

NEW
Model 188CPS

Capacitance Point Sensing Level Instrument



Model 188CPS Features

The American Magnetics Inc. (AMI) Model 188 CPS Point Sensing Instrument system is designed to provide point level sensing for up to five (5) points for virtually any non-conducting liquid or solid. This rugged microprocessor-based unit can operate with a variety of custom sensor configurations to suit almost any application. The Model 188CPS is a fast response alternative to point temperature sensors, and when combined with a linear capacitance sensor, offers a level of redundancy for critical applications.



Capacitance-Based Point Sensing of Liquids or Solids

The system consists of a Model 188CPS Point Sensing Instrument, plate sensor(s), in-line oscillator transmitter(s) and connecting cables. The point sensing elements for liquids are typically rugged parallel stainless steel plate capacitors which are mounted horizontally on a stainless steel support tube. Signal cables are routed through an electrical connector on a top flange or other feedthrough arrangement. A typical sensor arrangement for liquids is shown to the left. The plate capacitors allow a non-conducting liquid or solid to become the dielectric between the plates. The instrument measures the plate capacitance which is directly related to the amount of media between each plate set.

The plate sensors used for liquids are normally constructed in diameters of 3.5" to 5", however, custom designs which require smaller diameter tank penetrations can be provided for specific needs. Up to five plate sensors can be monitored by a single Model 188CPS instrument. The support tube may also function as a cylindrical capacitor which may be used for continuous level measurement using a separate AMI level instrument. Point sensors for solids measurement are typically oriented with a vertical gap that is much wider than that used for liquids. This allows the bulk material to easily flow into and out of the plates. This system is ideal for multiple hopper level indications.

Simple Operation

The instrument is equipped with five tricolor LED's which provide positive indication of immersed or exposed state for each point, as well as providing fault indications (open circuit, uncalibrated). No user input is required for normal operation of the instrument. The Model 188CPS provides five relay contact pairs available through a terminal block located on the rear panel. When a plate sensor is immersed in the non-conducting media, the respective relay contact pair closes. With additional cable the instrument can accurately monitor levels from over 500 feet away from the sensor.

Model 188CPS Specifications

Measurement Type:	Capacitance
Typical Accuracy:	± 0.25 inches
Display:	Tricolor LED
Relay contacts:	
Max Switching	10 VA, 200 VDC, 0.5 A
Continuous	1.5 A
Input Power:	100-120 or 200-240 VAC, 50-60 Hz
Dimensions:	3.8" H x 8.4" W x 11.1" D
Weight:	4.9 lbs.
Available Options	Rack Mounting



Rear View of Model 187 Instrument



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