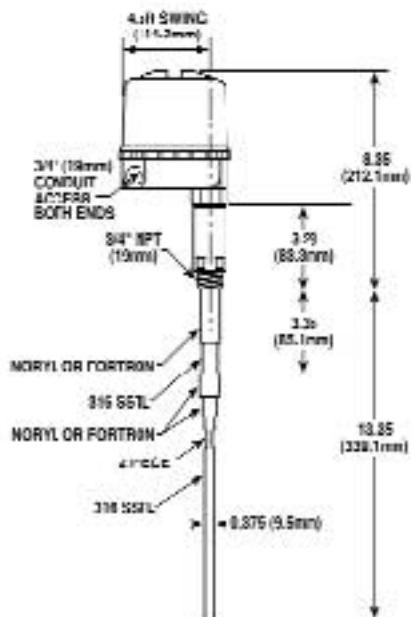


# CAPTROL 500



500 Integral



## DATA SHEET R.F. Capacitance Integral or Remote



500-R10 Remote Electronics

### ■ PURPOSE

Delavan's Captrol 500 is a cost effective Microcontroller Based R.F. Capacitance On/Off Switch used in powder bulk solid and liquid applications.

### ■ "ONE-TOUCH" BUTTON CALIBRATION

With the utilization of our Microcontroller and Delavan's unique Auto-Cal algorithm, calibration is accomplished with a momentary touch of a button. No special tools, complicated procedures or valuable time is needed.

### ■ PRINCIPLE OF OPERATION

The Captrol 500 Microcontroller Based Point Level Switch consists of solid state electronics mounted in a cast aluminum explosion proof enclosure. The rugged sensing element utilizes a driven guard designed to eliminate the effects of material build-up or coatings that may cause false signals.

The sensing element's "active" 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. This change in frequency is compared to a preset value and after amplification the signal is used to actuate a relay.

### ■ FEATURES

- Integral or remote mount electronics
- On-board microcontroller
- One-touch button calibration
- Built-in "self diagnostics"
- Built-in driven shield/guard  
Designed to eliminate false signals caused by material build-up or coatings
- Universal power supply  
115, 230 Volts AC or 24 Volts DC
- Status Indication LED's
- Adjustable sensitivity
- Adjustable time delay
- Field selectable Fail-Safe modes
- Built-in static suppression
- Explosion proof design
- 3/4" stainless steel N.P.T. and flange mounting

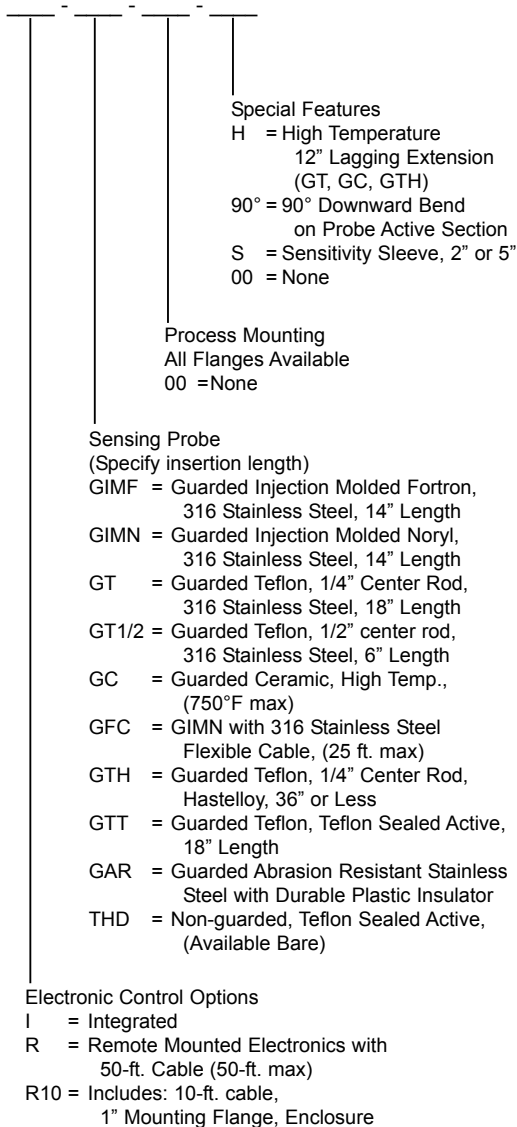


## ■ SPECIFICATIONS

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 Consumption	Less than 3 volt-amperes	
Frequency, AC Power	50-60 Hz	
Output	Relay-5 amp DPDT	
Ratings	5 amp @ 115 Volts AC Non-inductive 5 amp @ 230 Volts AC Non-inductive 3 amp @ 26 Volts AC Non-inductive	
Time Delay	Adjustable: .1 to 30 seconds	
Fail-safe	Switch Selectable: High Level or Low Level	
Indicators	Two light emitting diodes (LED): GREEN - Illuminated when probe capacitance is greater than set point RED - Illuminated when relay is energized	
Temperature Range	Electronics — -40° to 160°F (-40° to +71°C) Probes — G.I.M.F.: -40° to 450°F (-40° to +232°C) G.I.M.N.: -40° to 300°F (-40° to +149°C) G.T.: -40° to 450°F (-40° to +232°C)	
Pressure Rating	G.I.M.F. and G.I.M.N.: Up to 500 psi Teflon Probes: Up to 400 psi	
Housings	Cast Aluminum with Fused Polyester Finish	
	Meet NEMA 4, 5, 7, 9, 12; NEC Class I - Groups C, D; NEC Class II - Groups E, F, G	
Stability	0.01%F	
Sensitivity	Adjustable 0.5 pF to 10 pF Bulk solids - 10 lbs./cu. ft. and greater Liquids - 1.5 Dielectric constant and greater	

## ■ ORDERING INFORMATION

### CAPTR0L 500



CSA Approved for NEC Class I - Groups C, D;  
NEC Class II - Groups E, F, G;  
Divisions 1 & 2 When Used with THD or KHD Probe  
CSA Approved for Ord. Loc.

**DEHAVAN** Process Instrumentation  
an  Company

Hillside, IL 60162  
Ph: (708) 236-6000  
Fax: (708) 236-6006  
Email: sales@ljtechnologies.com

