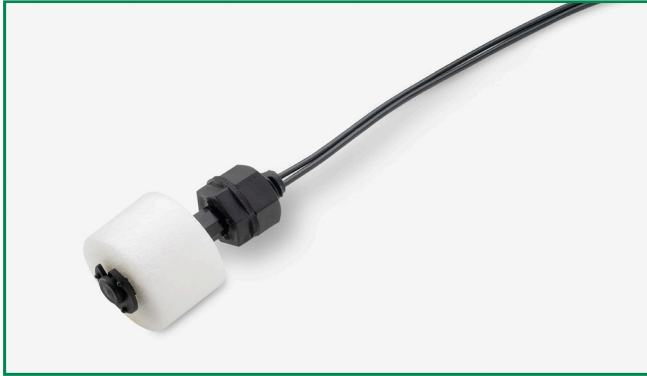


# 59630 Sensor with Integral Float Actuator

RoHS



## Description

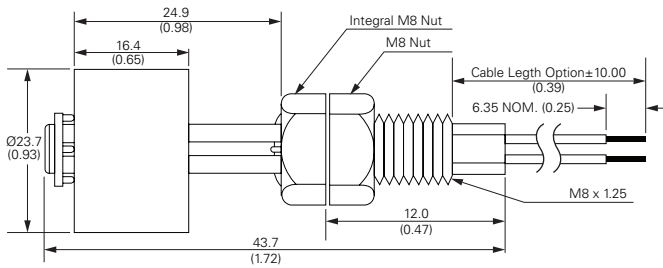
The 59630 is a reed level sensor with integral float actuator and an M8 x 1.25mm pitch thread with a choice of normally open, normally open high voltage, normally closed or change over contacts. It is capable of switching up to 265Vac/300Vdc at 10VA. It is ideally suited to liquid and air conditioning condensate and industrial process control applications.

## Features

- Sensor with integral blown polypropylene float, with integral magnet
- Sensor operates when float rises from end stop position
- Choice of contacts
- Choice of connector and cable length options

## Dimensions

Dimensions in mm (inch)



## Benefits

- Hermetically sealed, magnetically operated contacts continue to operate long after optical and other technologies fail due to contamination
- No standby power required
- Simple installation with M8 thread and nut

## Applications

- Liquid level control
- Air conditioning systems
- Industrial Process Control

| Schematics             | Switch Type |
|------------------------|-------------|
| Black<br>Black         | 1 and 2     |
| Black<br>Blue<br>White | 3           |
| Black<br>Black         | 4           |

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## Electrical Ratings

| Contact Type                |                             |                | Normally Open    | Normally Open High Voltage | Change Over     | Normally Closed  |
|-----------------------------|-----------------------------|----------------|------------------|----------------------------|-----------------|------------------|
| Switch Type                 |                             |                | 1                | 2                          | 3               | 4                |
| Contact Rating <sup>1</sup> |                             | VA/Watt - max. | 10               | 10                         | 5               | 10               |
| Voltage <sup>4</sup>        | Switching <sup>2</sup>      | Vdc - max.     | 200              | 300                        | 175             | 200              |
|                             | Breakdown <sup>3</sup>      | Vac - max.     | 140              | 265                        | 120             | 120              |
|                             |                             | Vdc - min.     | 250              | 400                        | 200             | 250              |
| Current <sup>4</sup>        | Switching <sup>2</sup>      | Adc - max.     | 0.5              | 0.4                        | 0.25            | 0.5              |
|                             | Carry                       | Aac - max.     | 0.35             | 0.30                       | 0.18            | 0.18             |
|                             |                             | Adc - max.     | 1.2              | 1.4                        | 1.5             | 1.2              |
| Resistance <sup>5</sup>     | Contact, Initial Insulation | Ω - max.       | 0.2              | 0.2                        | 0.2             | 0.2              |
|                             |                             | Ω - min.       | 10 <sup>10</sup> | 10 <sup>10</sup>           | 10 <sup>9</sup> | 10 <sup>10</sup> |
| Capacitance                 | Contact                     | pF - typ.      | 0.3              | 0.2                        | 0.3             | 0.3              |
| Temperature                 | Operating                   | °C             | -40 to +105      | -20 to +105                | -40 to +105     | -40 to +105      |

## Product Characteristics

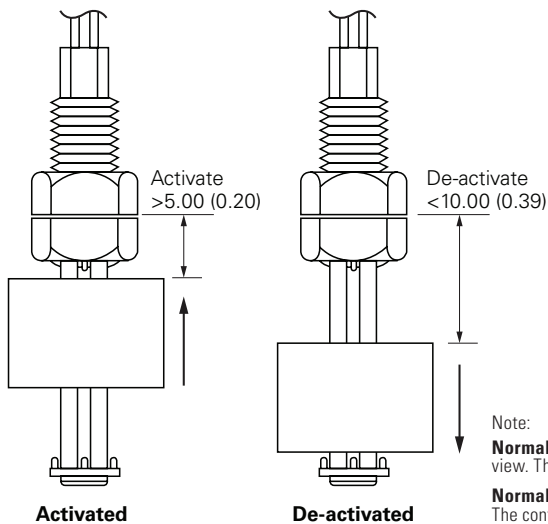
|                           |             |           |     |     |     |     |
|---------------------------|-------------|-----------|-----|-----|-----|-----|
| Operate Time <sup>6</sup> |             | ms - max. | 1.0 | 1.0 | 3.0 | 3.0 |
| Release Time <sup>6</sup> |             | ms - max. | 1.0 | 1.0 | 3.0 | 3.0 |
| Shock <sup>7</sup>        | 11ms ½ sine | G - max.  | 100 | 100 | 50  | 50  |
| Vibration <sup>7</sup>    | 50-2000 Hz  | G - max.  | 30  | 30  | 30  | 30  |

**Notes:**

- Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
- When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application Notes AN108A and AN107 for details.
- Breakdown Voltage - per MIL-STD-202, Method 301.
- Electrical Load Life Expectancy - Contact Littelfuse with voltage, current values along with type of load.
- This resistance value is for 300mm wire length. Resistance varies based on wire length.
- Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
- Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.
- For custom modifications to the wire length or size, or adding a special connector, please contact Littelfuse.

## Activation

Using sensor with float magnet orientated is illustrated



**Note:**

**Normally Open:** contacts are open when float is down as shown in the De-activate view. The contacts close when float is in upward position as shown on the left view.

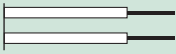

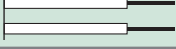
**Normally Closed:** Contacts are closed when the float is in the down position. The contacts open when float is in the upward position as shown in the left view.

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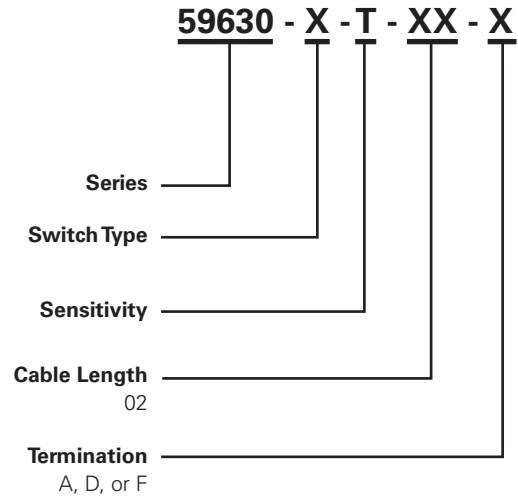
## Cable Length Specification

| Cable Type: 24 AWG 7/32 PVC 105°C UL1430/UL1569 |                           |
|---|---------------------------|
| Select Option                                   | Cable Length<br>mm (inch) |
| 02  | 300 (11.81)               |

## Termination Specification

| Termination Options |  |   |
|---------------------|--|---|
| Select Option       | Description<br>(Two-wire versions illustrated) |   |
| A                   | Tinned leads (6.4±0.76)mm                      |  |
| D                   | AMP MTE Connector<br>2.5mm pitch, 104257-1     |  |
| F                   | Untinned leads (6.4±0.76)mm                    |  |

## Part Numbering System



## Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width |
|------------------|-------------------------|----------|---------------------------|--------------|
| Bulk             | Bulk                    | 500      | N/A                       | N/A          |