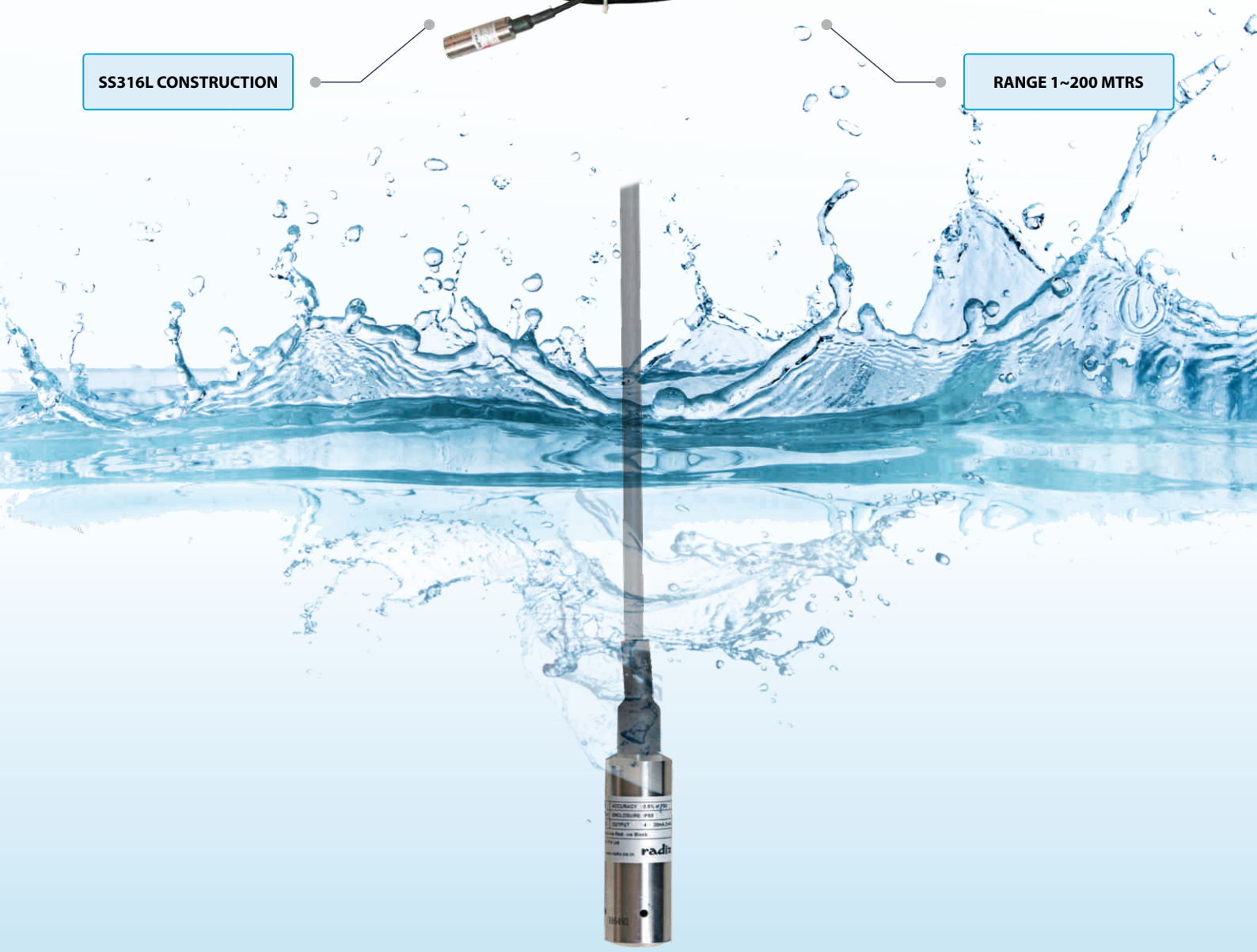


SUBMERSIBLE LEVEL TRANSMITTER



SUBMERSIBLE LEVEL TRANSMITTER

ABOUT SLT20X

The SLT20X series of submersible level transmitters are suitable for hydrostatic depth measurement of non-aggressive liquids (without solid impurities) in non-pressurised vessels.

They find applications in chemical, food processing and pharmaceutical industries, reservoirs, borewells, sumps & tanks, where the instantaneous level of the liquid is required to be known. An SLT transmitter outputs an analog 4 to 20 mA signal which can be used by measuring and control devices.

The transmitter's parameters, including zero (level corresponding to 4 mA) and span (level corresponding to 20 mA), can be adjusted using the PC based utility available..

The ease of mounting an SLT20X transmitter makes it ideally suited for use in tanks of all shapes and sizes and in a wide range of industrial applications from water to demanding chemical processes.

FEATURES

- 2 wire, 4 to 20 mA output
- Ranges from 1 meters to 200 meters (in water), Zero (4mA) and Span (20mA) user programmable anywhere in the range
- Fully sealed IP68 sensor for permanent submersion
- Special polyurethane cable ensures more flexibility and durability.
- SS316 Construction
- High static accuracy, stability and repeatability
- Temperature range -10 ... +80 °C
- Flexible mounting, typically suspended from the top. Side mounting version also available
- Unaffected by fumes and foams on the liquid surface

FUNCTION

SLT20X measure the height of liquid above the position in the tank referenced to atmospheric pressure. The cable is an integral part of the probe and has a vented tube to allow reference to the atmospheric pressure.

The transducer consists of a piezoresistive sensing element, converting the pressure into an electrical signal. This pressure-dependent signal is converted by the integrated electronics into a standardized output signal.

SLT202 is a microcontroller based transmitter with 2-wire, 4~20mA output. It allows the user to set an upper as well as lower dead band in any standard range. This transmitter allows measuring ranges as low as 0.6mH₂O. Refer the 'Adjustment' section below for details.

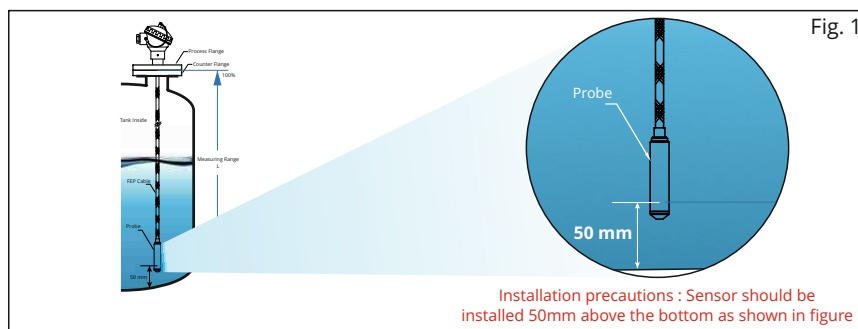
The transmitter's durable IP68, SS316 construction provides superior protection for use in many harsh environments.

SUBMERSIBLE LEVEL TRANSMITTER

SPECIFICATIONS

All specifications at ambient of 25 °C, unless specified otherwise

	SLT201	SLT202	SLT203
MEASUREMENT CHARACTERISTICS			
Pressure ranges	1 2 3 5 10 20 50 100 200 mH ₂ O	0.04mH ₂ O~10mH ₂ O...200mH ₂ O	1 2 3 5 10 20 50 100 200 mH ₂ O
Over pressure	2 times of FS	2 times of FS	2 times of FS
Accuracy	1% of span	1% of span	1% of span
Stability	range>20mH ₂ O, ± 0.2% FS range≤ 20mH ₂ O, 20mmH ₂ O	range>20mH ₂ O, ± 0.2% FS range≤ 20mH ₂ O, 20mmH ₂ O	range>20mH ₂ O, ± 0.2% FS range≤ 20mH ₂ O, 20mmH ₂ O
Smallest measuring range	NA	+0.6mH ₂ O	NA
PERMISSIBLE TEMPERATURE OF			
Operating	-10 ... +80 °C	-10 ... +80 °C	-10 ... +80 °C
Storage	-40 ... +100 °C	-40 ... +100 °C	-40 ... +100 °C
Thermal drift			
	Zero 0.02%FS/°C	0.02%FS/°C	0.02%FS/°C
	Span 0.05%FS/°C	0.05%FS/°C	0.05%FS/°C
Compensation temperature (Optional)	(-10~70)°C	(-10~70)°C	(-10~70)°C
ELECTRICAL SPECIFICATIONS			
Power supply U	11 < U ≤ 28	11 < U ≤ 28	11 < U ≤ 28
Output signal			
	Analogue 4 ... 20 mA, 2-wire	4 ... 20 mA, 2-wire+GND	4 ... 20 mA, 2-wire
Maximum load RA	RA < (U - 11V) / 0.02A	RA < (U - 11V) / 0.02A	RA < (U - 11V) / 0.02A
Protection	Protected against reverse signal polarity	Protected against reverse signal polarity	Protected against reverse signal polarity
MOUNTING OPTIONS			
Mounting type	Top	Top	Top
Without enclosure	Standard measuring range with 100mm excess cable	NA	NA
Threaded	NA	Threading as per standard MOC -SS/PP	Threading as per standard MOC -SS/PP
Flanged	NA	Flanges as pe ASME, BS standrd, square, non standard circles	Flanges as pe ASME, BS standrd, square, non standard circles
External mounting	NA	Flanged or Threaded	Flanged or Threaded
MATERIALS OF CONSTRUCTION			
Terminal Enclosure	NA	Cast Al	Cast Al
Probe Body	SS316L / SS	SS316L / SS	SS316L / SS
Pressure connection and diaphragm	SS316L	SS316L	SS316L
Protective cap	SS316L / SS	SS316L / SS	SS316L / SS
Cable	PUR (polyurethane) / PE (polyethylene)	PUR (polyurethane) / PE (polyethylene)	PUR (polyurethane) / PE (polyethylene)
Flange	NA	SS/CS/PP	SS/CS/PP
O-ring	Viton	Viton	Viton
Plug housing	NA	NA	NA
PROTECTION CLASS			
Transducer	IP68	IP68	IP68
Electronic Signal Conditioner	NA	IP66/67	IP66/67



SUBMERSIBLE LEVEL TRANSMITTER

ADJUSTMENT

The adjustments of the SLT202 carried out with a PC based utility software and USB configurator, the user could calibrate and adjust measuring range (including upper and lower dead band)

Fig. 2

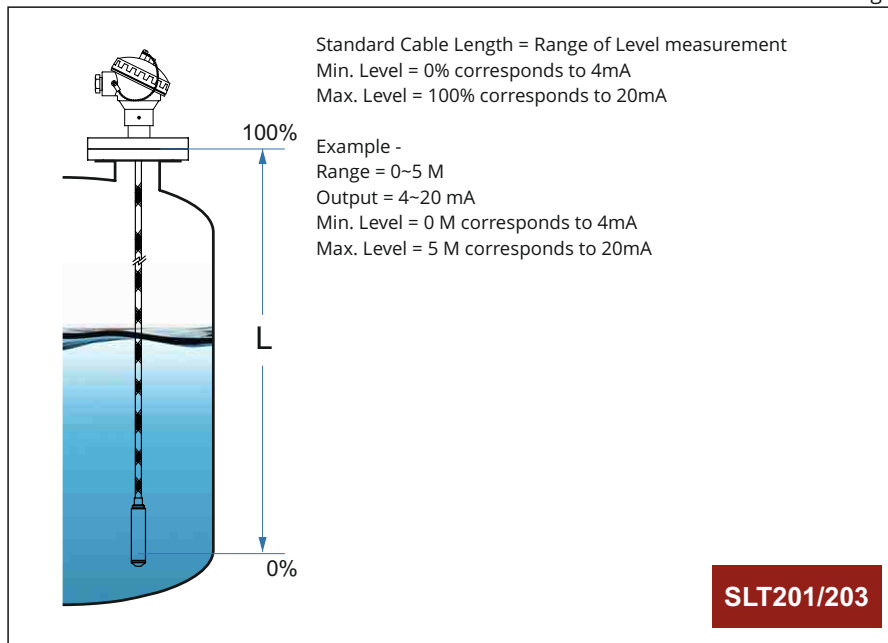
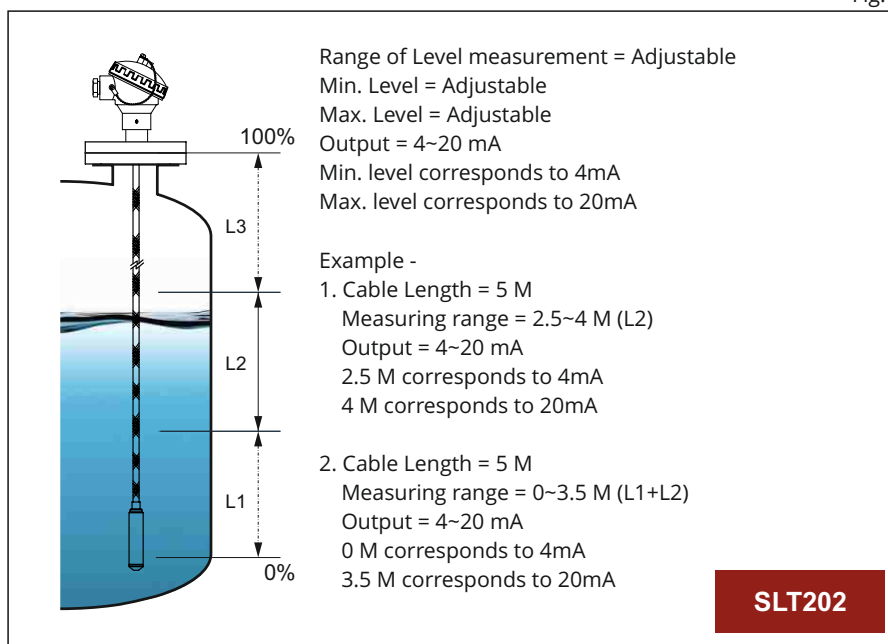


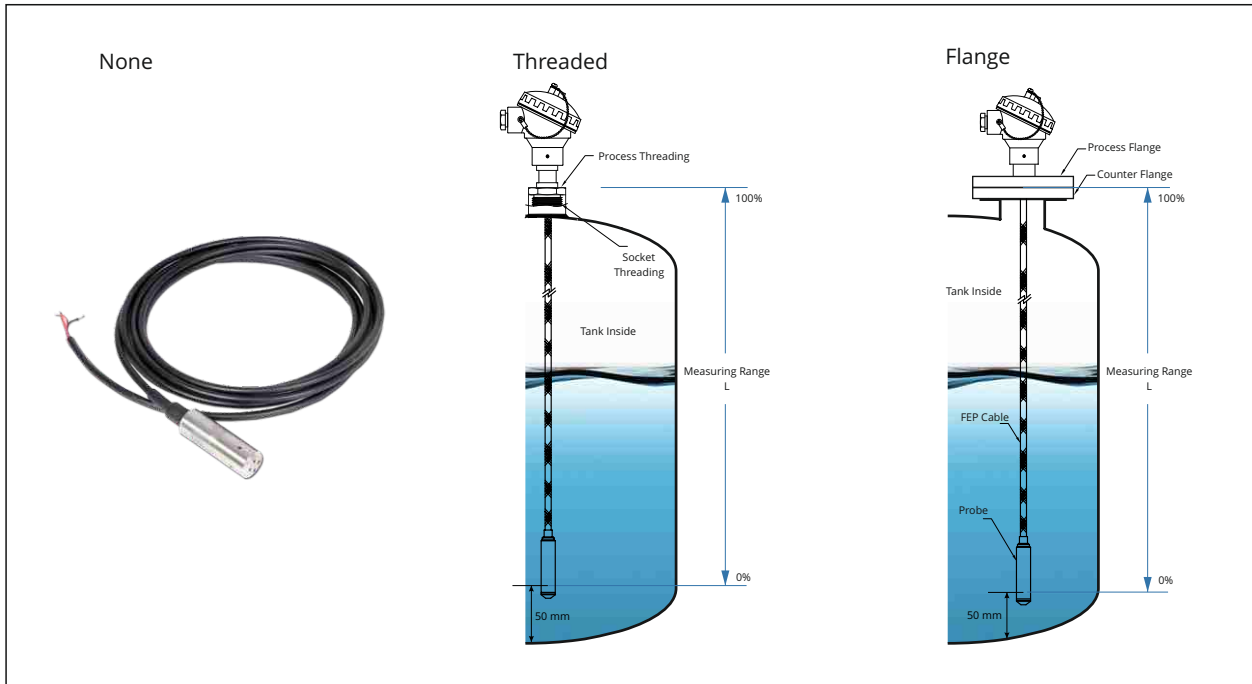
Fig. 3



SUBMERSIBLE LEVEL TRANSMITTER

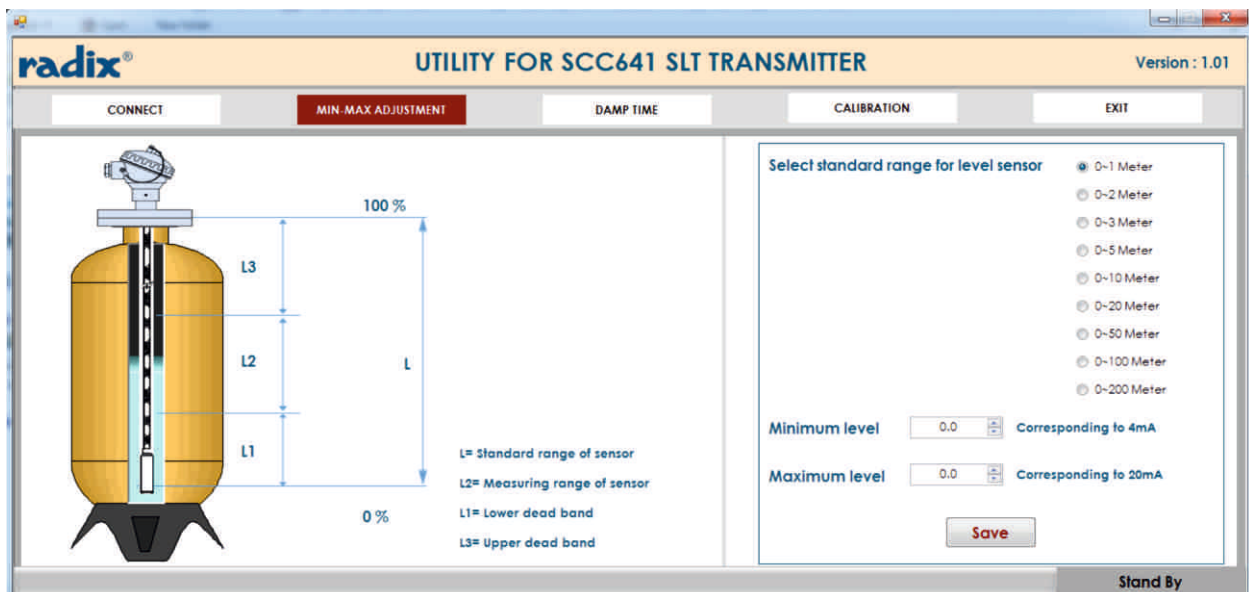
MOUNTING OPTIONS

Fig. 4



UTILITY SOFTWARE

Fig. 5

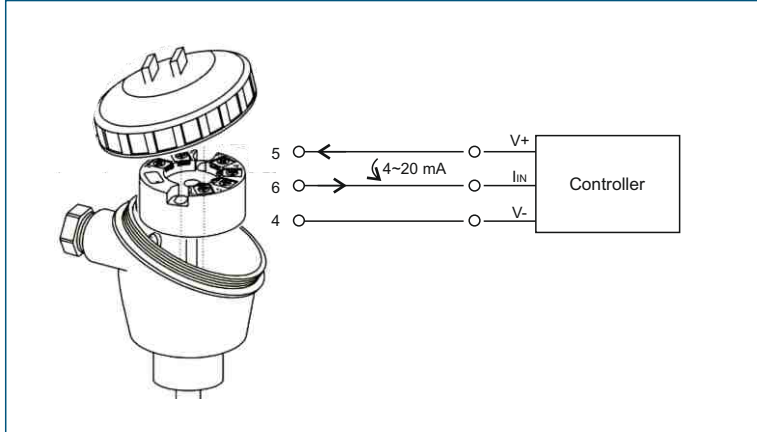


SUBMERSIBLE LEVEL TRANSMITTER

ELECTRICAL CONNECTIONS

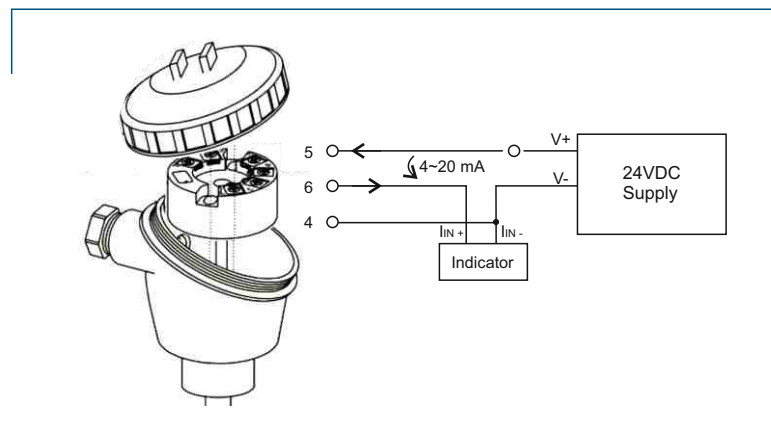
SLT202 - WITH CONTROLLER WITH TRANSMITTER SUPPLY

Fig. 6



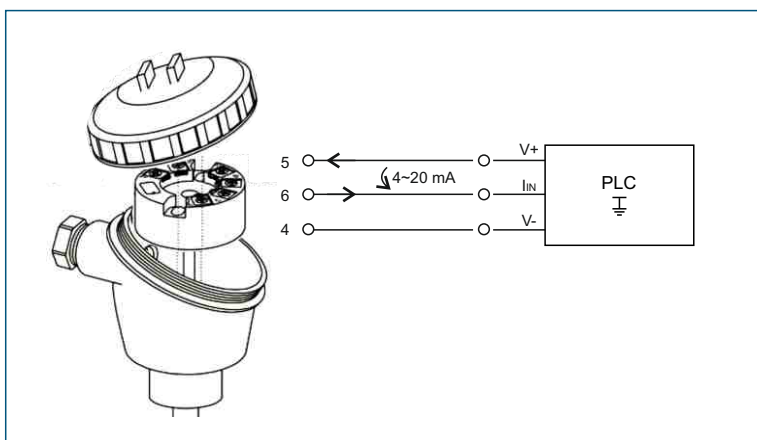
SLT202 - WITH INDICATOR & EXTERNAL POWER SUPPLY

Fig. 7



SLT202 - WITH PLC

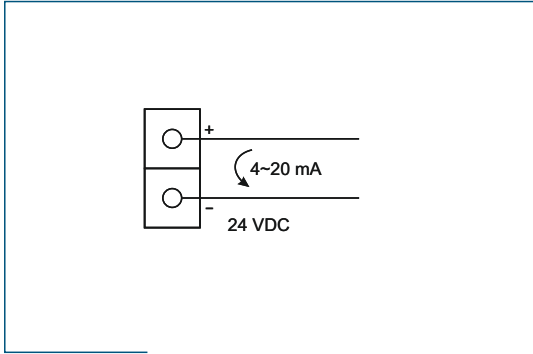
Fig. 8



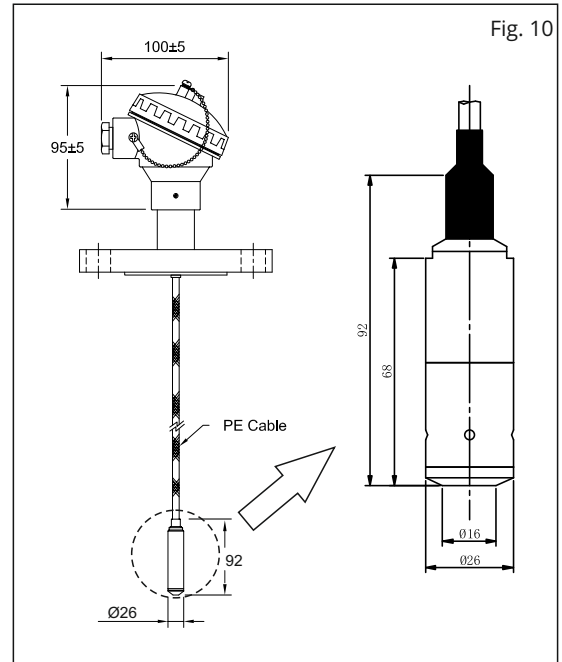
SUBMERSIBLE LEVEL TRANSMITTER

ELECTRICAL CONNECTIONS

SLT201 / SLT203 - 2-WIRE, 4-20 mA OUTPUT Fig. 9



DIMENSIONS



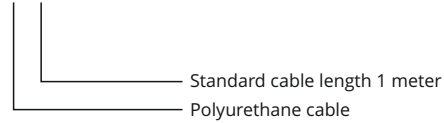
ORDERING INFORMATION

MODEL : SLT201- WITH STANDARD MEASURING RANGE
- NO PROCESS CONNECTION OR ENCLOSURE

CODE	SPECIFICATION	1	2
2811			
1	Cable Type		
	Polyethylene	0	
	Polyurethane	1	
2	Standard Cable length		
	1 Meter		0
	2 Meter		1
	3 Meter		2
	5 Meter		3
	10 Meter		4
	20 Meter		5
	50 Meter		6
	100 Meter		7
	200 Meter		8

EXAMPLE

2811 1 0



SUBMERSIBLE LEVEL TRANSMITTER

ORDERING INFORMATION

MODEL : SLT202 - WITH ADJUSTABLE MEASURING RANGE
- WITH PROCESS CONNECTION AND ENCLOSURE

CODE	SPECIFICATION	1	2	3	4
2812					
1	Cable Type				
	Polyethylene	0			
	Polyurethane	1			
2	Standard Cable Length* (L in Fig.11)				
	1 Meter		0		
	2 Meter		1		
	3 Meter		2		
	5 Meter		3		
	10 Meter		4		
	20 Meter		5		
	50 Meter		6		
	100 Meter		7		
	200 Meter		8		
3	Output				
	4~20 mA			0	
	4~20 mA, HART			1	
4	Process Connection				
	PP Flange (15NB to 100NB Flanges to BS/ ANSI/DIN)				0
	SS Flange (15NB to 100NB Flanges to BS/ ANSI/DIN)				1
	Threaded - ½" to 2" BSP or NPT (M/F) screwed				2
	Triclover				3

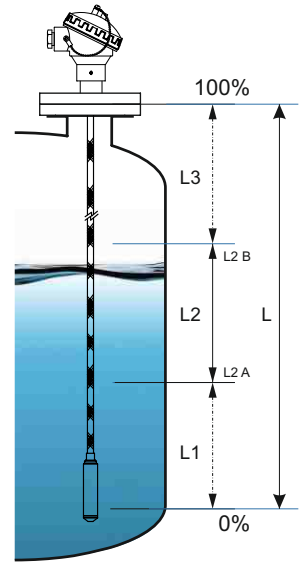


Fig. 11

Also specify :

Parameter	
L1	Lower Dead band (can be '0')
L2	Measuring Range (4~20 mA corresponds to this) 4 mA is at L2 A 20 mA is at L2 B
L3	Upper dead band (can be '0')

Note : 1. L can be selected based on tank height.
 2. L2 should be at least 10% of L
 Example : If L is 5 M then L2 can be minimum 0.5 M
 * Non-standard cable length can be provided.

EXAMPLE

2812 1 0 1 2

- └── Threaded - ½" to 2" BSP or NPT (M/F) screwed
- └── 4~20 mA, HART
- └── Standard cable length 1 meter
- └── Polyurethane cable

SUBMERSIBLE LEVEL TRANSMITTER

ORDERING INFORMATION

MODEL : SLT203 - WITH PROCESS CONNECTION AND ENCLOSURE
- WITH STANDARD RANGES ONLY

CODE	SPECIFICATION	1	2	3
2813				
1	Cable Type			
	Polyethylene	0		
	Polyurethane	1		
2	Standard Cable Length			
	1 Meter		0	
	2 Meter		1	
	3 Meter		2	
	5 Meter		3	
	10 Meter		4	
	20 Meter		5	
	50 Meter		6	
	100 Meter		7	
	200 Meter		8	
3	Process Connection			
	PP Flange (15NB to 100NB Flanges to BS/ ANSI/DIN)			0
	SS Flange (15NB to 100NB Flanges to BS/ ANSI/DIN)			1
	Threaded - 1/2" to 2" BSP or NPT (M/F) screwed			2
	Triclover			3

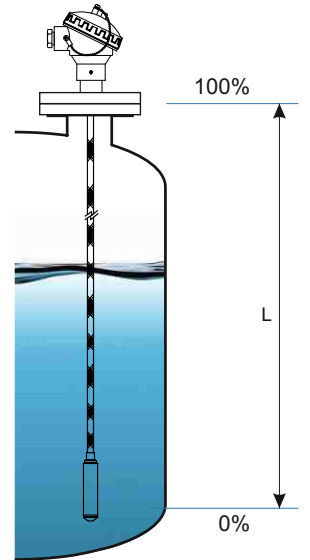
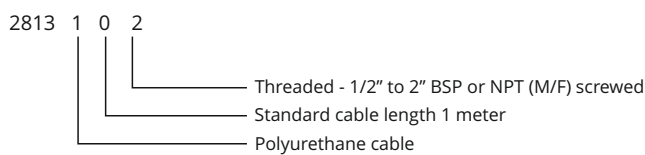


Fig. 12

EXAMPLE



ENQUIRIES

Instruments: sales@radix.co.in
Sensors: sensors@radix.co.in
Gauges: gauges@radix.co.in
Automation: automation@radix.co.in
Level: level@radix.co.in

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