working for you

Quickly move from collecting to analyzing your data.





Historical data is captured and can be reviewed on screen.



Improved Technology

Due to improved advanced software, hardware and technologies we're able to provide enhanced features, convenience and efficiency in a smaller cost-effective package.

Designed To Integrate

Use the Watch with your existing sensors. Connect to your network, computer or server.

Easy Installation

Mounting the system at the process or remotely is simple with four mount holes provided in enclosure back and mounting options. Make it a permanent or mobile installation.

Sensor Distance

Accommodate sensors at different distances including transmitters, distributed I/O, network connectivity, Modbus and other connection methods. Options are available to help you bridge long distances.

Sensor I/O	IW332	IW444	IW646	IW888	IW1010	IW1024	IW1826
Sensor Channels	6	8	10	16	20	34	44
Analog Input	3	4	6	8	10	10	18
Digital Input	3	4	4	8	10	24	26
Digital Output	2	4	6	8	12	12	12
Temperature inputs	0*	0*	0*	0*	0*	0*	2
Expandable	Yes	Yes	Yes	Yes	Yes	Yes	Yes
*	Can be provided w/4-20mA converter/transmitter						

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Technical Specifications

Intell-i-Watch Models	IW-332	IW-444	IW-646	IW-888 and IW-101012	IW-102412 and IW-182612
Input voltage	115V/1pH/60/50Hz.				
Input V range	100-240VAC/1pH				
Current consumption	690 mA (max I/O)	705 mA (max I/O)	750 mA (max I/O)	900 mA (max I/O)	900 mA (max I/O)
Description	Microprocessor controlled menu driven controller				
Indoor/outdoor	Install in both, recommend sunscreen/window for outdoor UIT long term protection and ease of use				
Mounting	Wall, floor based or other location strut or pole				
Penetrations	Blank walls and bottom for your penetrations as needed				
Display: UIT	TFT, touch resistive analog for display and system control				
Display size	3.5”	3.5”	3.5”	5”	7” and 10.4”
Display resolution	320 X 240	320 X 240	320 X 240	640 X 480	800 X 480
Keypad	Displays virtual keyboard when input is required				
Illumination	Backlit, LED, white, software controlled				
Communications port					
Port 1 & 2	2 channel, RS232/RS485				
Port 3	Ethernet (10/100 Mbps)				
Port 4	USB				
Removable memory	SD: 32 GB, flash drive 32 GB				
Optional storage	SSD drive, 2 TB				
Environment	Operational temp. 0-50°C (32-122°F)				
Relative humidity	10% to 95% (non-condensing)				
Enclosure rating	NEMA 4 / IP65, (NEMA 4X available)				
Misc					
Battery	Coin type, 3V, lithium, CR2450, 5 years @ 25°C for controller/UIT				
System Detail					
Dimensions	8” X 8” X 6”D	8” X 8” X 6”D	8” X 8” X 6”D	10” X 10” X 6”D	16” X 14” X 8”D
Weight	12 Lbs	12 Lbs	12 Lbs	14 Lbs	28 Lbs
MOC	Steel, coated	Steel, coated	Steel, coated	Steel, coated	Steel, coated
Output Feature Options (partial)					
	SMS, email, schedule				
	Cloud interface				
	Realtime data view				
	Create baseline KPIs for data comparisons				
	Interactive sensor dashboards: access, manipulate graphs, analytics, histories, stats & trending				

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Function Features	
Multi-level password	3 level user-selectable
Alarming	Visual alerts
	Alarm outputs
	User setpoints single & multiple point
	High, low setpoint
	Manage priority alarms
Data Logging	
Compliance logs	Non-changeable, fixed logs
Trending	
Custom	User selectable interval setting
	Day, week, month log duration settings
File transfers	Multi-device location transfer utility
Integrity verification	System auto checking of file integrity
Display	Menu driven interface
Group view	Multi-channel display in table format
Single view	Single channel large dashboard display
Four view	Four channels in quadrant display
Analytics	
Trend graph	Live, real-time graphing
	Short term historic data graph runs
	Archived data graph runs
Data Table	Statistics comparisons
	Captured min/max values
	Time stamp of recordings
	Configurable acceptance ranges
	Process monitoring calculations
Sensor Calibration	Monitoring
Sensor Life Tracker	Track sensor output performance
Options	
Motor monitoring	Software factory upgrade
Added storage	SSD2TB, Two TB drive
Hinged UIT cover	Polymeric clear, hinged & latched
Sunshade	
HMI window	
Enclosure type	NEMA 4X, NEMA 7
MOC	304/316 SS, FRP, aluminum, poly
Enclosure mount type	Floor or wall mount struts, hardware







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