

Explosion Proof Signal Light w/ Audible Alarm C1D1, C2D1 - Multiple Colors - External Float Switch Instruction Manual

Thank you for your purchase of the Larson Electronics EPL-TL-1X10W-C-PA-XFSW.

WARNING

TO AVOID THE RISK OF FIRE, EXPLOSION OR ELECTRIC SHOCK, THIS PRODUCT SHOULD BE INSTALLED, INSPECTED AND MAINTAINED BY A QUALIFIED ELECTRICIAN ONLY, IN ACCORDANCE WITH ALL APPLICABLE ELECTRICAL CODES.

TO AVOID ELECTRIC SHOCK:

- BE CERTAIN ELECTRICAL POWER IS OFF BEFORE AND DURING INSTALLATION AND MAINTENANCE.
- PRODUCT MUST BE CONNECTED TO A WIRING SYSTEM WITH AN EQUIPMENT-GROUNDING CONDUCTOR.

TO AVOID EXPLOSION:

- MAKE SURE THE SUPPLY VOLTAGE IS WITHIN THE VOLTAGE RATING.
- ENSURE THE MARKED T RATING IS LESS THAN THE IGNITION TEMPERATURE OF THE HAZARDOUS ATMOSPHERE.
- DO NOT OPERATE IN AMBIENT TEMPERATURES ABOVE THOSE INDICATED ON THE PRODUCT NAMEPLATE.
- DO NOT OPERATE IF THE LENS, CORD, SEALS, HOUSING, RECEPTACLES, ETC. IS CRACKED OR DAMAGED. IF SO, DISCONTINUE USE AND CONTACT MANUFACTURER FOR REPLACEMENT PARTS.
- ALL FASTENERS SHOULD BE PROPERLY SEATED.

The EPL-TL-1X10W-C-PA-XFSW Explosion Proof Signal Light w/ Audible Alarm and External Float Switch from Larson Electronics is suitable for monitoring liquid levels inside flammable work sites. The ATEX-rated system provides visual notification via an LED strobe lamp and audio notifications via an audible horn. Constructed of 316 stainless steel, the external float switch operates magnetically and is capable of withstanding 2,000 psig (138 bar) of pressure.



SIGNAL LIGHT AND HORN INSTALLATION

We recommend only a licensed electrician install this product!

It is strongly suggested to use two licensed electricians to proceed with the final mounting of the fixture to avoid any possible personnel injury or damage to the fixture. Depending on mounting height and scaffolding, a hydraulic man-lift or two good quality ladders should be used. This fixture is heavy and must be mounted to a surface that can structurally support the load. Secure the unit firmly to the surface by lifting the unit into place, and driving appropriate mounting hardware through all pre-drilled mounting holes in the side flanges of the back plate. Failing to comply can result in breakage, allowing the fixture to fall, which can cause serious injury or death. Run 3/4" conduit to the junction box and wire the unit according to the wire diagram included with your unit. Unit should be installed and wired in accordance with all applicable NEC and local electrical/building codes. Wiring for the signal light and horn are accessible via the junction box at the base of the light fixture.

FLOAT SWITCH INFORMATION AND INSTALLATION

Rugged and reliable, the float switch operates automatically to indicate tank level. Perfect for starting or stopping pumps, opening or closing valves, or actuate level alarm signals. A unique magnetically actuated switching design gives superior performance. There are no bellows, springs, or seals to fail. Instead, the free-swinging float attracts a magnet within the solid metal switch body, actuating a snap switch by means of a simple lever arm. Float arm hinge design limits the arm angle to prevent vertical hangup.



SPECIFICATIONS

Service: Liquids compatible with wetted materials.

Wetted Materials: Float and Rod: 316 SS; Body: Brass or 316 SS standard; Magnet Keeper: 430 SS standard, 316 SS or nickel optional.

Temperature Limits: 4 to 275°F (-20 to 135°C) standard, MT high temperature option 400°F (205°C) [MT option not UL, CSA, ATEX or IECEx]. ATEX, IECEx options: Ambient temperature -4 to 163°F (-20 to 73°C); Process temperature -4 to 163°F (-20 to 73°C).

Pressure Limit: Brass body 1000 psig (69 bar), 316 SS body 2000 psig (138 bar). Standard float rated 100 psig (6.9 bar). For other floats see model chart on next page.

Enclosure Rating: Weatherproof and Explosion-proof. Class I, Groups C and D; Class II, Groups E, F, and G. ATEX 0518 II 2 G Ex db IIB T6 Gb -20°C ≤ Tamb ≤ 73°C.

-20°C ≤ Process Temp ≤ 73°C.

EC-Type Certificate No.: KEMA 03 ATEX 2383.

ATEX Standards: EN60079-0: 2012 + A11: 2013; EN60079-1: 2014.

IECEx Certified: For Ex db IIB T6 Gb -20°C ≤ Tamb ≤ 73°C. -

20°C ≤ Process Temp ≤ 73°C.

IECEx Certificate of Conformity: IECEx DEK 11.0071.

IECEx Standards: IEC 60079-0: 2011; IEC 60079-1: 2014.

Switch Type: SPDT snap switch standard, DPDT snap switch optional.

Electrical Rating: FM, ATEX or IECEx models: 10A @ 125/250 VAC (V~). CSA models: 5A @ 125/250 VAC (V~); 5A res., 3A ind. @ 30 VDC (V---). MV option: 1A @ 125 VAC (V~); 1A res., .5A ind. @ 30 VDC (V---). MT option: 5A @ 125/250 VAC (V~). [MT and MV option not UL, CSA, FM, ATEX or IECEx].

Electrical Connections: NEC/CEC models: 16 AWG, 6" (152 mm) long. ATEX or IECEx unit: terminal block.

Conduit Connection: 3/4" female NPT standard or M25 x 1.5 with -BSPT option.

Process Connection: 1-1/2" male NPT standard, 2-1/2" male NPT standard optional floats or 1-1/2" male BSPT.

Mounting Orientation: Horizontal installation standard, optional vertical top mount.

Weight: 4 lb 9 oz (2.07 kg).

Dead Band: 3/4" (19 mm) for standard float.

Specific Gravity: 0.7 minimum with standard float. For other floats see model chart.

NOTES:

- Check all ratings given in the instructions and on the product to make sure that the product is suitable for your application. Do not exceed electrical ratings, pressure ratings, or temperature ratings of the product.
 - Disconnect power supply before beginning installation to prevent possible equipment damage or electrical shock.
1. Remove packing material from switch body-cap and remove tape from magnet keeper. Install standard switch in thredolet previously welded to tank. Install optional switch mountings per application drawings. Make sure locknuts on float are tight.
 2. When mounting switch in the side of a tank, the arrow on the side of the switch must point up.
 3. Thread connecting wires through conduit and connect according to wiring diagram. Wire in accordance with NEC and local electrical codes.

NOTE: Double pole, double throw switches have dual black, blue and red leads. These are connected in the same manner as single pole, double throw switches.

ATEX and IECEx Installation Instructions:

Cable Connection

The cable entry device shall be certified in type of explosion protection flameproof enclosure "d", suitable for conditions of use and correctly installed. Cable entry may exceed 70°C. Conductors and cable gland rated ≥95°C shall be used.

Conduit Connection

An Ex d certified sealing device such as a conduit seal with setting compound shall be provided immediately to the entrance of the valve housing. Cable entry may exceed 70°C. Conductors and cable gland rated ≥95°C shall be used.

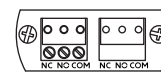
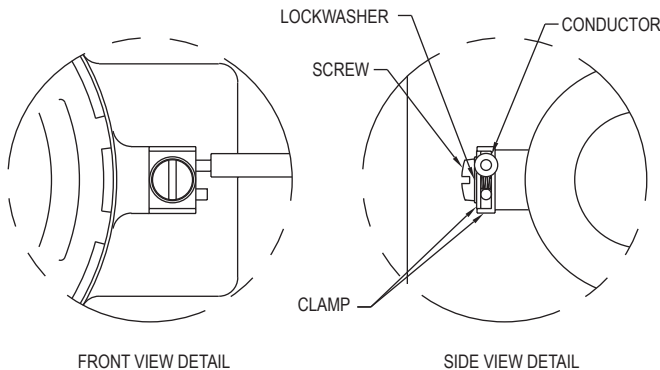
NOTE: The switch is deactivated and contacts are in normal condition when the liquid is below the float.

4. Make sure conduit or cable are properly sealed. Electrical components must be kept free of moisture, including condensation, at all times.

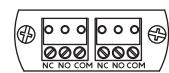
CAUTION: To prevent ignition of hazardous atmosphere, disconnect the device from the supply circuit before opening. After de-energizing, delay 10 minutes before opening. Keep assembly tightly closed when in operation.

NOTE: ATEX and IECEx units only: The temperature class is determined by the maximum ambient and/or process temperature. Units are intended to be used in ambient of $-20^{\circ}\text{C} \leq T_{\text{amb}} \leq 73^{\circ}\text{C}$. Units may be used in process temperatures up to 133°C providing the enclosure and switch body temperature do not exceed 73°C . The standard Temperature Class is T6 Process Temp $\leq 73^{\circ}\text{C}$.

5. For units supplied with both internal ground and external bonding terminals, the ground screw inside the housing must be used to ground the control. The external bonding screw is for supplementary bonding when allowed or required by local code. When external bonding conductor is required, conductor must be wrapped a minimum of 180° about the external bonding screw. See below.



SPDT



DPDT

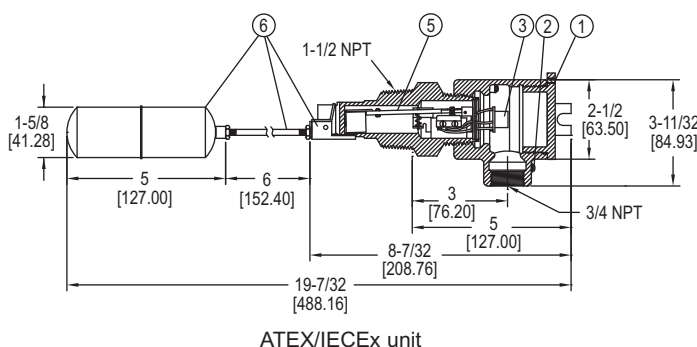
TERMINAL CONNECTIONS

MAINTENANCE

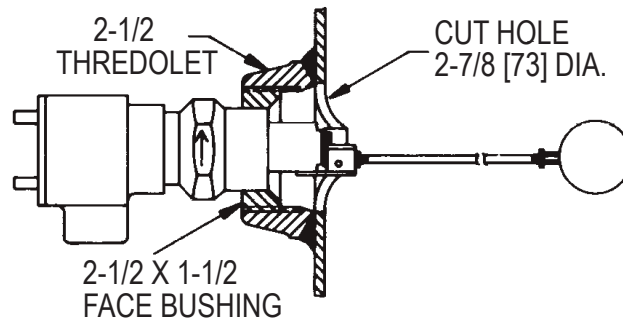
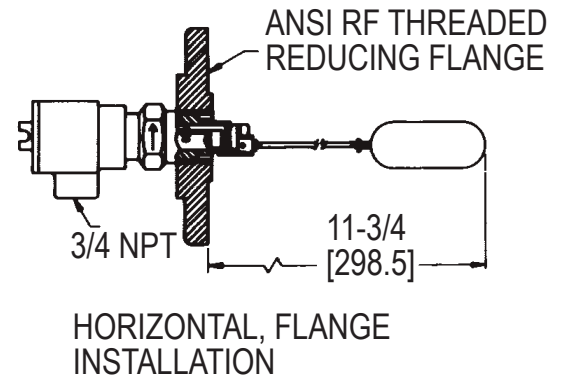
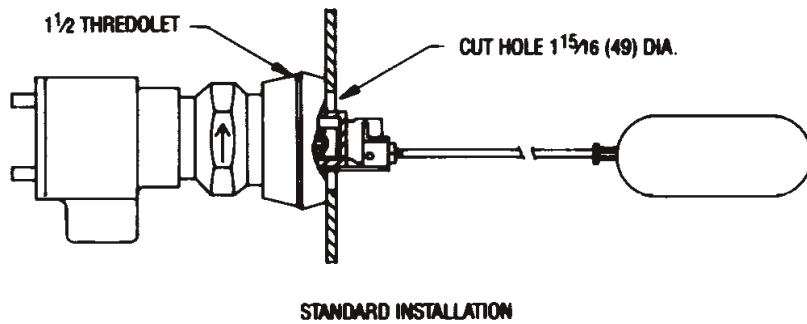
Inspect and clean wetted parts at regular intervals. The cover should be in place at all times to protect the internal components from dirt, dust, and weather, and to maintain hazardous location ratings. Disconnect device from the supply circuit before opening to prevent ignition of hazardous atmosphere. Repairs to be conducted by Larson Electronics, Inc. Units in need of repair should be returned to the factory.

PARTS LIST

1. Cover lock.
2. External ground.
3. Enclosure housing and cover.
4. Terminal block.
5. Internal ground.
- *6. Magnet arm and switch assembly.
7. Switch body.
- *8. Float, arm and block assembly.
- *Approved replacement parts



INSTALLATION GRAPHIC EXAMPLES:



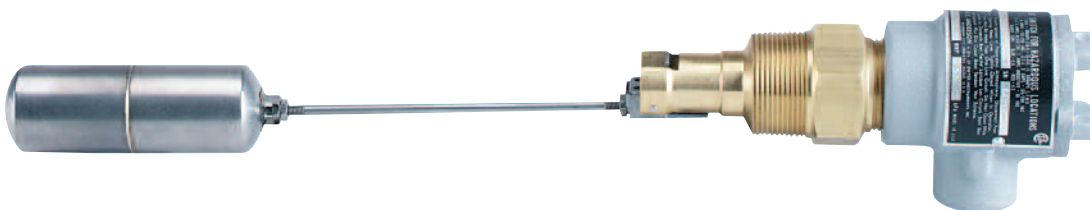
HORIZONTAL, 2-1/2 THREDOLET INSTALLATION
WITH OPTIONAL 2-1/2 [64] SPHERICAL FLOAT

USE AND CARE

Unauthorized modification may impair the function and/or safety of this device and could affect the life of the equipment. Always check for damaged or worn out parts before using the device. Store it in a secure place out of the reach of children when not in use. Inspect for good working condition prior to storage and before re-use.

REPLACEMENT PARTS

The EPL-TL-1X10W-C-PA-XFSW is designed to provide years of reliable performance. Should the need for replacement parts arise, please contact Larson Electronics.



THESE INSTRUCTIONS MAY NOT COVER ALL DETAILS OR VARIATIONS OF THIS PRODUCT FOR YOUR EQUIPMENT OR INSTALLATION REQUIREMENTS. SHOULD FURTHER INFORMATION NOT COVERED BY THESE INSTRUCTIONS BE REQUIRED, PLEASE CONTACT LARSON ELECTRONICS BY EMAIL AT SALES@LARSONELECTRONICS.COM OR BY PHONE AT 1-877-348-9680 FOR FURTHER ASSISTANCE.

PLEASE VISIT LARSONELECTRONICS.COM FOR **WARRANTY** AND **RETURN** INFORMATION.