

# DATA SHEET

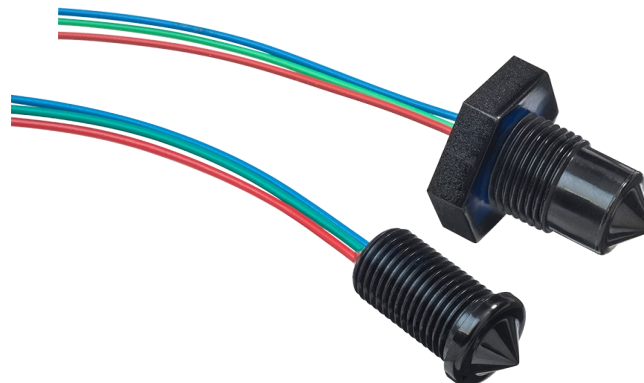
## Liquid Level Switches

### Honeywell LLE Series Alternatives

For part numbers LLE101000, LLE102000, LLE103000 and LLE105000

#### FEATURES

- Liquid level switches that can detect almost any liquid type; oil or water based
- Choice of mounting; internal or external
- Choice of threads



#### Housing/ Mounting



#### Output Type/Logic



#### Supply Voltage



#### Output Current



#### Temp



#### BENEFITS

- Low power
- Low cost
- Compact design

#### OUTPUT VALUES

<b>Output Voltage<sup>2</sup> (Vout):</b>	<b>Iout = 100mA</b>
Output High	Vout = Vs - 1.5V max
Output Low	Vout = 0V + 0.5V max

#### TECHNICAL SPECIFICATIONS

Supply voltage (Vs)	4.5V <sub>DC</sub> to 15.4V <sub>DC</sub>
Supply current (Is)	2.5mA max. (Vs = 15.4V <sub>DC</sub> )
Output sink and source current (Iout)	100mA
Operating temperatures	-25°C to +80°C
Storage temperatures	-30°C to +85°C
Housing material <sup>1</sup>	Polysulfone
Sensor termination	24AWG, 250mm PTFE wires, 8mm tinned



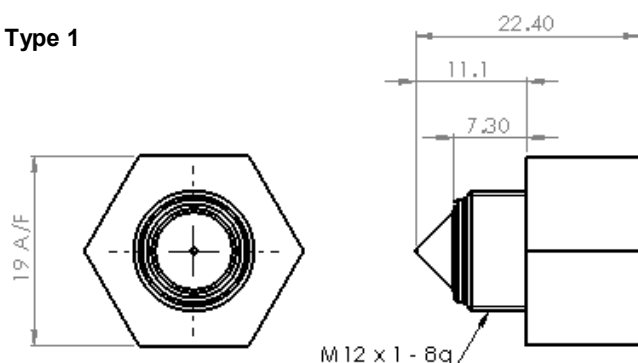
- 1) Before use check that the fluid in which you wish to use these devices is compatible with Polysulfone.
- 2) Voltages applicable to output value stated.



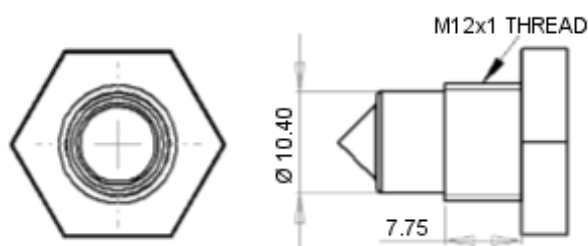
## OUTLINE DRAWING

All dimensions shown in mm. Tolerances =  $\pm 1$ mm.

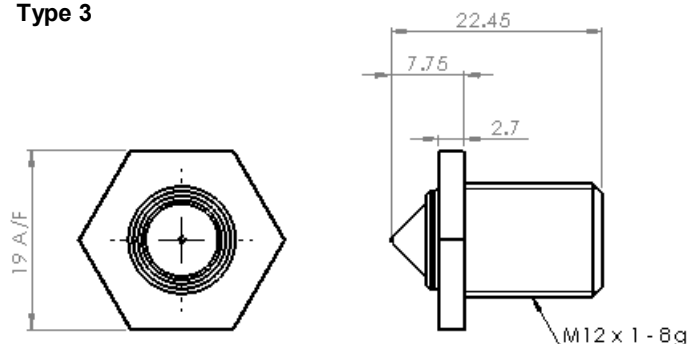
**Type 1**



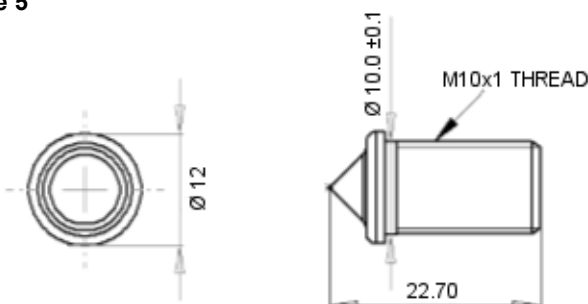
**Type 2**



**Type 3**



**Type 5**



## HOUSING SPECIFICATIONS

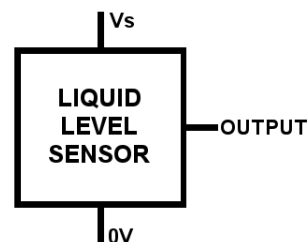
Housing Series - Internal Mounting		
	Type 1	Type 2
Thread	M12x1x8g	M12x1x8g with hex nut <sup>1</sup>
Pressure <sup>2</sup>	7 bar / 101 psi maximum	
Tightening Torque	1.5 Nm / 13.26 in-lbs maximum	

Housing Series - External Mounting		
	Type 3	Type 5
Thread	M12x1x8g with hex nut <sup>1</sup>	M10x1
Pressure <sup>2</sup>	7 bar / 101 psi maximum	
Tightening Torque	1.5 Nm / 13.26 in-lbs maximum	Not Applicable

**NOTE:** In the cases of Type 1 and Type 3 sensors, the rear of the SST sensors are slightly longer than the Honeywell sensors.

**NOTE:** The dimensions of the Type 5 part make it a "push in" part the same as LLE105000. Note that the sensor can also be secured using an M10 nut.

## ELECTRICAL INTERFACE



Wire	Designation
Red	Vs
Green	Output
Blue	0V

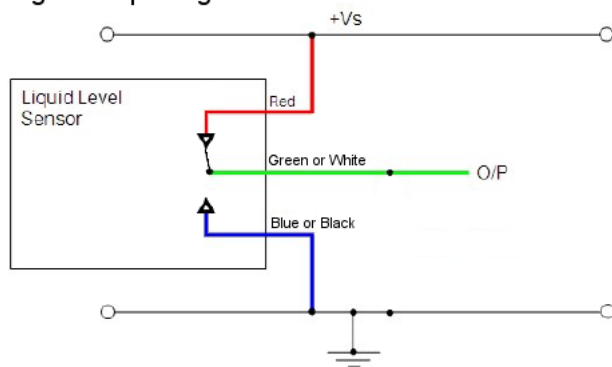


- 1) Hex nut and washer supplied with Type 1, Type 2 and Type 3.
- 2) When correctly sealed.



## CIRCUIT DIAGRAM

### Digital Output High in Air



**CAUTION:** Take care when connecting loads.

The minimum load impedance should not exceed  $V_s/\text{max output current}$ .

**Note:** Shorting the output to  $V_s$  or 0V will result in irreparable damage to the sensor.



## ORDER INFORMATION

Specify the part number you require.

### Sensor mounted from inside vessel

#### Type 1

L L C 1 0 1 0 0 0

#### Type 2

L L C 1 0 2 0 0 0

### Sensor mounted from outside vessel

#### Type 3

L L C 1 0 3 0 0 0

#### Type 5

L L C 1 0 5 0 0 0

### CAUTION

Do not exceed maximum ratings and ensure sensor(s) are operated in accordance with their requirements.

Carefully follow all wiring instructions. Incorrect wiring can cause permanent damage to the device.

SST Sensing Ltd recommend using alcohol based cleaning agents. Do NOT use chlorinated solvents such as trichloroethane as these are likely to attack the sensor material.

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

### INFORMATION

As customer applications are outside of SST Sensing Ltd.'s control, the information provided is given without legal responsibility. Customers should test under their own conditions to ensure that the equipment is suitable for their intended application. Before use, check that the fluid in which you wish to use these devices is compatible with Polysulfone.

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