

EchoSmart. Interface Level Analyser.



EchoSmart™

EchoSmart

EchoSmart Sludge Blanket Monitoring

EchoSmart is an underwater, interface level analyser built on a digital platform with technology which allows us to locate the analyser in the sensor. Our sensors generate and process the ultrasonic signal for continuous, real-time measurement, resulting in greater flexibility in equipment configuration options, enhanced communication capabilities and reduced installation costs.

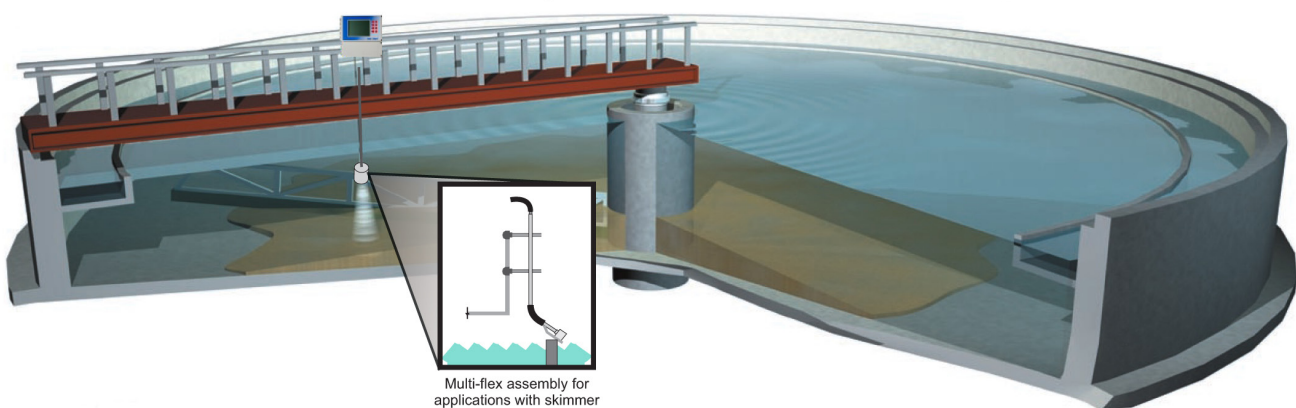
EchoSmart interface level analysers are unique, in that our smart-sensor technology enables us to control up to 16 smart sensors with one EchoSmart controller. This allows for field networks of sensors, thereby lowering the 'per-tank' cost. These field networks can also be created wirelessly, eliminating costly conduit and cabling runs.

Our sensors employ interface-detection algorithms developed exclusively by ATi with proven performance across the UK, USA and around the world.

User friendly

Easy to set-up, easy to operate, and easy to secure consistent, reliable, trouble-free measurements.

- Large display with intuitive screens for quick entry of parameters
- Soft key operation with help prompts for all settings
- Automatic initialisation for easy start-up
- Adaptive algorithms in each sensor for uninterrupted operation
- Track well-settled blankets
- Can also be configured to track dispersed solids (fluff or rag layer)
- Monitor blanket levels 24/7/365
- Suitable for round or rectangular clarifiers



Smart Sensors Available



Standard Sensor
Typical for applications with surface skimmers. Multi-flex assembly required.

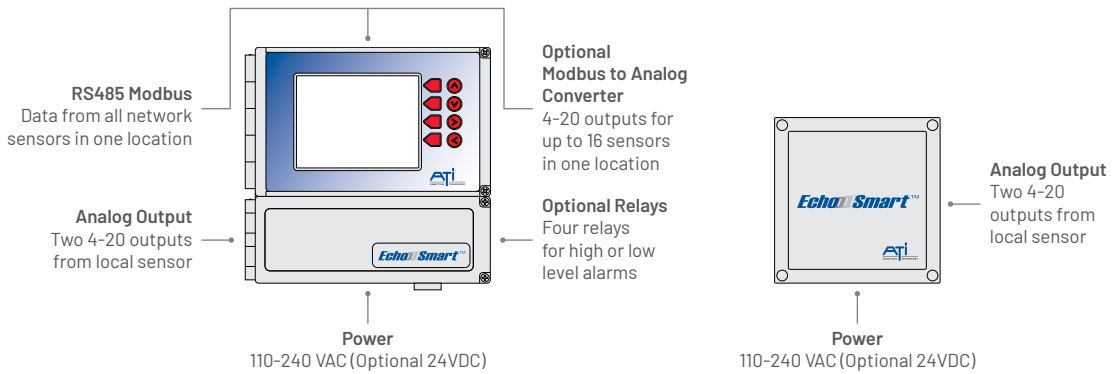


Wiper Sensor
Typical for applications without surface skimmers.



Level and Turbidity
Sludge level and turbidity in one sensor.

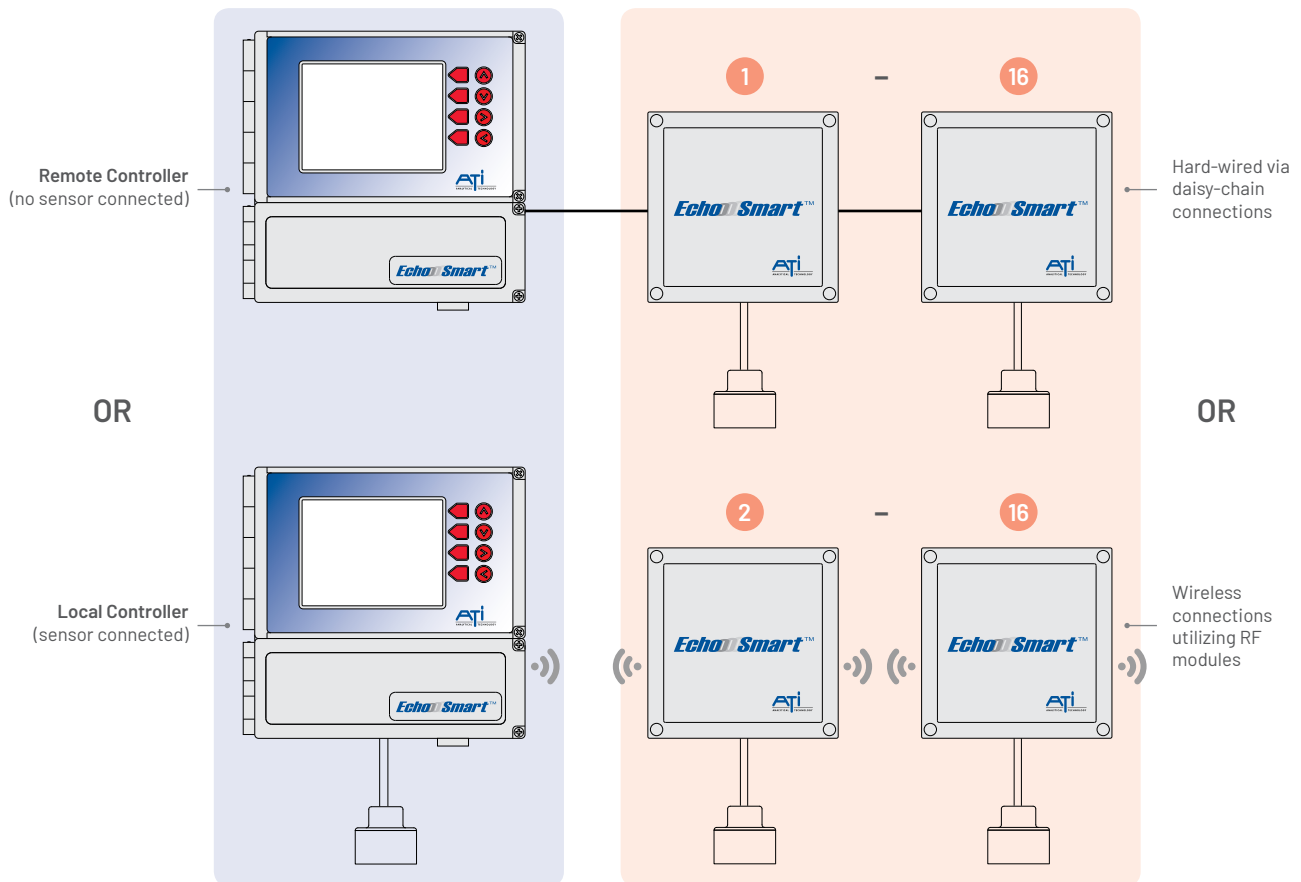
Available Outputs



Flexible Wired and Wireless Solutions

Adaptable configuration options for a variety of installation requirements and straightforward retrofit solutions.

- Available as stand-alone system
- Networks of up to sixteen sensors possible with only one controller needed
- Easily add more sensors to an existing network
- Communication between devices can be achieved through:
 - Hard-wired connections
 - Powerful sub-1GHz RF with self-healing mesh technology*



*Radio available as internally mounted plug-and-play module with external antenna or in a separate enclosure for maximum range and flexibility. Self-healing mesh technology eliminates most line of sight interference.

Specifications

Smart Sensor

Measuring Principle

Underwater Acoustic

Range

0.305 to 10.0m

Resolution

3.05mm at 3.05m

Accuracy

0.35m at 3.05m

Operating Temperature

34 to 125°F (1 to 52°C)

Power Requirement

15VDC Standard: 3W - Wiper 6W

Measurement Interval

Adjustable

Sensor Mounting

Fixed location or flexible assembly

Calibration

Factory calibrated

Sound speed field adjustable for temperature compensation

Sensor Construction

IP68, ABS and epoxy

Self-cleaning Wiper Sensor, silicon wiper (optional)

Dimensions

Standard Sensor: 68.8 x 73.6mm

Wiper Sensor: 143.2 x 73.6mm

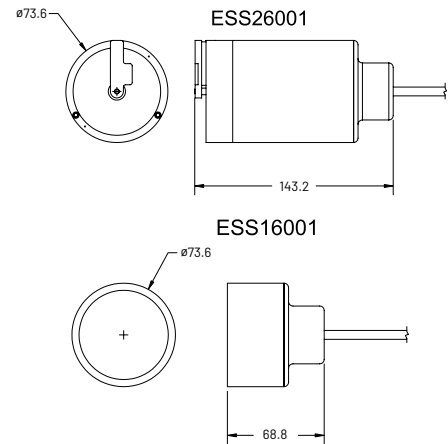
Weight

Standard Sensor: 1.02kg

Wiper Sensor: 1.25kg

Certifications

CE



Controller

Ambient Conditions

Operation: -40° to +140°F (-40° to +60° C)

Power Requirements

100 to 240 VAC, 50/60 Hz - 1A

Power 20 W - 1.34A Optional: 24VDC

Display

Graphical backlit monochrome screen

Resolution: 320 x 240 pixels

Viewing Area: 2.6 x 3.45 in (92 x 122 mm)

Communications

RS-485 MODBUS RTU

(2) 4-20mA Output

(1) Level Measurement

(1) Turbidity (Optional)

Optional 900MHz RF Module

Self-healing mesh network

Approvals:

FCC Part 15C, Industry Canada

Relays (Optional)

Four relays: 10A @ 250 VAC; 10A @ 30VDC, user selectable for high/low fault alarm

Memory Backup

All user settings are retained indefinitely in memory

Mounting Configurations

Surface and pipe mounting

Enclosure

NEMA 4X, IP65; Polycarbonate

Dimensions

235 x 229 x 115 mm

Weight

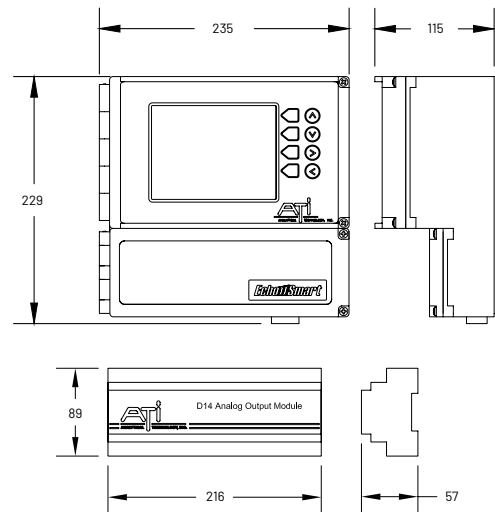
Approximately 1.36 kg depending on configuration

Modbus to Analog Output Converter (optional)

18-30VDC DIN Rail Mount Up to 16 isolated analog outputs

Certifications

CE



Power Supply Unit

Ambient Conditions

Operation: -40° to +140°F (-40° to +60° C)

Power Requirements

100 to 240 VAC, 50/60 Hz - 1A

Power 65W (fused) Optional: 24VDC

Communications

RS-485 MODBUS RTU

(2) 4-20mA Output

(1) Level Measurement

(1) Turbidity (Optional)

Optional 900MHz RF Module

Approvals:

FCC Part 15C, Industry Canada

Mounting Configurations

Surface and pipe mounting

Enclosure

NEMA 4X, IP65; Polycarbonate

Dimensions

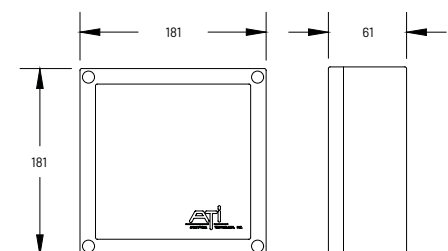
181 x 181 x 61 mm

Weight

Approximately 0.68 kg

Certifications

CE



ATi is a leading provider of engineered, analytical sensor monitoring solutions for water and gas applications and data analytics. Our pioneering and industry leading range of Smart Network Monitors, Water Quality Monitors and Gas Detectors provide innovative solutions for the most demanding of applications.

USA: sales@analyticaltechnology.com / +1-800-959-0299 (Toll Free) / +1-610-917-0991 (Voice)

UK: sales@atiuk.com / +44 (0) 1457 873 318

analyticaltechnology.com