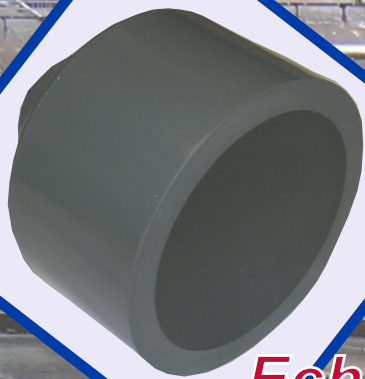


EchoSmart™

Interface Level Analyzers



EchoSmart Sensor

**Clarifiers
Thickeners
Liquid-Solid Separation
Processes**

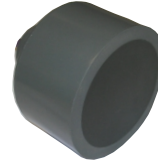
www.sludgelevel.com

Smart

EchoSmart Sensors generate and process the ultrasonic signal for real-time measurement and maximum flexibility. No "big ticket" auxiliary analyzers are required.

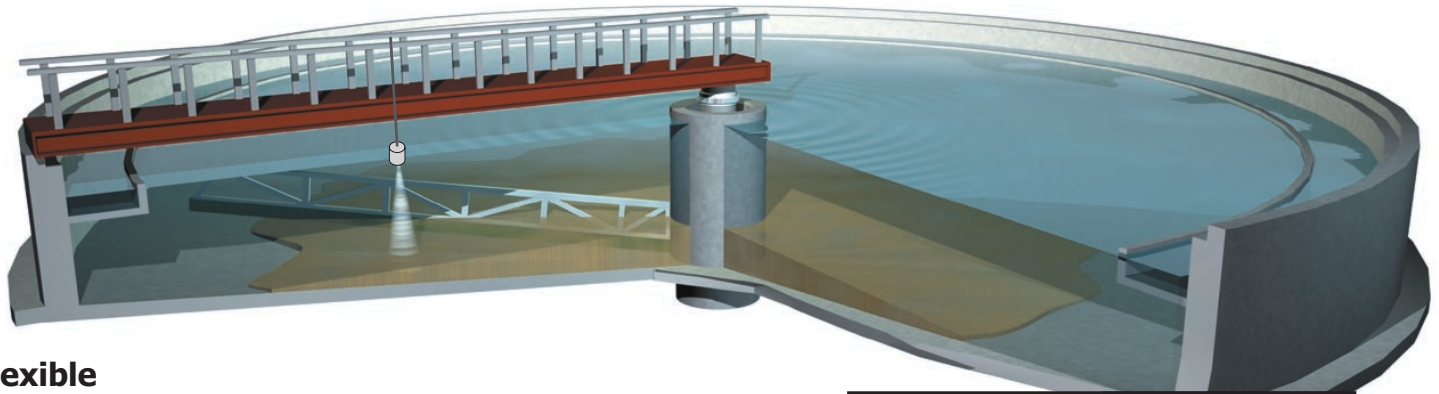
EchoSmart Sensors implement superior signal control and

tracking algorithms developed exclusively by Entech, independently field tested and confirmed by performance across the US and around the world.



Microprocessor-based
Intelligent Sensor

EchoSmart Sensor™



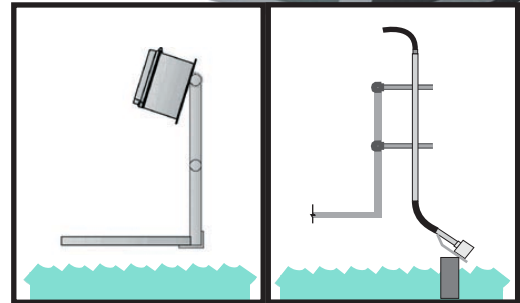
Flexible

Complete Stand-Alone Instrument Options

- EchoSmart Sensor with full-function EchoSmart Controller
- EchoSmart Sensor with EchoSmart Power Supply Unit (remote programming by EchoSmart Console Program)

EchoSmart Networks (See Opposite Page)

- Field Interconnect up to 128 EchoSmart Sensors
- RS-485 Local Networks
- Integrated ZigBee Compliant RF Network



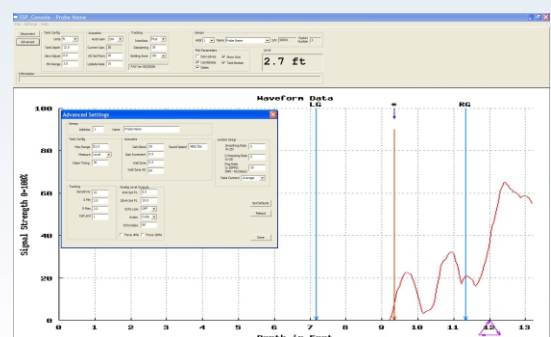
Friendly

Easy to set-up, easy to operate and easy to secure consistent, reliable, trouble-free measurements - that's user-friendly, and that's EchoSmart!

- Large display with intuitive "Page Fill" screens for quick entry of parameters
- Soft Key operation with Help Prompts for all settings
- Automatic Initialization and Automatic Gain for easy quick start and uninterrupted operation

EchoSmart Console Program™

The Console Program enables the operation and control of all networked sensors from a PC or laptop computer. With the EchoSmart Console Program, all programming, monitoring and control functions are available at the data acquisition and control console.



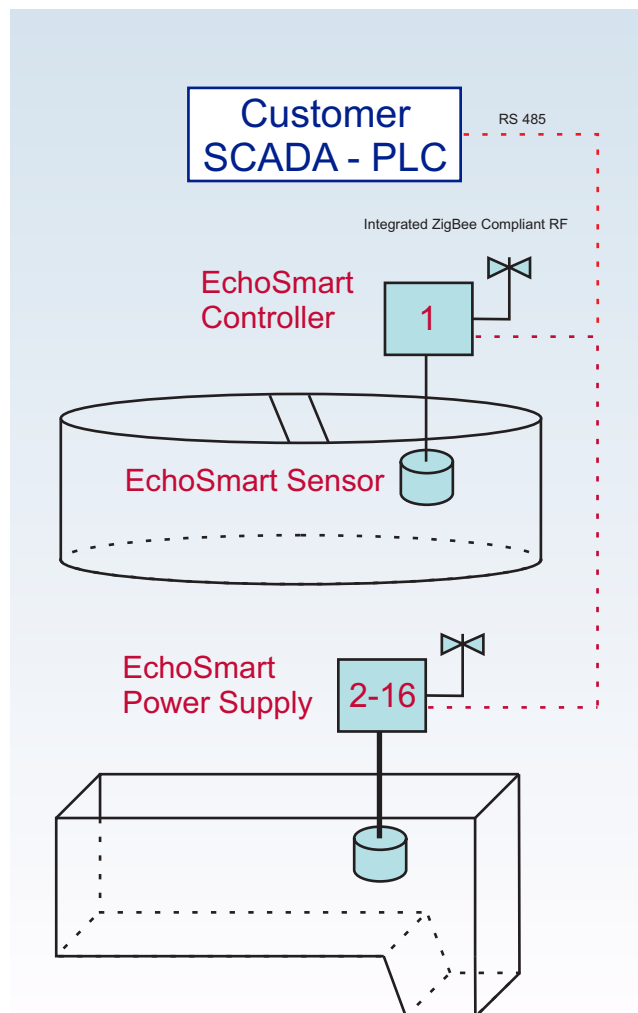
EchoSmart Network™

An EchoSmart Network consists of 2-128 EchoSmart Sensors interconnected in a wired or wireless field network. Fully integrated ZigBee Compliant RF networking is the clear choice for plants that want to take advantage of tremendous cost savings in reduced cabling and piping costs.

Features

Up to 16 EchoSmart Sensors can be networked with a single EchoSmart Controller for convenient operation and significant cost reduction.

ZigBee Compliant RF with self-healing mesh technology provides trouble-free communication while eliminating unnecessary piping and cabling costs. (Internal, fully integrated two-way radio with embedded internal antenna. Self-healing mesh technology eliminates most line of sight interference)



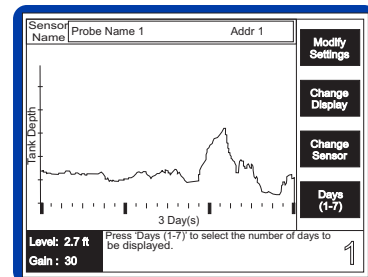
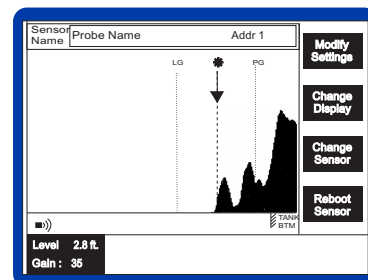
Sensor #1	Sensor #2	
2.8 ft	1.2 ft	Change Display
Gain: 35	Gain: 28	
Sensor #3	Sensor #4	
1.8 ft	3.2 ft	
Gain: 25	Gain: 32	

Sensor Name	SETTINGS	
Tank Configuration	Tracking	
Units	Feet	First 30
Tank Depth	12.0	Dampening ON
Zero Adjust	0.0	Settling Zone ON
Min Range	3.0	
Acoustics	Graphic Parameters	Back to Display
Auto Gain	ON	Tank Display ON
Current Gain	35	Trend Display ON
AG Set Point	20	Display Contrast 56
Update Rate	10	
Use the arrow keys to select the parameter you wish to modify.		
Level: 2.8 ft	Press 'Change Sensor' to select a different sensor.	
Gain: 35		

User Friendly Informational Screens



EchoSmart Controller™



EchoSmart™ Specifications

Smart Sensor

Measuring Principle
Underwater acoustic

Range
1.0 to 32 ft. (0.305 to 10.0 m)

Resolution
0.12 in. at 10.0 ft. (3.05 mm at 3.05 m)

Accuracy
0.1 ft at 10.0 ft. (035 m at 3.05 m)

Operating Temperature
34 to 125°F (1 to 52°C)

Power Requirement
15VDC Standard: 3W - Wiper 6W

Measurement Interval
Adjustable

Sensor Mounting

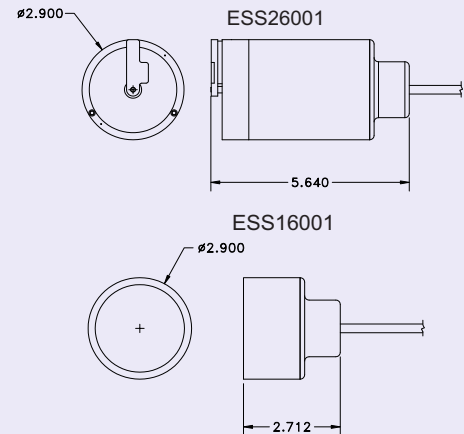
Fixed location or flexible assembly
Calibration
Factory calibrated
Sound speed field adjustable for temperature compensation

Sensor Construction
IP68, ABS and epoxy
Self-cleaning Wiper Sensor, silicon wiper (Optional)

Dimensions
Standard Sensor: 2.712 x 2.90 in
Wiper Sensor: 5.640 x 2.90 in.

Weight
Standard Sensor: 2.25 lb (1.02 kg)
Wiper Sensor: 2.75 lb (1.25 kg)

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 65 W (fused)
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 Serial -MODBUS RTU
RS-232

(2) 4-20mA Output
(1) Level Measurement
(1) Turbidity (Optional)

Optional 2.4GHz IEEE 802.15.4 RF
Module
Self-healing mesh network
Approvals: FCC Part 15.247, Industry

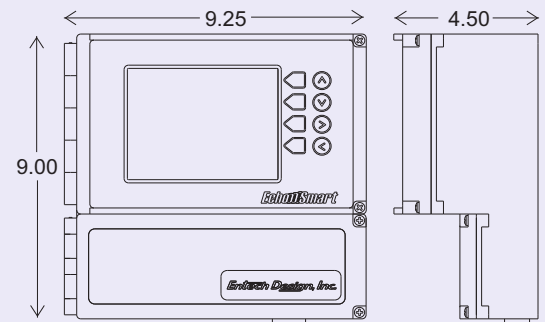
Canada
Relays (Optional)
Four relays: 10A @ 250 VAC; 10A @ 30VDC,
user selectable for high/low fault alarm

Memory Backup
All user settings are retained indefinitely in memory
Mounting Configurations
Surface and pipe mounting

Enclosure
NEMA 4X, IP65; Polycarbonate
Dimensions
9.25 x 9.0 x 4.5 in (235 x 229 x 115 mm)

Weight
Approximately 3.0 lb (1.36 kg) depending on configuration

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 20 W - 1.34A
Optional: 24VDC

Communications
RS-232 MODBUS RTU
RS-485

(2) 4-20mA Output
(1) Level Measurement
(1) Turbidity (Optional)

Optional 2.4GHz IEEE 802.15.4 RF
Self-healing mesh network

Approvals: FCC Part 15.247, Industry
Canada

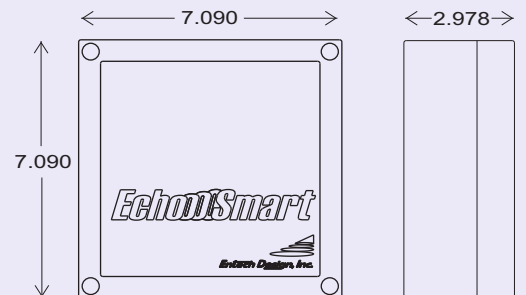
Mounting Configurations
Surface and pipe mounting

Enclosure
NEMA 4X, IP65; Polycarbonate

Dimensions
7.125 x 7.125 x 2.375 in (181 x 181 x 61 mm)

Weight
Approximately 1.5 lb (0.68 kg)

Certifications: CE



6 Iron Bridge Drive
Collegeville, PA 19426
(610) 917-0991



315 S. Locust St.
Denton, TX 76201
(940) 898-1173
entech@entechdesign.com