



Control Duty Mechanical Control Switch Installation Instructions

These mechanically activated switches provide automatic control for applications in water and sewage applications.

MECHANICAL NARROW ANGLE FLOAT



Control switch for:

- Low current, non-arcing applications down to 0.160 mA at 125 VAC
- Water
- Sewage application
- Control differential of 1.5 inches above or below horizontal with 3.5 inch tether.

MECHANICAL WIDE ANGLE FLOAT



Control switch for:

- Low current, non-arcing applications down to 0.160 mA at 125 VAC
- Water
- Sewage application

tether length (inches)	3.5 min.	6	9	12	15	18	22
pumping range (inches)	8	11	15	21	28	31	36

PREVENTATIVE MAINTENANCE

- Periodically inspect the product. Check that the cable has not become worn or that the housing has not been damaged so as to impair the protection of the product. Replace the product immediately if any damage is found or suspected.
- Periodically check to see that the float is free to move and operate the switch.
- Use only CSI Controls® replacement parts.

CSI CONTROLS® THREE-YEAR LIMITED WARRANTY

CSI Controls® warrants to the original consumer that this product shall be free of manufacturing defects for three years after the date of consumer purchase. During that time period and subject to the conditions set forth below, CSI Controls® will repair or replace, for the original consumer, any component which proves to be defective due to defective materials or workmanship of CSI Controls®.

ELECTRICAL WIRING AND SERVICING OF THIS PRODUCT MUST BE PERFORMED BY A LICENSED ELECTRICIAN.

THIS WARRANTY DOES NOT APPLY: (A) to damage due to lightning or conditions beyond the control of CSI Controls®; (B) to defects or malfunctions resulting from failure to properly install, operate or maintain the unit in accordance with printed instructions provided; (C) to failures resulting from abuse, misuse, accident, or negligence; (D) to units which are not installed in accordance with applicable local codes, ordinances, or accepted trade practices, and (E) to units repaired and/or modified without prior authorization from CSI Controls®.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

TO OBTAIN WARRANTY SERVICE: The consumer shall assume all responsibility and expense for removal, reinstallation, and freight. Any item to be repaired or replaced under this warranty must be returned to CSI Controls®, or such place as designated by CSI Controls®.

ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS ARE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. CSI CONTROLS® SHALL NOT, IN ANY MANNER, BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES AS A RESULT OF A BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY.

⚠ WARNING**ELECTRICAL SHOCK HAZARD**

Disconnect power before installing or servicing this product. A qualified service person must install and service this product according to applicable electrical and plumbing codes.

**⚠ WARNING****EXPLOSION OR FIRE HAZARD**

Do not use with flammable liquids. Install in accordance with ANSI/NFPA 70. Suitable for usage with intrinsically safe circuit extensions as defined by UL 698A.



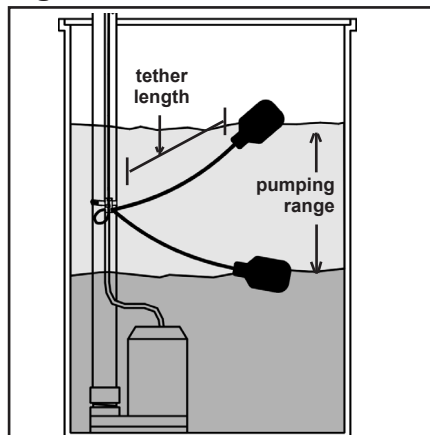
Failure to follow these precautions could result in serious injury or death. Replace product immediately if switch cable becomes damaged or severed. Keep these instructions with warranty after installation. This product must be installed in accordance with National Electric Code, ANSI/NFPA 70 so as to prevent moisture from entering or accumulating within boxes, conduit bodies, fittings, float housing, or cable.

For detailed specifications on this product, or for the complete line of CSI Controls® panel, alarm, and switch products, visit our web-site at www.csicontrols.com.

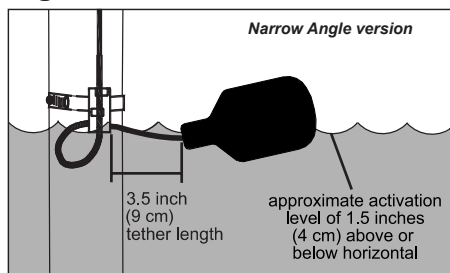
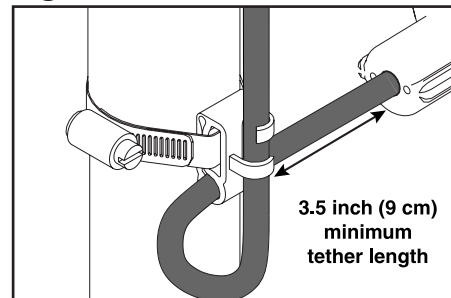
MOUNTING THE SWITCH

1. Determine the required cord tether length according to product specifications on the front page and as shown in Figure A & B.
2. Place the cord into the clamp as shown as shown in Figure C.
3. Locate clamp at desired activation level and secure the clamp to the discharge pipe as shown in Figure C.
Note: Do not install cord under hose clamp.
4. Tighten the hose clamp using screwdriver. Over tightening may result in damage to the plastic clamp. Make sure the float cable is not allowed to touch the excess hose clamp band during operation.
5. Wire switch as shown in the Wiring Diagram.
6. Check installation. Allow system to cycle to insure proper operation.

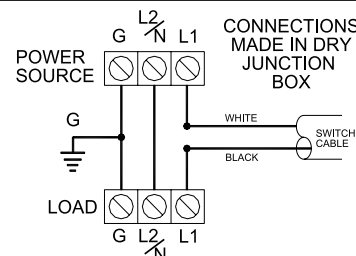
Note: All hose clamp components are made of 18-8 stainless steel material. See your CSI Controls® supplier for replacements.

Figure A

Due to weight of cable, pumping range above horizontal is NOT equal to pumping range below horizontal. Use values published on front page as a guide. Pumping ranges are based on testing in non-turbulent conditions. Range may vary due to water temperature and cord shape. Note: As the tether length increases, so does the variance of the pumping range.

Figure B**Figure C**

⚠ WARNING: Tethering switches below minimum tether length can affect switch operation and will reduce the fatigue life of the cable.

Wiring Diagram
Normally Open and Normally Closed

⚠ WARNING In 230 VAC installations, one side of the line going to the load is always **HOT**. This condition exists if the switch is on or off. Install double pole disconnect on all 230 VAC circuits.

Ensure cable connections are performed in a **dry** junction box or other watertight seal that seals both conductors and cable jacket. Failure to do so could result in electrical shock hazard and/or water traveling down cable and entering the switch. Failure to guard against this may affect switch performance.

CSI controls®

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