

The Need For Every
Process Industry

SPINK CONTROLS

®

An ISO 9001:2008 Certified Company



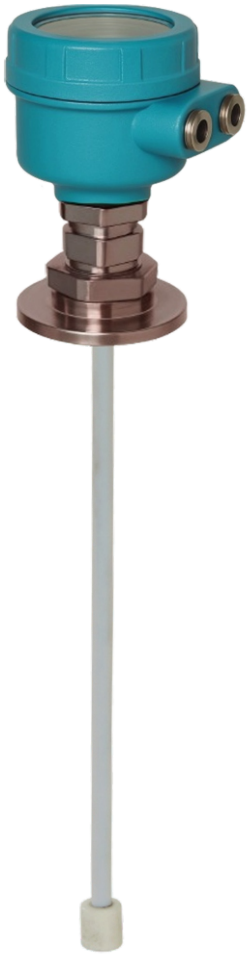
CAPACITANCE TYPE LEVEL TRANSMITTER

MODEL: SC / L - 700

LEVEL

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Spink Controls' ELTRAN – a new-generation capacitance-type level transmitter designed for accurate measurement of a wide range of liquids. These transmitters operate on the fundamental principle of capacitance, where the sensor is selected based on the conductivity and properties of the liquid.

Working Principle: It comprises an electronic module and a probe. The probe includes sensing and grounding electrodes (a reference electrode is used if the tank is non-metallic). It is installed at the top of the tank. The sensing electrode and the tank wall (or reference electrode) form a variable capacitor, with the process material acting as the dielectric medium. As the material level changes, the capacitance also changes, given by:

$$C = \epsilon \times \frac{A}{d}$$

Where:

C = Capacitance

ε = Permittivity of the material

A = Area of the electrodes

d = Distance between electrodes

This change is detected by the electronic module and converted into a corresponding mA output.



ENGINEERING SPECIFICATION

TRANSMITTER TYPE	: LOOP POWERED
SUPPLY VOLTAGE	: 12 TO 24 V DC
OUT PUT	: 4-20mA (AT CONSTANT LOAD ≤ 500 Ω)
RESOLUTION	: 2mm
RESPONSE TIME	: < 2 SECONDS
PERMISSIBLE LOAD	: 600 Ω @ 24 VDC
ACCURACY	: ± 0.25% FSR
PRESSURE RATING	: 6 kg/cm ²
TEMPERATURE RANGE	: -20 to 100°C
CABLE ENTRY	: 3/4" ET
ENCLOSURE	: FLAMEPROOF WEATHERPROOF DIE-CAST Aluminium : Ex db IIA IIB T6 Gb IP 67 & IP 68
DISPLAY	: 4-DIGIT, 7-SEGMENT LED
OPTIONAL FEATURE	: HEAT SINK FOR TEMPERATURES ABOVE 100°C, REMOTE INDICATOR



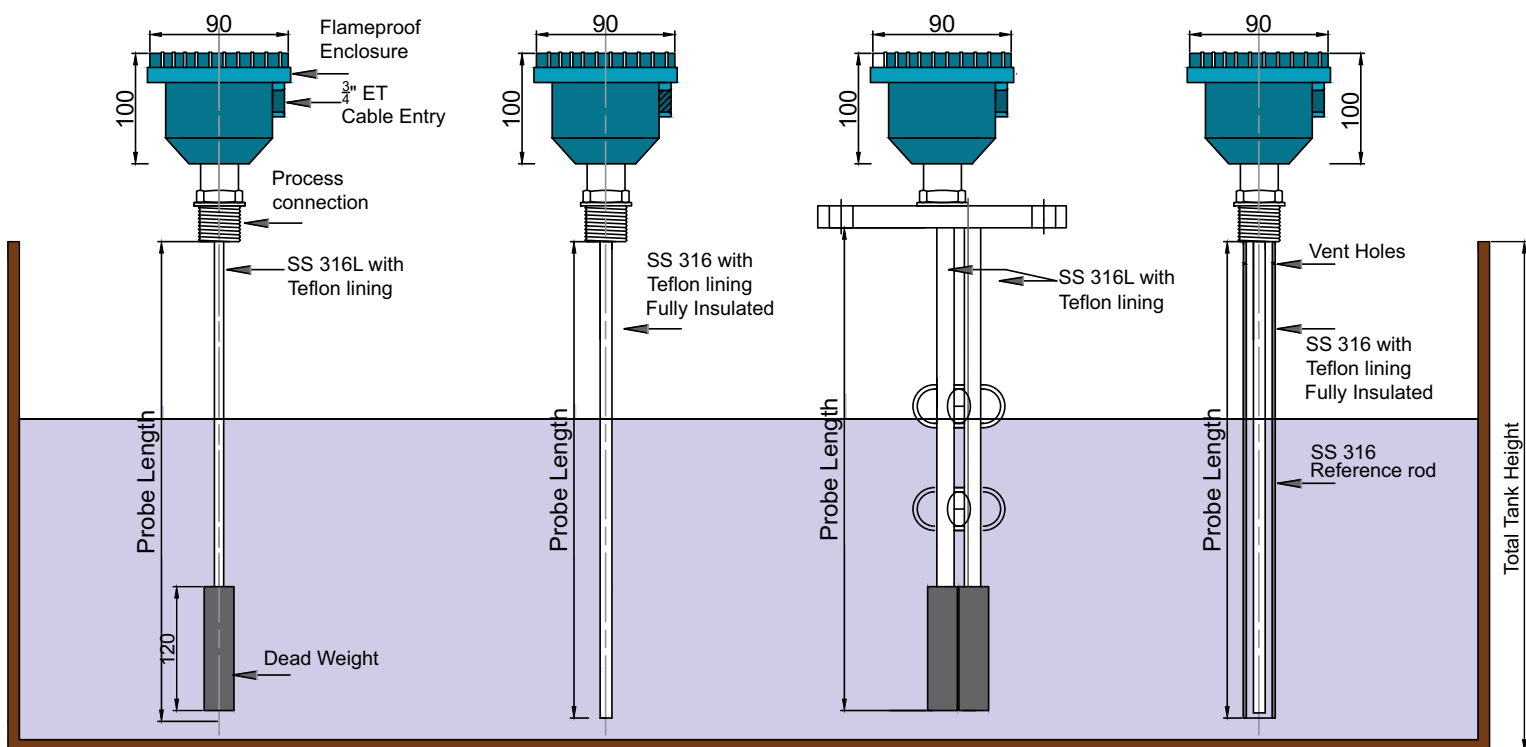
MODEL SELECTION BASED ON APPLICATION

SC/L-701

SC/L-702

SC/L-703F

SC/L-703R



Flexible Type ELTRAN (SC/L-701)

Simplest model with range **1500 mm to 15000 mm** for conductive liquids in conductive tanks.

Rugged type ELTRAN (SC/L-702)

Strong and durable model for harsh environments with level range **upto 2000 mm**.

ELTRAN with Reference Probe (SC/L-703F & SC/L-703R)

Designed to provide stable grounding and accurate readings for **non-conductive liquids** (e.g., fuels) or **non-conductive tanks** (e.g., plastic, FRP)

Available in both:

- Flexible Type (SC/L-703F)
- Rugged Type (SC/L-703R)

MODEL CODING

Suffix Code	1	2	3	4	5	6	7	8	9	10	11	12	13	Parameters
Model	L-701													Flexible probe
	L-702													Rugged probe
	L-703													Flexible with reference probe
	L-704													Rugged with reference probe
Conductivity	A													Conducting
	B													Non-Conductivity (Reference probe)
Digital Indication	IN													With display
	INX													Without display
Electrical Housing	1													Die-cast aluminium: Ex db IIA / IIB T6 Gb IP 67
	2													Die-Cast aluminium: IP 68
Sensor Probe MOC	SS													SS316 with Teflon Line
	AL													Aluminum (Only for Diesel/ Oil application)
Process Connection	TC													Tri Clover End
	F													Flanged ANSI B16.5
	TH													Threaded (BSP or NPT)
	SF													Special Bottom Fitting Plate (Only for Diesel & Oil Application))
Process Connection size								XX						On request(15 - 100 NB)
Process Connection MOC	C1													SS304
	C2													SS316
	C3													SS316L
	C4													PP
	C5													MS
	C6													SS316 WITH PTFE coated
	XX													Other on Request
Dead Weight (for SC/L-701 Only)	29													29 mm
	34													34 mm
	-													Not Applicable
Power Supply& Output	SO1													24VDC & 4-20mA Output
	SO2													24VDC & 0-5 VDC
	SO3													24VDC & 0-10 VDC
	SO3													24 VDC Supply & RS 485
	SO5													24VDC & RS232 (TTL)
Probe Length											XX			100 - 1500 mm (Rugged),1500-15000 mm (Flexible)
Heat sink (Above 100 Deg. C)												HS		with Heat Sink
												WH		Without Heat Sink
Digital Process Controller for Remote indication (SC/L- 1101) - Optional												WD		Required
												WOD		Not required



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