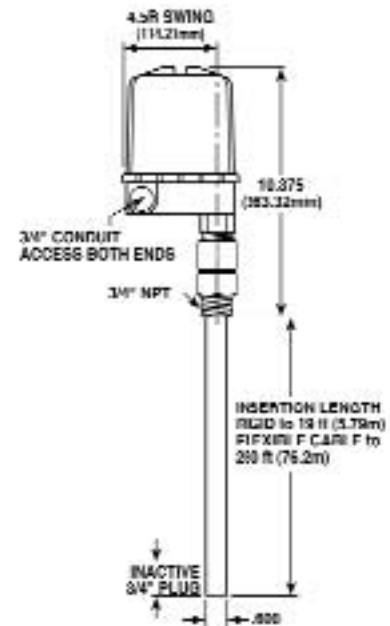


CAPTROL 514

DATA SHEET

R.F. Capacitance Multi-Point Level Switch



FUNCTION

Delavan's Captrol 514 is a superior integral mount Microcontroller Based R.F. Capacitance "Multi-Point" Level Switch used in liquids and powder bulk solid applications.

PRINCIPLE OF OPERATION

The Captrol 514 Microcontroller Based Multi-Point Level Switch consists of solid state electronics mounted in a cast aluminum explosion proof enclosure. The integral unit utilizes a driven guard designed to eliminate the effects of material build-up or coatings that may cause false signals.

The sensing element section is energized with a R.F. (radio frequency) signal approximately 2MHz. When the process level changes, a change in capacitance occurs resulting in a change in frequency. The change in frequency is compared to each of the previously established user set-points. Depending upon the result of these comparisons, the microcontroller will adjust (on or off) each relay.

FEATURES

- On board Microcontroller
- Built-in system "Auto-Test"
- Built-in "Self Diagnostics"
- Easy to read 8 character Alpha Numeric LED display
- RS 485 communication data-link
- Removable terminal strip
- 4 independently selectable fail-safe modes
- 4 independently selectable time-delay modes
- Menu driven keypad user interface
- Built-in driven shield/guard designed to eliminate false signals caused by material build-up/coating
- 4 independently adjustable set-points/differential set-points
- 4 set-point status LED's
- 4 relay status LED's



SPECIFICATIONS

Supply Voltage	NOMINAL	ABSOLUTE LIMITS
	115 Volts AC	95-135 Volts AC
	230 Volts AC	180-270 Volts AC
	24 Volts DC	18-28 Volts DC
Power	Less than 12 volt-amperes	
Frequency, AC Power	50-60 Hz	
Output	(4) Relay - 5 amp SPDT	
Ratings	5 amp @ 115 Volts AC Non-inductive 2.5 amp @ 230 Volts AC Non-inductive 3 amp @ 26 Volts AC Non-inductive	
Time Delay	Adjustable: .1 to 30 seconds	
Fail-safe	Programmable: High Level or Low Level	
Display/Indicators	8 character Alpha Numeric: (4) Red set-point status LED's (4) Yellow relay status LED's (1) Green power status LED	
Temperature Range Electronics —	-40°F to +160°F (-40°C to +71°C)	
Housing Cast Aluminum with Fuse Polyester Finish	Meets NEMA 4, 5, 7, 9, 12; NEC Class I — Groups C, D; NEC Class II — Groups E, F, G	
Stability	0.01%/°F	
Sensitivity	0.5 pF to 25,000 pF Bulk solids - 10 lbs./cu. ft. and greater	

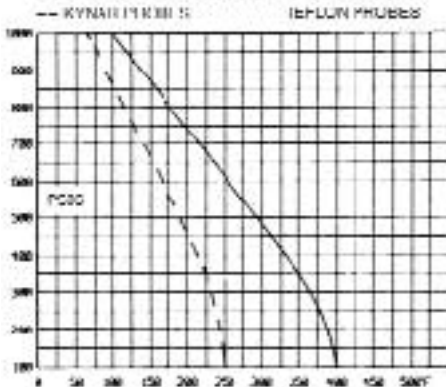
ORDERING INFORMATION

CAPTROL

514-	<p>Special Features</p> <p>H = High Temperature 12" Lagging Ext. (> 200°F)</p> <p>I = Integrated</p> <p>R10 = Remote Unit, Includes 10 ft Cable, 1" Flange, Enclosure</p> <p>00 = None</p> <p>Process Mounting</p> <p>NPT = Nat'l Pipe Thread Process Connection</p> <p>3A = Food-grade Tri-clover Fitting</p> <p>T3A = Teflon Faced Food-grade Tri-clover Fitting (specify size)</p> <p>K3A = Kynar Faced Food-grade Tri-clover Fitting (specify size)</p> <p>FC = Flange C.S. (specify size)</p> <p>FSS = Flange 316 Stainless Steel (specify size)</p> <p>Sensing Probe Type</p> <p>THD = Teflon Insulated Heavy Duty 1/2"</p> <p>KHD = Kynar Insulated Heavy Duty 1/2"</p> <p>TCP = Teflon Probe with Concentric Pipe and Flange</p> <p>TCT = Teflon Probe with Concentric Tube 3/4" N.P.T.</p> <p>BF = Bare Flexible Cable</p> <p>T = Teflon Insulated 1/4"</p> <p>BHT = Bare Probe - High Temperature Packing</p> <p>TF = Teflon Insulated Flexible Stainless Steel Cable</p> <p>KF = Kynar Insulated Flexible Stainless Steel Cable</p> <p>DWW = Polypropylene Flex Probe, 1/8" Cable, 3/4" N.P.T.</p> <p>THDD = Teflon Heavy Duty Dual Probe with 1/2" and 1/4" Teflon Insulated Probes with 3" Teflon Faced Flange.</p> <p>KHDD = Kynar Heavy Duty Dual Probe with 1/2" and 1/4" Kynar Insulated probes with 3" Kynar Faced Flange.</p> <p>BHS = Bare Probe - High Sensitivity</p>
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Model 514 Four point R.F. Capacitance Point Level Switch

TEMPERATURE AND PRESSURE RATINGS



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