



CAPSWITCH 500

Process Instrumentation

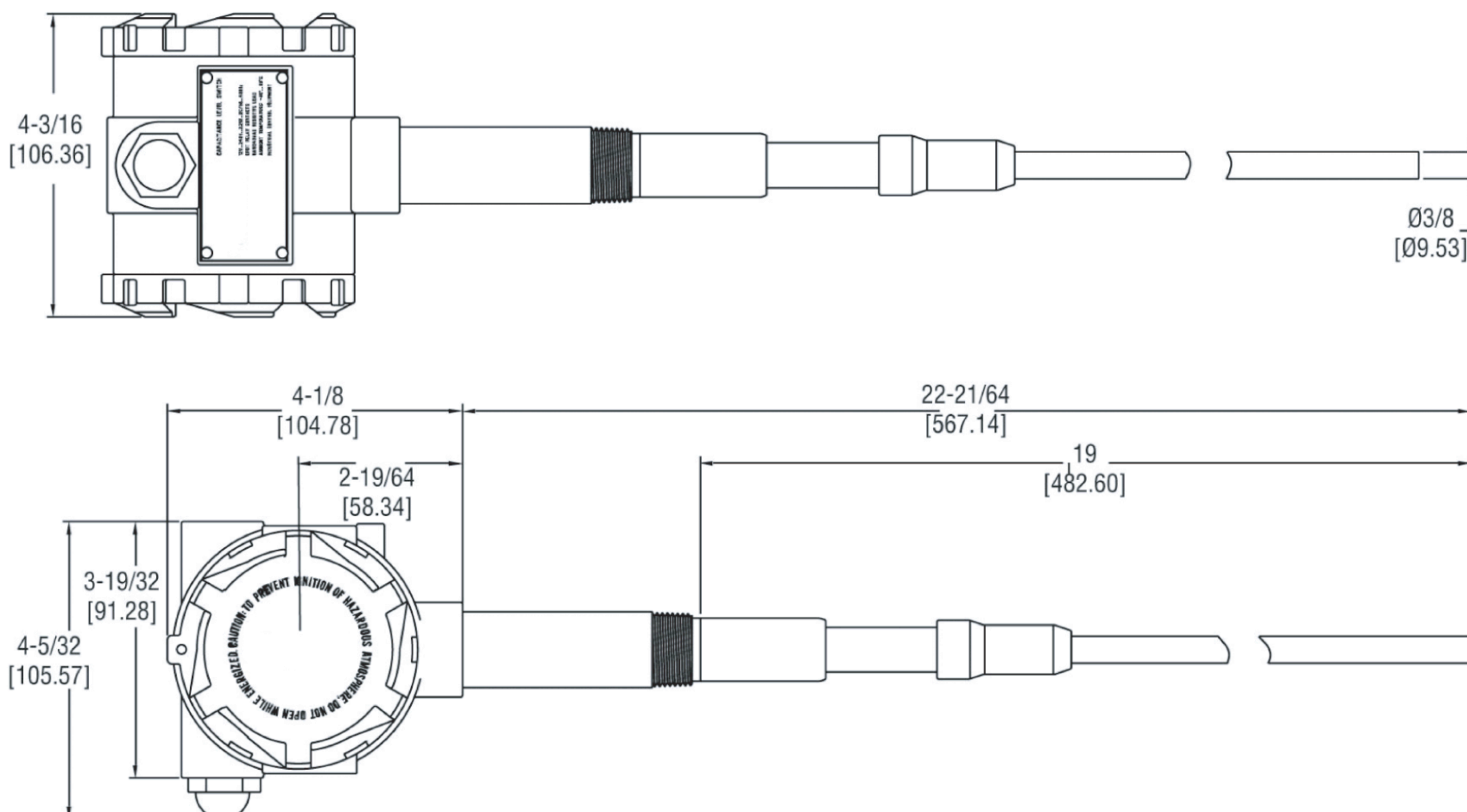
Capacitance Level Switch for Liquids and Solids.

The **ECHO CapSwitch 500** is a reliable capacitance level switch that does not have any moving parts. The state of the art sensing technology is impulse RF admittance measurement with an active guard. This provides excellent level detection while being insensitive to material buildup.

Capacitive level technology can be used for liquids, slurries, powders and bulk materials. Also, the CapSwitch 500 can be used for liquid interface applications to detect the level of two immiscible liquids that have different dielectric constants such as oil and water.

The standard unit comes with automatic push-button calibration for instantaneous start-up. The active guard prevents false alarms normally caused by sticky, dusty or clingy materials that coat the probe. Each relay can be set either failsafe Normally Open or Normally Closed on power loss. A bright red LED status indicator provides for visual confirmation of relay status. Also, an adjustable time delay prevents false alarms due to splashing or agitation.

- **No Moving Parts**
- **Insensitive to Material Buildup**
- **Immune to External RF Interference**
- **Liquid - Liquid Interface Detector**
- **Universal Power Supply - both AC & DC**



Technical Specification: CapSwitch 500 Series



TECHNOLOGY / OPERATION

Measuring Principle Capacitance Level Switch for Liquids and Solids

PERFORMANCE

Product Sensitivity 8 Selectable Ranges: 1, 2, 4, 6, 8, 10, 14, 20 pF (30pF Nominal Free Cap.)
 Trip Point Trips when product touches probe.
 Power Supply 12 - 240 VAC/VDC
 Power Consumption 2.8 Watts
 Response Time 0.2 seconds
 Time Delay Adjustable 0 to 60 seconds (prevents false alarms due to splashing, etc.)

OUTPUTS

Digital 2 DPDT Relays (form C), 8A @ 120/230 VAC, 5A @ 24 VDC
 Indication Red LED activates with ON (not available on EX Proof Version)

ENVIRONMENT

Temperature Range (Standard) Process: -40° to 250°F (-40° to 121°C), Head: -40° to 185°F (-40° to 85°C)
 Pressure Limit 365 psig (25 bar)
 Outdoor Rating NEMA 4X (IP 65) Weatherproof
 Static/Spark Protection 10 MEG Ohm dissipation resistance with spark gap. 100A max. surge.

DESIGN

Standard Length to Flange 19.0 inch (0.48 m)
 Custom Length to Flange User can cut probe to within 6 inches or weld on extension
 Mounting Arrangement Side or Top Mounting
 Mounting Connection Standard 3/4" MNPT, optional 1" or 1.25" MNPT (BSP available)
 Conduit Connection 1/2" FNPT Conduit Connection
 Housing Material Aluminum, Powder-coated
 Wetted Material Stainless Steel 316 and PVDF active guard
 Weight (Control Head) Approximate 4 lbs (1.8 kg)

APPROVALS

Approval General Purpose

WARRANTY

Product Warranty 1 year

Our policy is one of constant development and improvement. ECHO reserves the right to amend details as necessary. Environmental conditions can affect accuracy slightly.

PART NUMBER CONFIGURATOR													
MODEL	CapSwitch - Capacitance Level Switch	C	S	5									
CONFIGURATION	Standard NEMA4X				0								
POWER SUPPLY	12 to 240 VAC/VDC Universal					0							
OUTPUT	DPDT Rated 10A						0						
CONNECTION	3/4" MNPT (Standard)							0					
	1" MNPT							1					
	1.5" MNPT							2					
	3/4" BSPT (European Thread)							3					
	1" BSPT (European Thread)							4					
	1.5" BSPT (European Thread)							5					
EXTENDED OPTION	Standard Insertion Length 19" (can be cut to minimum 6")								L	0	1	9	
	Extended RIGID Length (316SS) - Specify in INCHES (20" to 144")								R	X	X	X	
REQUIRED													X X X X X