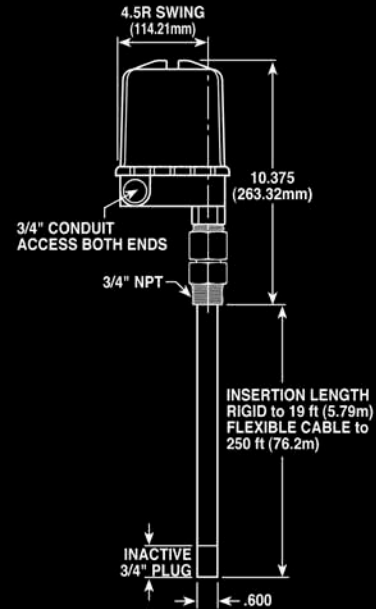


CAPTROL 514

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

DELAVAN

Process Instrumentation

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-

Special Features

- H = High Temperature
12" Lagging Ext. (> 200°F)
- I = Integrated
- R10 = Remote Unit, Includes 10 ft Cable,
1" Flange, Enclosure
- 00 = None

Process Mounting

- 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 Stainless Steel
(specify size)

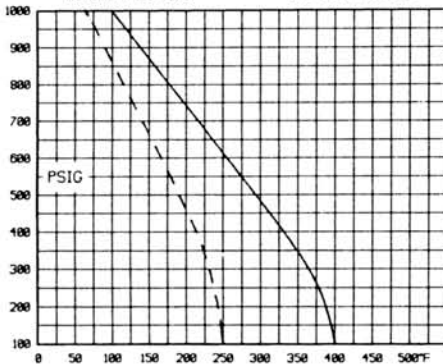
Sensing Probe Type

- THD = Teflon Insulated Heavy Duty 1/2"
- KHD = Kynar Insulated Heavy Duty 1/2"
- TCP = Teflon Probe with Concentric Pipe
and Flange
- TCT = Teflon Probe with Concentric Tube
3/4" N.P.T.
- BF = Bare Flexible Cable
- T = Teflon Insulated 1/4"
- BHT = Bare Probe - High Temperature Packing
- TF = Teflon Insulated Flexible
Stainless Steel Cable
- KF = Kynar Insulated Flexible
Stainless Steel Cable
- DWW = Polypropylene Flex Probe,
1/8" Cable, 3/4" N.P.T.
- THDD = Teflon Heavy Duty Dual Probe with
1/2" and 1/4" Teflon Insulated Probes
with 3" Teflon Faced Flange.
- KHDD = Kynar Heavy Duty Dual Probe with
1/2" and 1/4" Kynar Insulated probes
with 3" Kynar Faced Flange.
- BHS = Bare Probe - High Sensitivity

Model 514 Four point R.F. Capacitance Point Level Switch

TEMPERATURE AND PRESSURE RATINGS

-- KYNAR PROBES — TEFLON PROBES



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