

### Installation instructions for LLE Series Liquid level sensors

#### **⚠ WARNING** **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.**

#### **CAUTION**

- Do not exceed maximum supply voltage.
- 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.**

### General description

The LLE Series liquid level sensor provides a single point detection via a TTL compatible output. When liquid is present on the surface of the sensor the output sinks up to a maximum of 10 mA.

LED and phototransistor chips are sealed into the base of the plastic dome, in such a position that light is totally internally reflected from the dome boundary to the phototransistor. Thus the output is normally high. When liquid covers the dome, the change in refractive index at the boundary means light escapes into the liquid, so less light reaches the phototransistor which thus causes the output to switch low.

### Cleaning

Proper fluids should be selected based on type of contaminant to be removed. Honeywell recommends freon and alcohol based solvents. Do not use chlorinated solvents such as trichlorethane 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 polysulphone.

### Electrical specifications

#### Supply voltage (Vcc)

-25 °C to 80 °C (-13 °F to 176 °F) 5 V ± 5 %

#### LED (Vf) @ 25 °C (77 °F)

1.2 V @ 10 mA typ.

#### Supply current @ 25 °C (77 °F)

15 mA nominal

#### Output sink current (Io)

@ 25 °C (77 °F)

10 mA max.

@ 80 °C (176 °F)

3 mA max.

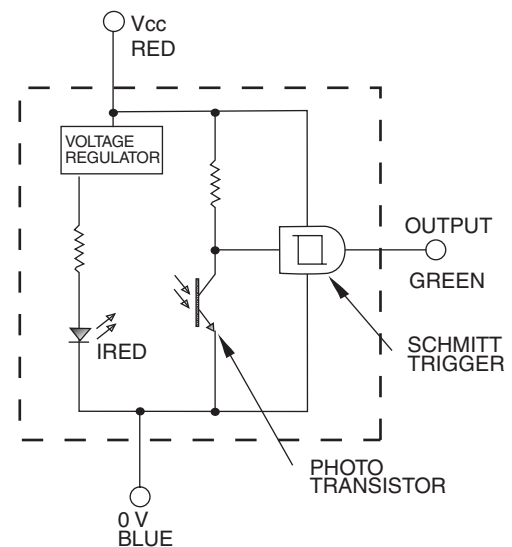
#### Operating temperature

-25 °C to 80 °C  
-13 °F to 176 °F

#### Storage temperature

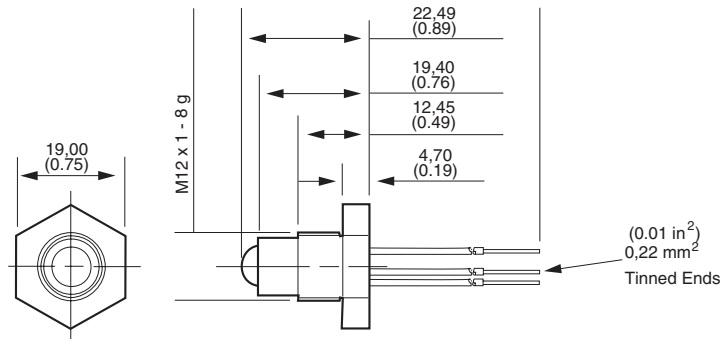
-30 °C to 85 °C  
-22 °F to 185 °F

### Electrical diagram



Mounting dimensions in mm (inches) for reference only

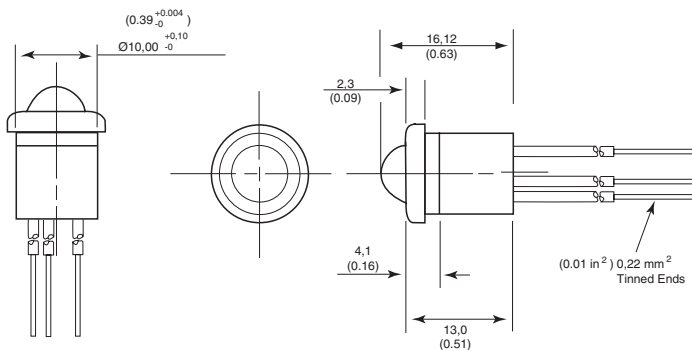
LLE102000 (Type 2)



Notes

- 1 Recommended panel hole size  $\varnothing$  12,5  $\pm$ 0.3 mm (0.49  $\pm$ 0.01 in)
- 2 'O' ring seal supplied unassembled

LLE105000 (Type 5)



Mounting

Type 2

Thread	M12x1x8 g
Tightening torque	1,5 Nm/13.26 in lb max.
Pressure (using washer supplied)	5 bar max.

Type 5

Mounting hole	10 mm
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WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Contact your local sales office for warranty information. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace without charge those items it finds defective. The foregoing is Buyer's sole remedy and is **in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose.**

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While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

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