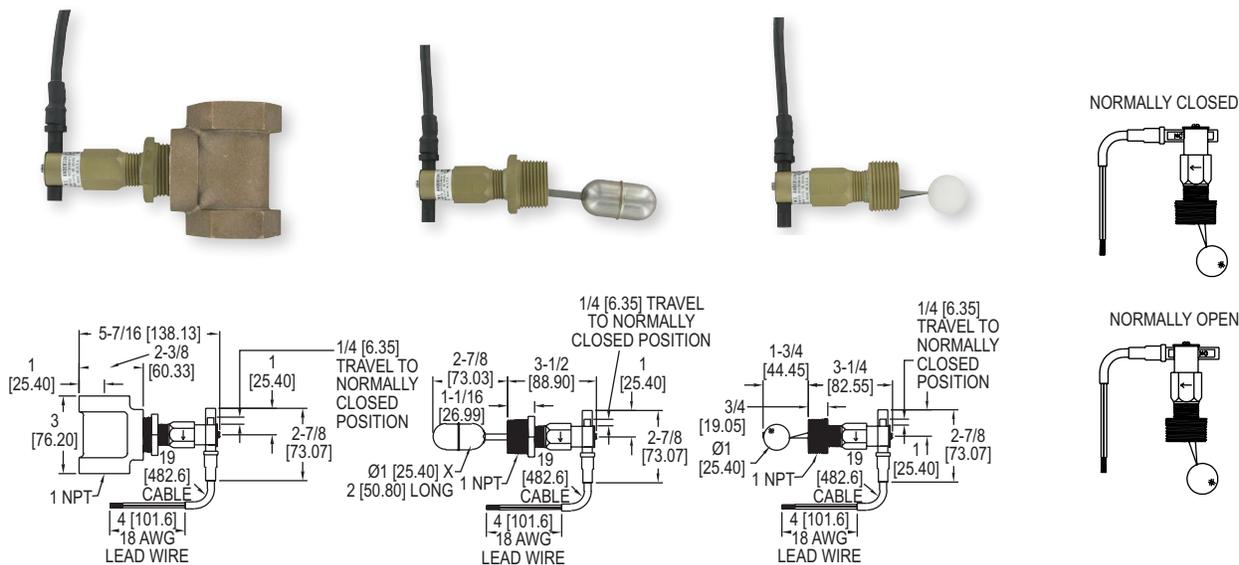




# Series L10 Flotect™ Mini-Size Level Switch

## Specifications - Installation and Operating Instructions



Model	Description	Line Size	Installation/Mounting	Float Material	Max. Press. psig (bar)	Min. S.G.
L10-B-3-O	Brass	1" NPT	Side Wall	Solid Polypropylene	1000 (68.9)	0.9
L10-B-3-A	Brass	1" NPT	Side Wall	Cylindrical St. Steel	200 (13.8)	0.5
L10-B-3-C	Brass	1" NPT	Side Wall	Round St. Steel	350 (24.1)	0.7
L10-B-3-B	Brass	1" NPT	Ext. Tee	Solid Polypropylene	250 (17.2)	0.9
L10-B-3-H	Brass	1" NPT	Ext. Tee	Round St. Steel	250 (17.2)	0.7
L10-S-3-O	St. Steel	1" NPT	Side Wall	Solid Polypropylene	2000 (137.8)	0.9
L10-S-3-A	St. Steel	1" NPT	Side Wall	Cylindrical St. Steel	200 (13.8)	0.5
L10-S-3-C	St. Steel	1" NPT	Side Wall	Round St. Steel	350 (24.1)	0.7
L10-S-3-S	St. Steel	1" NPT	Ext. Tee	Solid Polypropylene	2000 (137.8)	0.9
L10-S-3-L	St. Steel	1" NPT	Ext. Tee	Round St. Steel	350 (24.1)	0.7
L10-B-7-O	Brass	1" BSPT	Side Wall	Solid Polypropylene	1000 (68.9)	0.9
L10-B-7-A	Brass	1" BSPT	Side Wall	Cylindrical St. Steel	200 (13.8)	0.5
L10-B-7-C	Brass	1" BSPT	Side Wall	Round St. Steel	350 (24.1)	0.7
L10-B-7-B	Brass	1" BSPT	Ext. Tee	Solid Polypropylene	250 (17.2)	0.9
L10-B-7-H	Brass	1" BSPT	Ext. Tee	Round St. Steel	250 (17.2)	0.7
L10-S-7-O	St. Steel	1" BSPT	Side Wall	Solid Polypropylene	2000 (137.8)	0.9
L10-S-7-A	St. Steel	1" BSPT	Side Wall	Cylindrical St. Steel	200 (13.8)	0.5
L10-S-7-C	St. Steel	1" BSPT	Side Wall	Round St. Steel	350 (24.1)	0.7
L10-S-7-S	St. Steel	1" BSPT	Ext. Tee	Solid Polypropylene	2000 (137.8)	0.9
L10-S-7-L	St. Steel	1" BSPT	Ext. Tee	Round St. Steel	350 (24.1)	0.7

SPECIFICATIONS
<b>Service:</b> Compatible liquids.
<b>Wetted Materials:</b> Float: Solid polypropylene or 304 SS; Body: Brass or 303 SS; Magnet: Ceramic; External float chamber (tee): None, brass, or 304 SS; Other: Lever arm, pin, spring, etc.: 301 SS, 302 SS, 316 SS.
<b>Temperature Limit:</b> 200°F (93°C).
<b>Pressure Limit:</b> See model chart.
<b>Enclosure Rating:</b> Weatherproof, meets NEMA 4X (IP66).
<b>Switch Type:</b> SPST hermetically sealed reed switch. Field adjustable for normally open or normally closed.
<b>Electrical Rating:</b> 1.5 A @ 24 VDC res., 0.001 A @ 200 VDC res., 0.5A @ 120 VAC.
<b>Electrical Connections:</b> 18 AWG, 19" (483 mm) long, PVC jacket. Rated 221°F (105°C).
<b>Process Connection:</b> 1" male NPT standard on models without external float chamber. Change 3 in model number to 4 for 1-1/4", to 5 for 1-1/2", or 6 for 2". 1" female NPT on models with external float chamber.
<b>Mounting Orientation:</b> Horizontal with index arrow pointing down.
<b>Weight:</b> Approximately 10 oz (0.283 kg) without external float chamber, 2.32 lb (1.05 kg) with external float chamber.
<b>Specific Gravity:</b> See model chart.
<b>Agency Approvals:</b> CE, CSA and UR.
<b>Switch Enclosure:</b> Nylon.

### INSTALLATION

- Unpack switch and remove any packing material found inside lower housing or float chamber (tee).
  - WARNING** Mechanical shock and vibration can cause damage to the reed switch. Care should be taken to avoid dropping the switch on hard surfaces or impacting the switch assembly.
  - Switch must be installed with body in a horizontal plane with arrow on side of body pointing down.
  - If switch has an external float chamber (tee), connect it to vertical sections of 1" NPT pipe installed outside vessel walls at appropriate levels. If unit has no external float chamber, it must be mounted in a 1" NPT half coupling welded to the vessel wall. The coupling must extend through the wall. Use Teflon® thread tape or pipe joint compound to assure a good seal.
  - Connect the wiring in accordance with local electrical codes.
  - Inductive, capacitive and lamp loads can all create conditions harmful to the reed switch.
    - Inductive loads** can be caused by electromagnetic relays, electromagnetic solenoids and electromagnetic counters, all with inductive components as the circuit load.
    - Capacitive loads** can be caused by capacitors connected in series with or parallel to the reed switch. IN a closed circuit, the cable length (150 ft or more) to the switch can introduce a capacitance.
    - Lamp loads** can be caused by switching lamp filaments which have low cold resistance.
- In addition to these causes, exceeding any of the maximum electrical ratings can lead to premature or immediate failure. This includes inrush and surge currents greater than the maximum switching current. To accommodate these conditions, see diagrams on the reverse for possible solutions.
- After installation, set the switch action to **NO** (normally open) or **NC** (normally closed). Normally open contacts close and normally closed contacts open when liquid level in the vessel lifts the float past the actuation point. To change, loosen, but do not remove, the two screws on the switch cap. Slide the reed switch assembly to expose the switch action needed. Tighten screws when adjustment is complete.

**CIRCUIT INFORMATION FOR REED SWITCH PROTECTION**

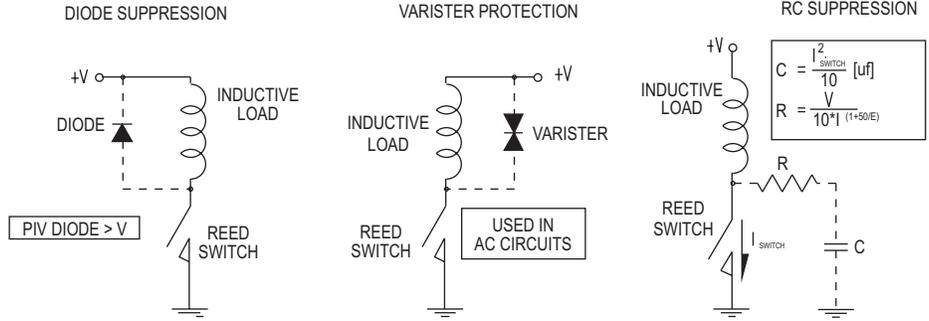
**Read information below before installing your new reed switch control!**

Exceeding the current capacity of this Reed Switch control may cause **FAULTY OPERATION!** Be aware of the inductive and capacitive or lamp loads you may be placing on you Reed Switch Control. The circuits below outline possible solutions to preventing overloads due to inrush or surge currents exceeding maximum or when the switch current and product of the lamps (low "cold" resistance) is outlined below. Failure to follow these measures to protect Reed Switch Contacts may cause the contacts to weld together or result in premature wear.

**Possible Circuit Solutions Indicated by Dashed Lines**

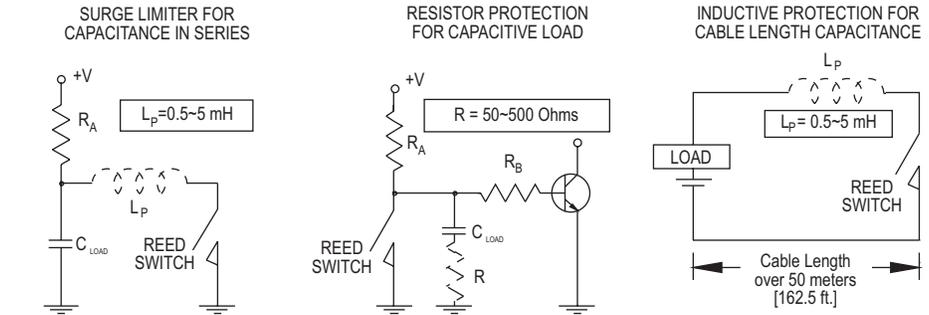
**Inductive Loads**

Possible causes –  
An electromagnetic relay, electromagnetic solenoid, electromagnetic counter with inductive component as circuit load.



**Capacitive Loads**

Possible causes –  
A capacitor connected in series or parallel with Reed Switch control. In a closed circuit, a cable length (usually greater than 50m [162.5 ft.]) used to connect reed switch may also introduce static capacitance.



**Lamp Loads**

Possible causes –  
A tungsten filament lamp load.



**MAINTENANCE/REPAIR**

Upon final installation of the Series L10, no routine maintenance is required. The Series L10 is not field serviceable and should be returned if repair is needed. Field repair should not be attempted and may void warranty.

**WARRANTY/RETURN**

Refer to "Terms and Conditions of Sales" in our catalog and on our website. Contact customer service to receive a Return Goods Authorization number before shipping the product back for repair. Be sure to include a brief description of the problem plus any additional application notes.