

# Installation Instructions for Standard and Extended Temperature Industrial Series Optical Liquid Level Sensors

## GENERAL DESCRIPTION

The LLC Industrial Series liquid level sensor provides single point liquid detection via a TTL compatible output.

This sensor range was designed to directly switch incandescent indicators, sounders, relays or applications which require higher output power.

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 detected at the phototransistor which makes the output change state. Various electrical outputs are available to suit different applications.

## 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 trichloroethane 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 with either polysulphone or trogamid.

## ELECTRICAL SPECIFICATIONS

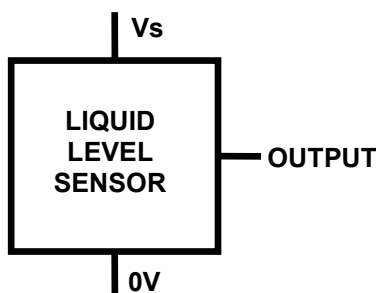
Supply Voltage (Vs)	+4.5 Vdc to +15.4Vdc or +8Vdc to +30Vdc	Output Voltage (Vout) Vs = 4.5 - 15.4Vdc Iout = 1A	<b>Output High</b> Vout = Vs - 1.5V Max <b>Output Low</b> Vout = 0V + 0.5V Max
Supply Current (Is)	Max 2.5mA (Vs = 15.4Vdc) or Max 7.5mA (Vs = 30Vdc)	Output Voltage (Vout) Vs = 8 - 30Vdc Iout = 1A	<b>Output High</b> Vout = Vs - 1.8V Max <b>Output Low</b> Vout = 0V + 0.7V Max
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 Voltage (Vout) Vs = 4.5 - 15.4Vdc and Vs = 8 - 30Vdc Iout = 0mA	<b>Output High</b> Vout = Vs - 0.3V Max <b>Output Low</b> Vout = 0V + 0.1V Max
Output Sink and Source Current (Iout)	1A		
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)		

## MOUNTING AND HOUSING TYPES

Housing Series	200 and 210 Series	600 and 610 Series	700 and 710 Series
Thread	M12x1x8g with Hex Nut*	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		
Mounting Hole	Ø12mm	Ø ½ Inch	1/4" NPT Threaded
Housing Material	Polysulphone or Trogamid		
Sensor Termination	20AWG, 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

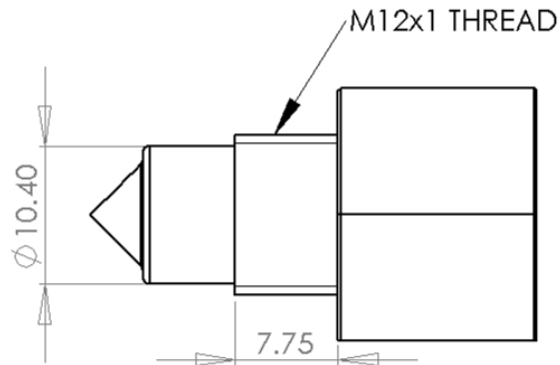
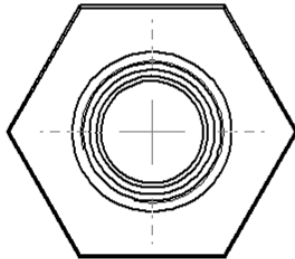




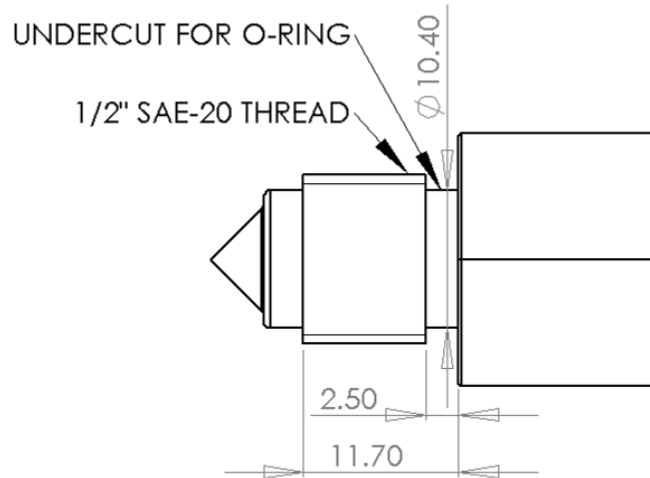
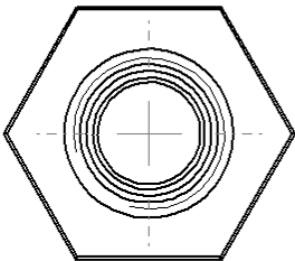
**PRODUCT DIMENSIONS**

(all dimensions in mm)

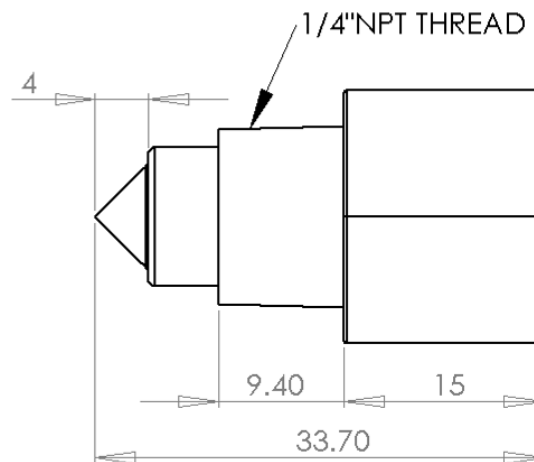
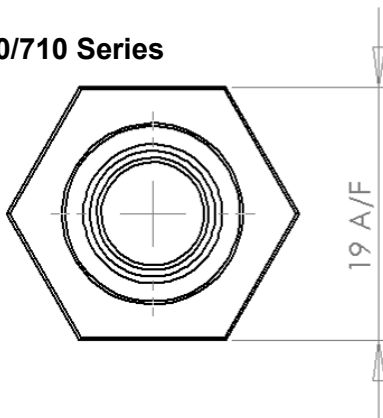
**LLC200/210 Series**



**LLC600/610 Series**



**LLC700/710 Series**



**WARNING**

All SST Sensing Ltd products are tested under nominal operating conditions during the production process. Applications for our products are varied and, as these are outside our control, specification information provided is given without legal responsibility. Customers should test under their own conditions, to ensure that the sensors are suitable for their intended application.

**CAUTION**

Do not exceed maximum ratings. Carefully follow all wiring instructions, incorrect wiring can cause permanent damage to the device. Do not use chemical cleaning agents.

**Failure to comply with these instructions may result in product damage.**

**General Note:** SST Sensing Ltd reserves the right to make changes in product specifications without notice or liability. All information is subject to SST's own data and considered accurate at time of going to print.