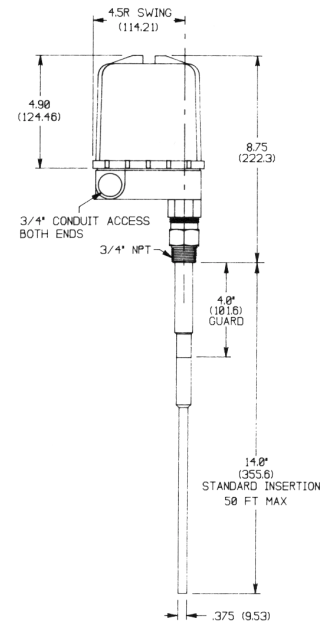
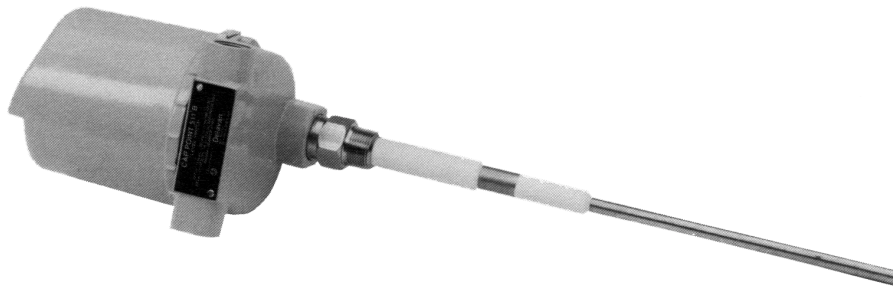




CAPTROL 511 R. F. Capacitance Point Level Switch

Engineering Specification Sheet



Product Features

- **Disregards effects of product build-up**
Build-up is ignored via the unique driven guard element on the sensing probe.
- *On board performance DVM test points*
- *Adaptable to a variety of applications*
- *Field selectable Failsafe modes*
- *Built-in static suppression*
- *Explosion proof design*
- *Adjustable Time Delay*
- *Adjustable Sensitivity*
- *Universal Power Supply - Accepts 115, 230 VAC or 24 VDC*
- *Status indication L.E.D.'s*
- Variable probe lengths
- **TWO YEAR PRODUCT WARRANTY**

Purpose

The CAPTROL 511 point level switch is designed to be the ultimate in detecting the presence or absence of various materials from powder bulk solids to most liquids. The electronics are self contained in a cast aluminum housing pre-assembled to a rugged three element sensing probe.

Principle of Operation

The CAPTROL 511 responds to a capacitance change at the Active section of the sensing element. The material to be detected must be referenced to ground potential to create a significant capacitance change. Typically the ground referencing is accomplished by threading the probe to a metallic tank which then becomes ground reference. Most non-metallic tanks require a ground pipe or plate adjacent to the active probe.

When material fills the space between the active probe and ground, a capacitance change is detected and the output relay is actuated.

Overlooks Build-up

Effects of an accumulated build-up that typically cause false signals are ignored via Delavan's driven guard element of the sensing probe.

Specifications

Supply Voltage	Nominal 115 VAC 230 VAC or 24 VDC	Absolute Limits 95-135 VAC 190-270 VAC 12-28 VDC
Power	Less than 3-Volt-Amperes	
Frequency, AC Power	60-100 Hz	
Output	Relay- 5 amp DPDT	
Ratings	5 A @ 115 VAC Non-Inductive 5 A @ 230 VAC Non-Inductive 3 A @ 24 VDC Non-Inductive	
Time Delay	Adjustable: .3 to 20 seconds	
Failsafe	Switch selectable - High Level or Low Level	
Indicators	Two, light emitting diodes (LED). RED - Illuminated when probe capacitance is greater than set point. YELLOW- Illuminated when relay is energized.	
Temperature Range		
(Electronics)	-40° to 160°F (-40° to +71° C)	
(Probes)	G.I.M.:	-40° to 300°F (-40° to +149°C)
	G.T.:	-40° to 400°F (-40° to + 204°C)
Pressure Rating	G.I.M.: Up to 125 PSI Teflon Probes: Up to 400 PSI	
Housing	Cast Aluminum	
with Fused Polyester Finish	Meets NEMA 4,5,7,9 & 12 NEC Class I Division II, Group C, D NEC Class II Division II, Group, E,F, & G	
Stability	<u>2.2mv</u> or <u>0.02 pf</u> (TP3 &TP4) °C °C	
Sensitivity	0.5 pF to 30 pF Bulk solids - 10 lbs/cu. ft. and greater Liquids- 1.5 dielectric constant and greater	

Ordering Information

CAPTROL

511 - _____ - _____ - _____ - _____

Special Features

X = No special features
H = High Temperature
 Lagging ext. (>200° F)
L = External alarm indicator
90° = 90° downward bend
 on probe active section

Process Mounting (specify size)

NPT = Nat'l pipe thread process connection
3A = Food-grade Tri-Clover fitting
T3A = Teflon faced food-grade Tri Clover
 fitting (specify size)
K3A = Kynar faced food-grade Tri-Clover
 fitting (specify size)
FC = Flange C.S. (specify size)
FSS = Flange 316 SS (specify size)

Sensing Probe Type (specify length)

GIM = (Standard, 14" Injection Molded S.S./Polysulfone)
GT = (18" Standard, 18" or less S.S./Teflon)
GFC = (GIM w/ S.S. Flexible Cable - Max. 6 ft.)
GC = (High Temperature, plasma/ceramic - Max. 750° F)
GAR = (Abrasion Resistant, S.S. protective sheathing)
GTH = (Teflon w/ Hastelloy wetted parts, 36" or less)

Enclosure Type

G = General Purpose
H = Hazardous Locations

Model 511-B R.F. Capacitance Point Level Switch

TWO-YEAR PRODUCT WARRANTY

Delavan control products will be replaced, put in good operating condition, or the purchase price refunded, at the option of Delavan, free of charges except transportation, if defective in their manufacture, labeling, packaging, or shipping, and if notice of said defect is received by Delavan within two years from the date of shipment. The cost of such replacement, repair or refund or purchase price shall be the exclusive remedy for any breach of any warranty, and Delavan shall not be liable to any person for consequential damages for injury or commercial loss resulting from any breach of any warranty of fitness for a particular purpose, and makes no other warranty, express or implied, including implied warranty arising from course of dealing or usage of trade.



DELAVAN

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