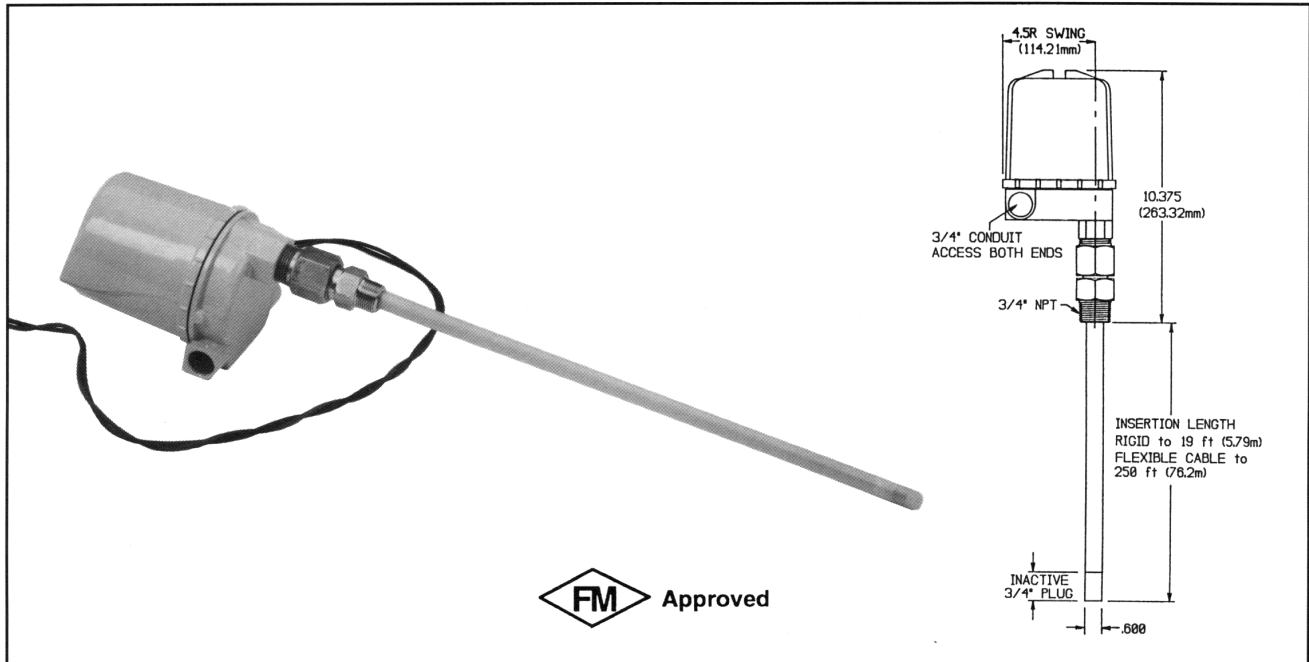




CAP ANALOG 4100 R. F. Capacitance Two-Wire Transmitter

Engineering Specification Sheet



Product Features

- True "two-wire" 24 VDC operation
- Built-in immunity to process build-up/coatings
- Switch selectable reversible output 4-20 mA or 20-4mA
- Completely adjustable
- One time "zero-cal" function test
- 1 mile twisted pair separation
- Easy access NEMA 7, 9 enclosure
- Economical and cost effective
- Self contained integral electronics
- Sensing probe lengths to 250 ft.
- TWO-YEAR PRODUCT WARRANTY

Purpose

Delavan's CAP ANALOG 4100 is a cost effective "two-wire" R. F. Capacitance transmitter used in powder bulk solids, liquids and slurry applications.

True "Two-Wire" Operation

The CAP ANALOG 4100 is a superior two-wire transmitter. Maintenance and installation expense are eliminated due to not needing line power; the same two-wires which power the 4100 also transmits its output signal.

Principle of Operation

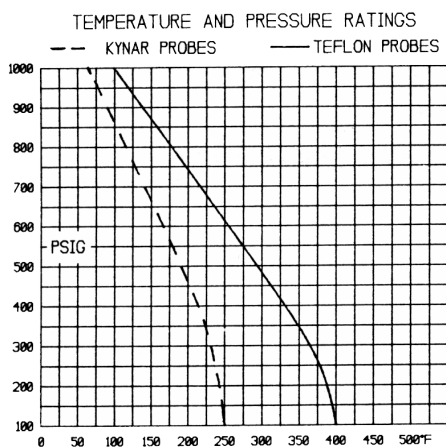
The CAP ANALOG 4100 system consists of an electronic amplifier mounted in a cast aluminum explosion proof housing. This housing normally is integrally mounted on the top of the probe. The unit is powered by a remote 24 DC power supply supplied by Delavan or the user.

The CAP ANALOG 4100 along with its probe sensor operates as a capacitance system that converts changes in level to changes in output signal. After calibration any change in level is recognized and converted to an analog output 4-20mA signal. The system will operate any loop powered 4-20 mA DC indicator.

The CAP ANALOG 4100 is supplied with two 20 turn, ZERO and SPAN adjust potentiometers. A switch and memory calibration potentiometer is provided. DIP switches are provided to extend the range of zero reverse output so that output is 20-4 instead of 4-20mA DC.

Specifications:

Input Voltage	24 VDC	600 ohm @20mA
	18 VDC	300 ohm @20mA
	13 VDC	50 ohm @20mA
Power	Less than 2-Volt-Amperes	
Output	4-20mA DC 600 ohms max. w/24 VDC power supply	
Reverse output	Switch Selectable- 20-4mA DC 600 ohm max.	
Maximum Transmission Distance	One mile or limited only by loop resistance	
Dielectric Constant Range	1.5 dielectric values to 80 dielectric values	
Immunity	Immune to build-up of conductive liquids	
Span(pfd)	Range 1	Range 2
	Min 15	Min 60
	Max 100	Max 600
	Range3	Range 4
	Min 400	Min 2500
	Max 4000	Max 30,000
Temperature Range (Electronics)	-40° to +160°F (-40° to +71°C)	
Housing		
Cast Aluminum with Fused Polyester Finish	Meets NEMA 4,5,7,9 & 12 NEC Class I Groups C, D NEC Class II Groups E, F, & G	



Ordering Information

CAP-ANALOG

4100 - _____ - _____ - _____ - _____

Special Features

X = No special features
H = High Temperature
Lagging ext. (>200° F)

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 SS (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" NPT
BF = Bare Flexible Cable
T = Teflon Insulated 1/4"
BHT = Bare Probe - High Temperature Packing
TF = Teflon Insulated, Flexible SS Cable
KF = Kynar Insulated Flexible SS Cable
DWW = Polypropylene Flex Probe, 1/8" cable, 3/4" NPT
THDD = Teflon Insulated with Insulated Ground Reference 3" Flange
KHDD = Kynar Insulated with Insulated Ground Reference 3" Flange
BHS = Bare Probe - High Sensitivity

Enclosure Type

G = General Purpose
H = Hazardous Locations

Model 4100 R.F. Capacitance "Two-Wire" Continuous Transmitter



TWO-YEAR PRODUCT WARRANTY

Delavan control products will be replaced, put in good operating condition, or the purchase price refunded, at the option of Delavan, free of charges except transportation, if defective in their manufacture, labeling, packaging, or shipping, and if notice of said defect is received by Delavan within two years from the date of shipment. The cost of such replacement, repair or refund or purchase price shall be the exclusive remedy for any breach of any warranty, and Delavan shall not be liable to any person for consequential damages for injury or commercial loss resulting from any breach of any warranty of fitness for a particular purpose, and makes no other warranty, express or implied, including implied warranty arising from course of dealing or usage of trade.



DEHAVAN
Process Instrumentation
an L & J TECHNOLOGIES Company

5911 Butterfield Rd.
Hillside, IL 60162
PH: (708) 236-6000
FAX: (708) 236-6006
E-MAIL: sales@ljtechnologies.com