

SUBMERSIBLE LEVEL TRANSMITTER INTRINSICALLY SAFE (PSLT-IS)

INSTALLATION INSTRUCTIONS

U.S. Patent 8,336,385

⚠ 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 this product with flammable liquids. Do not install in hazardous locations as defined by National Electrical Code, 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 cable becomes damaged or severed. 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, or cable. Keep these instructions after installation.

IMPORTANT INFORMATION

- Applications: sewage and effluent lift stations, storm water pump stations, non-potable water systems, tanks, wet wells, and reservoirs.
- When paired with specified intrinsically safe barriers and panels, this is suitable for Class 1 Division 1 Groups C and D hazardous locations.
- PRIMEX® recommends the use of a desiccant filter or bellows to protect against moisture entering the vent tube.
- Do not bend cable to a radius smaller than 1.5 inches (38mm) to avoid kinking the vent tube.
- When installing, lower the transmitter slowly and avoid impact with objects in the wet well.
- Do not press against the transmitter diaphragm with a sharp object.
- Backed by a 2-year limited warranty.

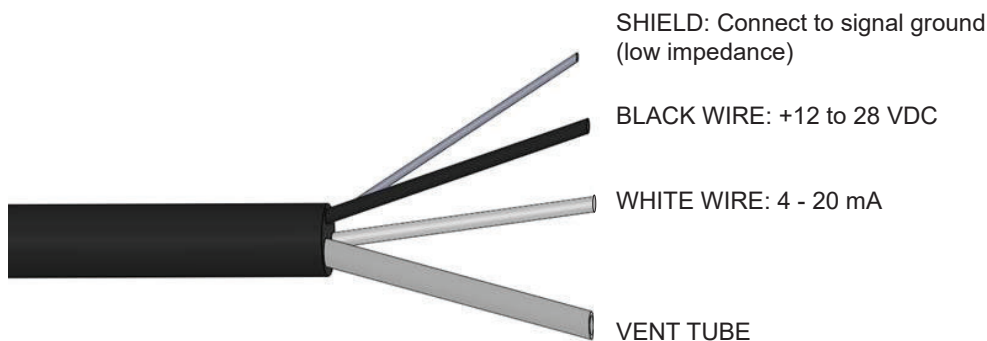
INTRINSICALLY SAFE (I.S.) ENTITY PARAMETERS

SUPPLY/SIGNAL BARRIER		PRESSURE TRANSMITTER			CABLE	
Vmax	I _{max}	C _i	L _i	P _i max	C _{cable}	L _{cable}
28 VDC	93 mA	0.25µF	0mH	0.65W	212.5pF/FT	0.08 mH/FT

PART NUMBER	DESCRIPTION	C _i + C _{cable}	L _i + L _{cable}	P _i max	Date Installed
1071046	XMTR, PSLT-IS 11.5 - 50 FT	0.2606µF	3.997mH	0.65W	
1071045	XMTR, PSLT-IS 11.5 - 75 FT	0.2659µF	5.995mH	0.65W	
1071044	XMTR, PSLT-IS 11.5 - 100 FT	0.2712µF	7.994mH	0.65W	
1074293	XMTR, PSLT-IS 11.5 - 150 FT	0.2818µF	11.991mH	0.65W	
1071043	XMTR, PSLT-IS 34.6 - 50 FT	0.2952µF	5.21mH	0.65W	
1071042	XMTR, PSLT-IS 34.6 - 75 FT	0.2969µF	7.73mH	0.65W	
1071041	XMTR, PSLT-IS 34.6 - 100 FT	0.2985µF	10.26mH	0.65W	
1074292	XMTR, PSLT-IS 34.6 - 150 FT	0.3017µF	15.31mH	0.65W	

ELECTRICAL CONNECTION

The PSLT-IS (2-wire) loop transmitter is designed to operate within a specific voltage range.

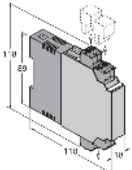




SPECIFICATIONS

- Measuring Ranges: 5 PSI (11.5 ftWC) and 15 PSI (34.6 ftWC)
- Accuracy: 1% full scale
- Operating Temp: 32°F to 140°F (0°C to 60°C)
- Output: 4-20 mA, loop powered
- Excitation Voltage: 10-28 VDC reverse polarity protection
- Proof Pressure: 2 times measuring range
- IP Rating: IP 68 for permanent submersion
- Wetted Materials:
 - Sensor Housing: PVC, 3.00" diameter x 7.75" length (76mm x 197mm)
 - Cable Seal: EPDM
 - Diaphragm: VITON®, 1.25" diameter (32mm)
 - Cable: TPE, 18 AWG - 2 wire shielded with vent tube, 0.3" diameter (8mm)

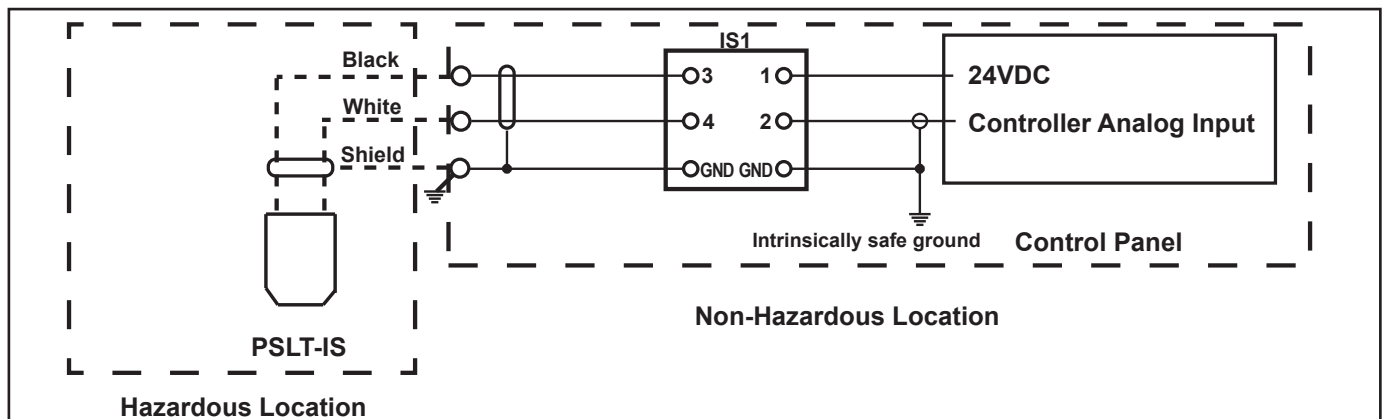
PSLT-IS Transmitter Analog Input Scaling Table					
mA	%	TRANSMITTER 0-11.5FTWC		TRANSMITTER 0-34.6FTWC	
		Ft (cm)	In (mm)	Ft (cm)	In (mm)
20	100	11.5 (350)	138 (3,505)	34.6 (1,055)	415 (10,541)
16	75	8.6 (263)	103 (2,616)	26 (792)	311 (7,899)
12	50	5.75 (175)	69 (1,753)	17.3 (527)	208 (5,283)
8	25	2.9 (88)	35 (889)	8.7 (265)	104 (2,642)
4	0	0 (0)	0 (0)	0 (0)	0 (0)

PRIMEX® Approved Accessories:

SJE Part Number	Description	
1047680	Intrinsically Safe Barrier Turck MZB87P See wiring diagram below for proper wiring.	
1031277	Bellows Assembly Alternative to the drying tube, this aneroid bellows attaches to cable vent tube and requires no periodic maintenance.	
1029891	Drying Tube Assembly Clear tube filled with indicating desiccant that attaches directly to cable vent tube to intercept water vapor. Must be periodically renewed as desiccant becomes saturated, turning color from blue (dry) to pink (saturated).	

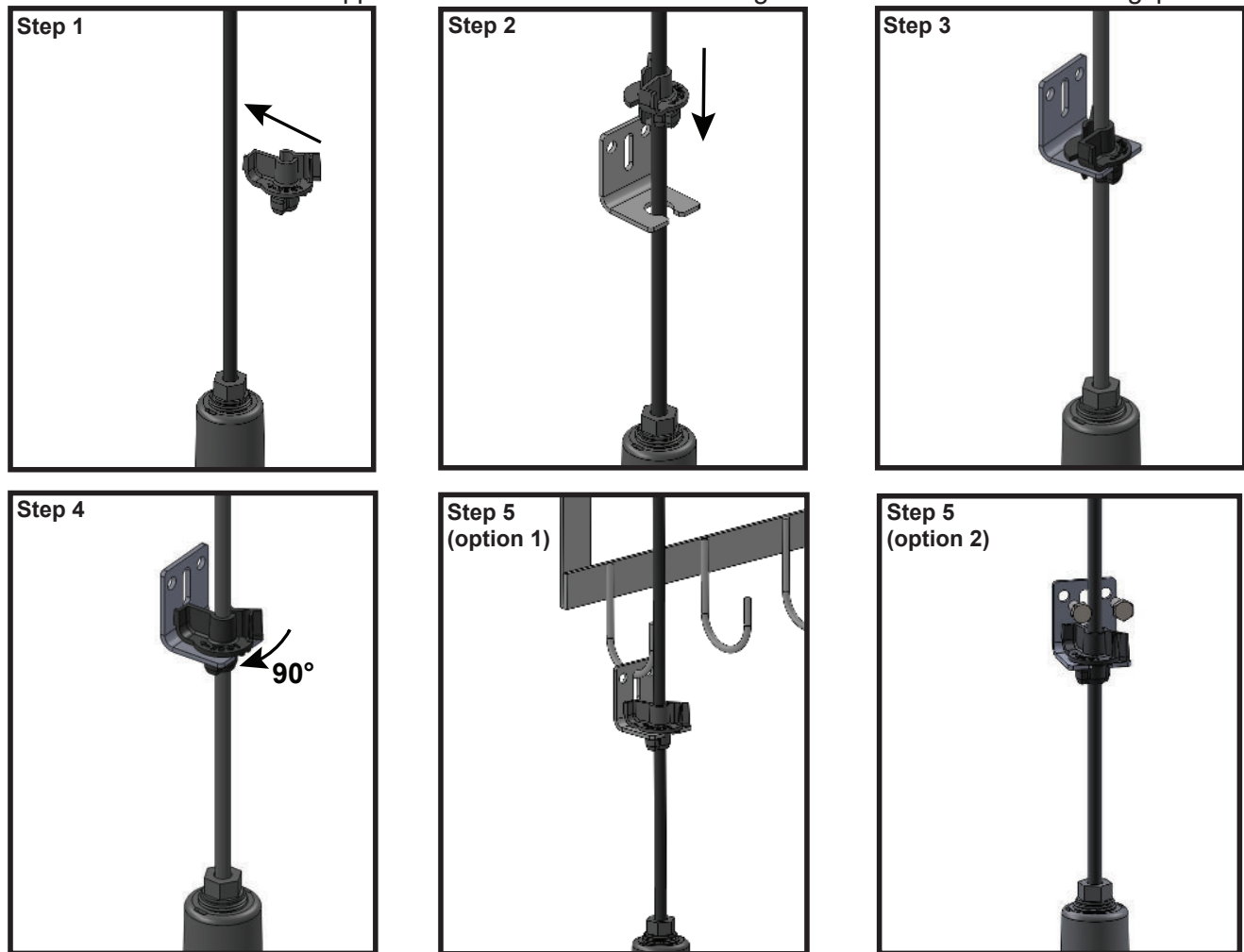
*150ft maximum cable length to be used with barrier

*Install accessories per manufacturer instructions



MOUNTING BRACKET

The PSLT-IS transmitter is supplied with a stainless steel mounting bracket and a strain relief cord grip.



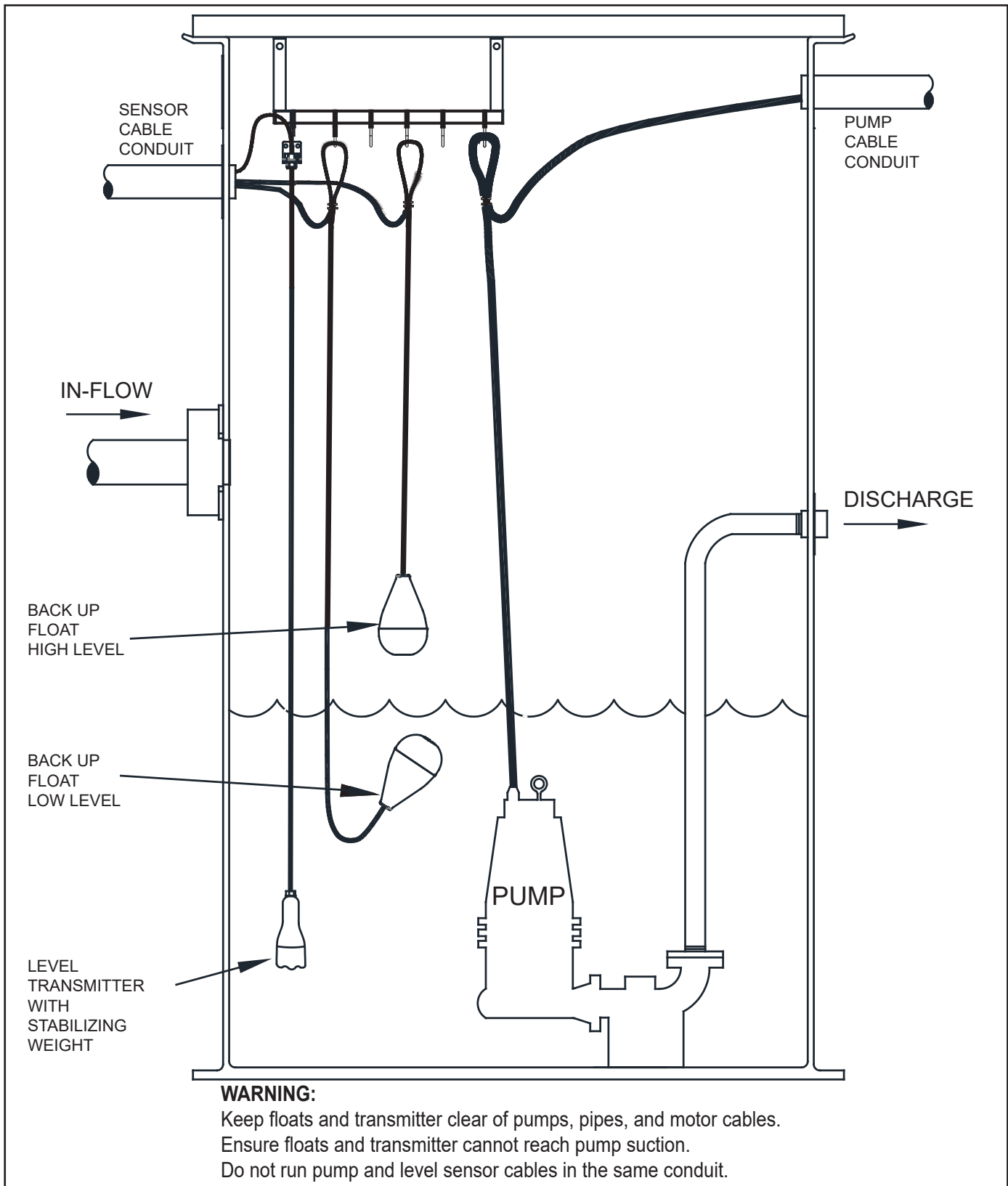
INSTALLATION

- 1. Anchoring:** Install the PSLT-IS transmitter in a stilling well when possible, to prevent damage from impact. It is acceptable to suspend the transmitter without a protective stilling well provided extra care is taken to prevent damage to the transmitter and cable. Do not mount the transmitter to a pump or piping.
- 2. Submersion:** Damage to the cable will lead to failure of the transmitter. The PSLT-IS transmitter cable has a rugged jacket material to minimize the risk of cuts and abrasions. Carefully lower the transmitter into the well, making sure the cable does not contact sharp edges. Do not drop the transmitter.
- 3. Condensation Protection:** The size of the vent tube is designed to minimize the intrusion of water vapor when the cable is terminated inside a clean and dry control panel. In areas of high humidity, use a drying tube (desiccant) or bellows to prevent water vapor from entering the vent tube. Contact PRIMEX® for ordering information. Never terminate the transmitter cable in a junction box in the wet well.
- 4. Cable:** The PSLT-IS transmitter cable is flexible; however, the vent tube inside the cable must not be kinked during installation. Do not bend cable to a radius smaller than 1.5 inches (38 mm). If a liquid tight cord grip is used with the transmitter cable, do not over tighten. This may cause damage to the cable and restrict the vent tube.
- 5. Mounting position:** The PSLT-IS transmitter must be installed in a vertical position with cable on top.

MAINTENANCE

- Periodically check the cable and housing for damage.
- Carefully remove excessive buildup on sensor.
- Periodically check the operation and output signal of the transmitter.
- Replace the product immediately if any damage is found or suspected.
- Use only PRIMEX® replacement parts.

TYPICAL LIFT STATION WITH TRANSMITTER AND FLOAT BACK UP



844-4PRIMEX (477-4639)
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