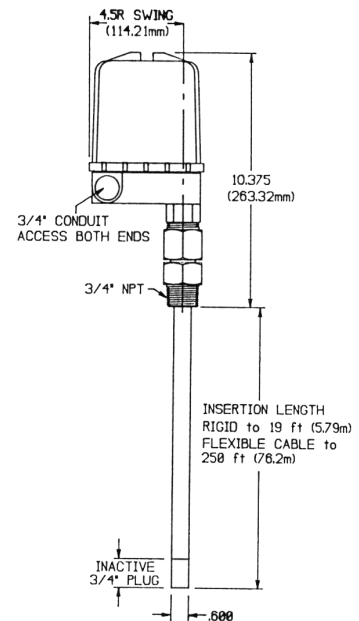




CAPTROL 510 R. F. Capacitance Adjustable "Dual-Point" Switch

Engineering Specification Sheet



Product Features

- Universal Power Supply - Accepts 115, 230, VAC, or 24 VDC
- Built-in "coating rejection" designed to eliminate false signals caused by material build-up/coating.
- Field selectable Failsafe modes
- Adjustable Time Delay
- Built-in static suppression
- Pump control with adjustable set points over full length of sensing probe.
- Status indication L.E.D.'s
- General purpose & explosion proof design
- 3/4" N.P.T. & Flange mounting
- Sensing Probe lengths to 250 feet
- Many probe options/materials
- *Independent set point and differential adjustments.*
- *TWO YEAR PRODUCT WARRANTY*

Purpose

Delavan's CAPTROL 510 is an adjustable on/off R.F. Capacitance switch with up to 2 independently adjustable non-interacting set points. It may be used in powder bulk solids and liquid applications.

Principle of Operation

The CAPTROL 510 system consist of a solid state "Failsafe" electronics mounted in an explosion proof enclosure and a sensing probe.

The probe is energized with a R.F. signal (approx. 2MHZ). When the process level changes a change of capacitance occurs resulting in a change in frequency. This change is compared with preset values and after amplification is used to actuate up to 2 relays.

Multi-turn potentiometers are used for set-point and differential calibration. An important feature of the CAPTROL 510 is the set-point and differential adjustments are non-interacting and are independent of each other.

Pump Control

Delavan's two setpoint operation off of one relay allows our CAPTROL 510 to be used as pump control. One setpoint turns off a pump and the second setpoint (which is adjustable over the entire length of the sensing probe) is used to turn a pump on. Both function with only one relay.

Specifications

Supply Voltage	Nominal	Absolute Limits
	115 VAC	95-135 VAC
	230 VAC	180-270 VAC
	or	
	24 VDC	18-28 VDC
Power	Less than 3 Volt-Amperes	
Frequency, AC Power	50-60 Hz	
Output	Relay up to 2 form C DPDT Contacts	
Ratings	5A @ 115 VAC Non-Inductive	
	2.5 A @ 230 VAC Non-Inductive	
	3A @ 26 VDC Non-Inductive	
Time Delay Standard Option	0.5 Second on Make	
	Variable 50 milliseconds to 10 seconds	
Failsafe	Switch selectable - High Level or Low Level	
	High Level Failsafe Position: Relay is de-energized when liquid is present.	
	Low Level Failsafe Position: Relay is de-energized when liquid is not present	
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)	
Housing	Meets NEMA 4, 5, 7, 9 & 12	
	Cast Aluminum with Fused Polyester Finish	
	NEC Class II Groups E, F & G	
Stability	0.01%/°F	
Sensitivity	0.5 pF or less, i.e. 1% of base capacitance up to 100pf	
Other Features	Set point and different adjustments	
	are completely independent of each other.	

Ordering Information

CAPTROL

510 - - - - -

Special Features

X = No special features
H = High Temperature Lagging ext. (>200 °F)

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)

THD	TF
KHD	KF
TCP	DWW
TCT	THDD
BF	KHDD
T	BHS
BHT	

*Note: For BF, TF, and KF probes anchoring assembly is required

Enclosure Type

G = General Purpose
H = Hazardous Locations (See Note 1 below)

Electronic Control Options

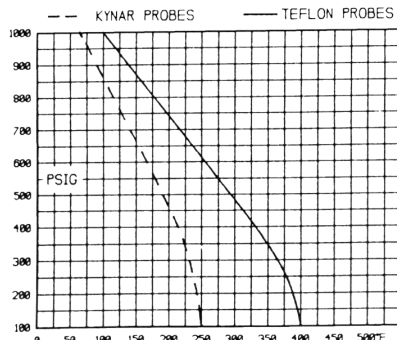
1 = 1 independently adjustable relay
2 = 2 independently adjustable relays

Model 510 Adjustable "Dual-Point" R.F. Capacitance Point Level Switch

NOTE 1: CSA approved for Class I, Groups C and D, Class II, Groups E, F and G, Divisions 1 and 2 Pending Cenelec approval for EEx d IIC T6 locations.



TEMPERATURE AND PRESSURE RATINGS



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
Process Instrumentation
an L & J TECHNOLOGIES Company

5911 Butterfield Rd.
Hillside, IL 60162
PH: (708) 236-6000
FAX: (708) 236-6006
E-MAIL: sales@ljtechnologies.com