



CAPTROL 500

R.F. Capacitance

Integral or remote point level switch



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.



ELECTRONIC
EQUIPMENT

ACOUSTIC

WEIGHING

ANTI-TILTING

VALVES

TEMPERATURE

DETECT
A FIRE®

FLOW/
RATE

DENSITY

INTERFACE

PRESSURE

LEVEL

Purpose

Terry Ferraris'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 Terry Ferraris'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 NPT and flange mounting

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Specifications

Supply Voltage	NOMINAL	115Volts AC	230Volts AC	24Volts DC
	ABSOLUTE LIMITS	95-135Volts AC	180-270Volts AC	18-28Volts DC
Power Consumption	Less than 3VA			
Frequency, AC Power	50-60Hz			
Output	Relay 5A DPDT			
Ratings	5A @ 115 VAC non-inductive 5A @ 230 VAC non-inductive 3A @ 26 VAC non-inductive			
Time Delay	Adjustable 0.1 to 30 seconds			
Fail-Safe	Switch Selectable High Level or Low Level			
Indicators	Two 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. & G.I.M.N.: Up to 500psi Teflon Probes: Up to 400psi			
Housings	Meet NEMA 4, 5, 7, 9, 12			
Cast Aluminum with Fused Polyester Finish	NEC Class I - Groups C, D NEC Class II - Groups E, F, G			
Stability	0.01%F			
Sensitivity	Adjustable 0.5pF to 10pF Bulk Solids - 10 lbs/cu. ft and greater Liquids - 1.5 Dielectric constant and greater			

Dimensions



