

Capvel LP - 2 Wire Loop Powered Capacitance Level Transmitter

Version 2.1

Capvel is suitable for continuous level measurement and controlling conductive and non-conductive liquids, granular materials of homogeneous composition that have stable dielectric constant.

Principle

It consists of an electronic insert and a probe. The probe comprises sense and ground electrodes (reference probe in absence of metallic tank). The probe is mounted on top of the tank. The sense electrode and the tank's wall serve as the two electrodes of an imperfect capacitor with service material acting as the dielectric. Change in material level causes a change in the capacitance of this capacitor. The electronic insert measures this change of capacitance accurately & shows the result in mA.



Approvals BIS, CCOE, CE Marking, RoHS Compliance, Flameproof Enclosure (Gas Groups IIA, IIB, IIC)

Features

- Internal temperature compensation
- Extrapolated calibration range (from any two points)
- Suitable for a wide range of liquids
- Low cabling cost
- Self-diagnosis of error conditions during operation
- 3 digit LCD display

Applications

- Chemical Industry
- Vehicle Tracking
- DG sets (Telecom)
- Water treatment plants
- Edible Oil
- Distilleries

Parts

The parts of Capvel LP are explained in Figure 2. All dimensions are in millimeters. Figure 1 explains the mounting arrangement for Capvel LP. The different application media catered by Capvel LP are demonstrated in Figure 3.

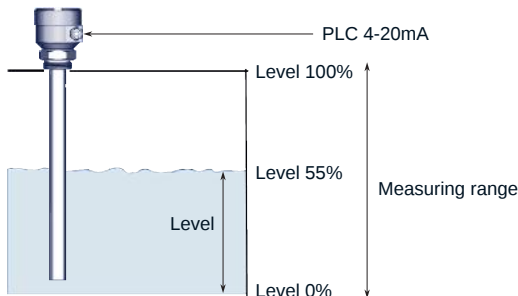


Figure 1: Mounting Arrangement for Capvel

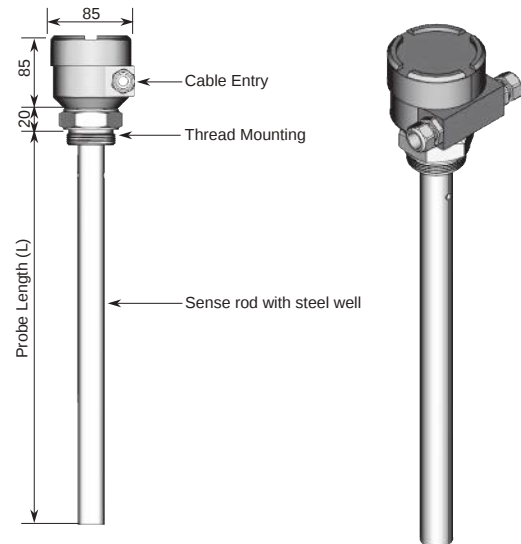


Figure 2: Parts of Capvel

Manufacturing Level Instruments & Speed Monitoring Systems

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Technical Specifications

Mechanical

Housing:	Cast aluminum weatherproof, flameproof
Mounting:	Threaded: 1 - 1.5" BSP/NPT (M) Flanged: As per specification Material: MS (Plated)
Cable Entry:	2 X 1/2" BSP / NPT, Brass
Gland Type:	Single / Double compression gland / PG 13.5
Probe Length:	Standard: 100 mm Extended (Rod): Up to 3000 mm Extended (Rope): Up to 10 meter

Probe:

Metallic Tank:	
Rod Type:	Sense Rod (SS), Full PTFE
Rope Type:	Single Rope, Full / Part PTFE
Non-metallic Tank:	
Rod Type:	Sense Rod (SS), Full PTFE Still Well (GI / SS)
Rope Type:	Twin rope, Full / Part PTFE

Electrical

Indication:	2 LED's for Fault Indication & Calibration
Input Supply:	24-50 V DC at 750 ohm
Current Consumption:	20 mA maximum
Output:	Analog (4 - 20mA)
Temperature:	Standard Model: 0°C to 80°C High Temperature Model: up to 300°C for non-conductive media
Internal Enclosure:	ABS

Measurement

Measurement Span:	15 to 10,000 pf above zero
Response Time:	2 sec. (typical)
Accuracy:	Adjustable, +/- 2% of full scale

Why Sapcon

- Sapcon – Synonymous with Level Measurement.
- Pioneers in this field with over 32 years of expertise.
- Understanding your problems, always ready with solutions.
- Masters in customization.
- Offering accelerated delivery, saving your inventory costs.

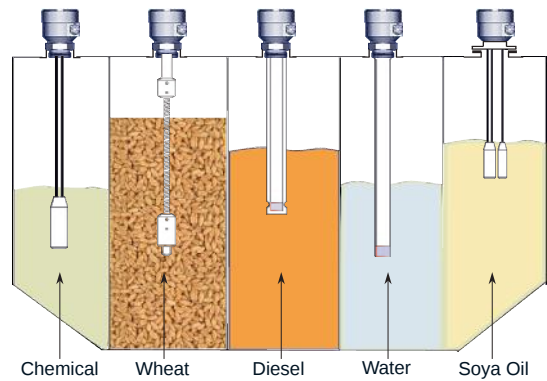


Figure 3: Application Media Catered by Capvel

Model Selection

CAPVEL LP-2 WIRE

ENCLOSURE

- R- WEATHER PROOF ROUND
- FA- FLAMEPROOF (GAS GROUPS IIA & IIB)
- FC- FLAMEPROOF (GAS GROUPS IIA, IIB & IIC)

TEMPERATURE

- S- STANDARD TEMPERATURE UPTO 80°C
- H1- HIGH TEMPERATURE MAX 150°C
- H2- HIGH TEMPERATURE 200°C
- H3- HIGH TEMPERATURE UPTO 300°C

POWER SUPPLY

- D- 24-50 V DC

SENSE / EXTENSION ELEMENT TYPE

- RP- PART INSULATED ROD PROBE
- RF- FULL INSULATED ROD PROBE
- FP- PART INSULATED FLEXIBLE ROPE PROBE
- FF- FULL INSULATED FLEXIBLE ROPE PROBE

PROBE MOUNTING ARRANGEMENT

- T- THREADED
- F- FLANGED
- O- OTHER

PROBE INSULATION MATERIAL

- P- PTFE
- C- CERAMIC
- O- OTHER

PROBE LENGTH

- PL- STANDARD PROBE
LENGTH 100 mm
- PX- EXTENDED PROBE
LENGTH (100-3000 mm)



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