



CAPSWITCH 500

Process Instrumentation

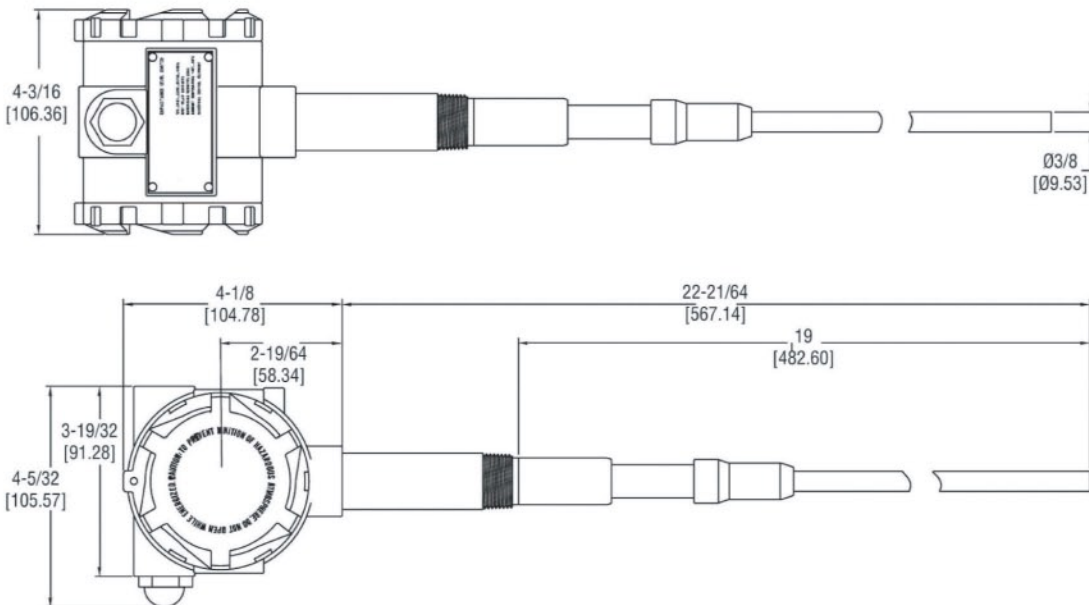
Capacitance Level Switch for Liquids and Solids.

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 Indication	2 DPDT Relays (form C), 8A @ 120/230 VAC, 5A @ 24 VDC 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	2 years

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 NEMA 4X				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