Installation Instructions for Standard and Extended Temperature **Optomax Series** Liquid Level Sensors

GENERAL DESCRIPTION

The liquid level sensor provides single point liquid detection via a TTL compatible push pull output.

An infra-red LED and phototransistor accurately positioned at the base of the sensing tip ensure good optical coupling between the two when the sensor is in air. When the sensing tip is immersed in liquid, the infra-red light escapes from the cone causing a change in the amount of light present at the phototransistor which makes the output change state.

CLEANING

Proper fluids should be selected based on type of contamination to be removed. SST Sensing recommends freon and alcohol based solvents. DO NOT use chlorinated solvents such as tricholorethane as these are likely to attack the sensor material.

Liquid Media Compatibility

Before use check that the fluid in which you wish to use these devices is compatible either with polysulphone or trogamid.

ELECTRICAL SPECIFICATIONS

Supply Voltage (Vs)	+4.5 Vdc to +15.4Vdc		
Supply Current (Is)	Max 2.5mA (Vs = 15.4Vdc)		
Output Type	An "L" in the part number after D3 indicates that the sensor output will be low in air. Otherwise the output will be high in air.		
Output Sink and Source Current (Iout)	100mA		
Operating Temperatures	-25°C to +80°C (Standard) -40°C to +125°C (Extended)		
Storage Temperatures	-30°C to +85°C (Standard) -40°C to +125°C (Extended)		

Output Voltage (Vout) Iout = 100mA	**Output High** Vout = Vs - 1V Max **Output Low** Vout = 0V + 0.5V Max
Output Voltage (Vout) Iout = 0mA	**Output High** Vout = Vs - 0.3V Max **Output Low** Vout = 0V + 0.1V Max

MOUNTING AND HOUSING TYPES

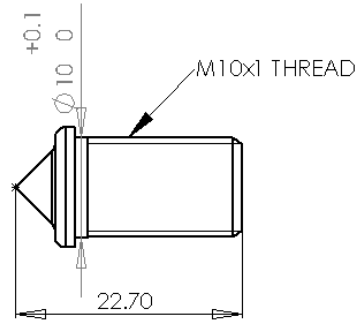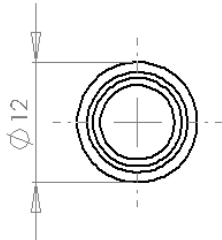| Housing Series	200 and 210 SH Series	500 and 510 Series	600 and 610 SH Series	700 and 710 SH Series
Thread	M12x1x8g with Hex Nut*	M10x1	½" SAE with O-Ring*	1/4" NPT
Tightening Torque	1.5 N m/13.26 in lb max.			
Pressure (when correctly sealed)	7 bar max	20 bar max	7 bar max	7 bar max
Mounting Hole	Ø12mm	Ø10mm	Ø ½ Inch	1/4" NPT Threaded
Housing Material	Polysulphone or Trogamid			
Sensor Termination	24AWG, 250mm PTFE Wires, 8mm Tinned			

* Hex nut and o-ring sold separately, please contact us for details. NPT version can be sealed with PTFE tape.
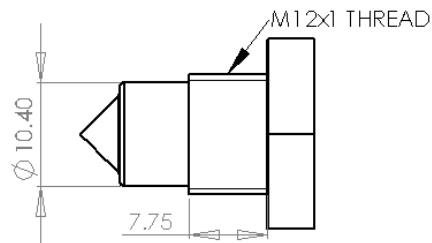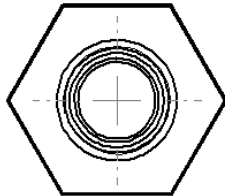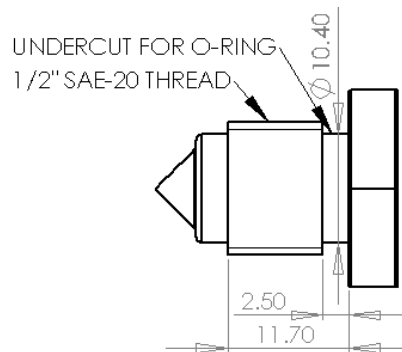
Sensor Output Wiring

WIRE	DESIGNATION
RED	Vs
GREEN	OUTPUT
BLUE	0V

LLC200D3SH

SST
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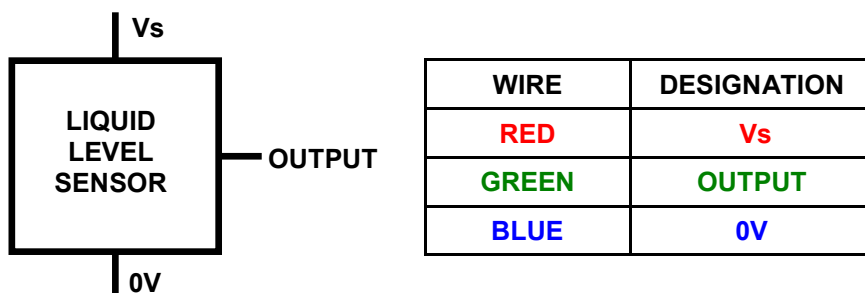
500 and 510 Series (Mounted from Inside)

Ø12

Ø10 +0.1 0

M10x1 THREAD

22.70

200 and 210 SH Series (Mounted from Outside)

Ø10.40

M12x1 THREAD

7.75

600 and 610 SH Series (Mounted from Outside)

UNDERCUT FOR O-RING
1/2" SAE-20 THREAD

Ø10.40

2.50
11.70
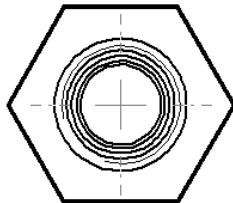
700 and 710 SH Series (Mounted from Outside)

19 A/F

1/4"NPT THREAD

4

9.40
4.70
23.40
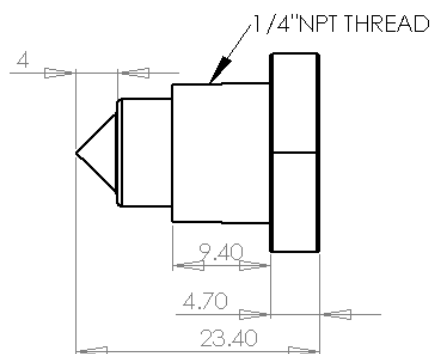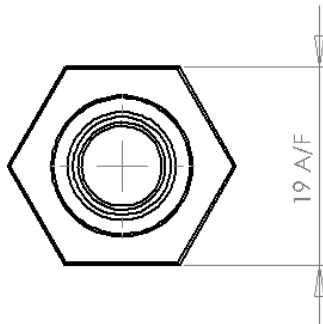
SENSOR MOUNTED FROM INSIDE VESSEL

L L X 5 X 0 D 3 X

Housing Material	Operating Temperature	Output Polarity
C = Polysulphone T = Trogamid	0 = -25°C to +80°C 1 = -40°C to +125°C	L = Output low in air Blank = Output high in air
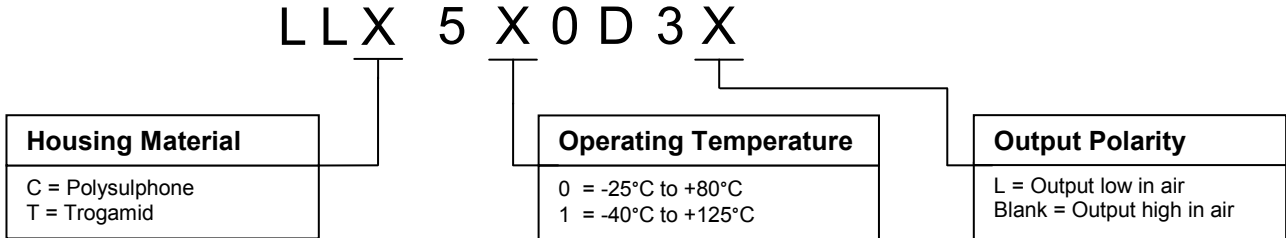
SENSOR MOUNTED FROM OUTSIDE VESSEL

L L X X X 0 D 3 X S H

Housing Material	Operating Temperature	Output Polarity
C = Polysulphone T = Trogamid	0 = -25°C to +80°C 1 = -40°C to +125°C	L = Output low in air Blank = Output high in air

Housing Style

2 = 200 and 210 SH Series
6 = 600 and 610 SH Series   7 = 700 and 710 SH Series

WARNING	CAUTION
Personal Injury DO NOT USE these products as safety or Emergency Stop devices or in any other application where failure of the product could result in personal injury. **Failure to comply with these instructions could result in death or serious injury.**	Do not exceed maximum ratings. Although the sensor is protected against supply reversal, it is not recommended. Do not overtighten screw-in type. Do not use chlorinated solvents. Do not mount with dome pointing downwards. **Failure to comply with these instructions may result in product damage.**

It is the customer's responsibility to ensure that this product is suitable for use in their application.   For technical assistance or advice, please email us: info@sstsensing.com