



Model L6 **FLOTECT**® Float Switch

Specifications - Installation and Operating Instructions

Explosion-Proof; UL and CSA Listed -
Class I, Groups *A, B, C, & D

Class II, Groups E, F & G

Directive 2014/34/EU (ATEX) Compliant for

CE II 2 G Ex d IIC T6 Gb Process Temp≤75°C

IECEX Compliant for Ex d IIC T6 Gb Process Temp≤75°C

*(Group A, stainless steel body only)



SPECIFICATIONS

Service: Liquids compatible with wetted materials.

Wetted Materials: Float: Solid polypropylene or 304 SS; Lower Body: Brass or 303 SS; Magnet: Ceramic; External Float Chamber (Tee): Matches lower body choice of brass or 303 SS; Other: Lever Arm, Spring, Pin, etc.: 301 SS.

Temperature Limit: -4 to 220°F (-20 to 105°C) Standard, MT high temperature option 400°F (205°C)(MT not UL, CSA, ATEX, IECEX and KC). ATEX compliant AT, IECEX IEC and KC option ambient temperature -4 to 167°F (-20 to 75°C) process temperature: -4 to 220°F (-20 to 105°C).

Pressure Limits: See next page.

Enclosure Rating: Weatherproof and Explosion-proof. Listed with UL and CSA for Class I, Groups A, B, C and D; Class II, Groups E, F, and G. (Group A on stainless steel body models only).

CE 0518 II 2 G Ex d IIC T6 Gb Process Temp≤75°C.

EC-Type Certificate No.: KEMA

04ATEX2128.

ATEX Standards: EN 60079-0: 2009; EN60079-1: 2007.

IECEX Certified: For Ex d IIC T6 Gb Process Temp≤ 75°C.

IECEX Certificate of Conformity:

IECEX DEK II.0039.

IECEX Standards: IEC 60079-00:

2007; IEC 60079-1: 2007.

Korean Certified (KC) for Ex d IIC T6 Gb Process Temp≤75°C.

KTL Certificate Number: 2012-2454-75.

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

Electrical Rating: UL models: 5 A @ 125/250 VAC (V~). CSA, ATEX and IECEX models: 5 A @ 125/250 VAC (V~); 5A res., 3 A ind. @ 30 VDC (V=). MV option: 0.1 A @ 125 VAC (V~). MT option: 5 A @125/250 VAC (V~). [MT option not UL, CSA, ATEX or IECEX].

Electrical Connections: UL models: 18 AWG, 18" (460 mm) long. ATEX/CSA/IECEX models: terminal block.

Upper Body: Brass or 303 SS.

Conduit Connection: 3/4" male NPT standard, 3/4" female NPT on junction box models.

Process Connection: 1" male NPT on models without external float chamber, 1" female NPT on models with external float chamber.

Mounting Orientation: Horizontal with index arrow pointing down.

Weight: Approximately 1 lb (.5 kg) without external float chamber, 1.75 lb (.8 kg) with external float chamber.

Specific Gravity: See next page.

Example	L6	EP	B	B	S	3	B	MT	L6EPB-B-S-3-B-MT level switch; brass upper housing, brass lower housing, brass tee with Polypropylene spherical float, SPDT snap switch, and high temperature option
Series	L6								Series L6 level switch
Construction		EP							Explosion proof and weatherproof
Upper Body Material			B	S					Brass 303 Stainless Steel
Lower Body Material				B	S				Brass 303 Stainless Steel
Circuit (Switch) Type					S	D			SPDT DPDT
Line Size						3			1" NPT
Tee and Float Options							0		No Tee, Solid Polypropylene Spherical Float* No Tee, 304 SS Cylindrical Float Brass Tee, Solid Polypropylene Spherical Float* C No Tee, 304 SS Spherical Float H Brass Tee, 304 SS Spherical Float L 303 SS Tee, 304 SS Spherical Float S 303 SS Tee, Solid Polypropylene Spherical Float*
Switch Options								MV MT	Gold Contacts on snap switch for dry circuits (see specifications for ratings) High Temperature switch rated 400°F (205°C) (see specifications for ratings)*
Options								AT CSA IEC KC GL ID TBC TOP	ATEX approved construction (with JCT option standard) CSA approved construction (with JCT option standard)* IECEX approved construction (with JCT option standard) KC approved construction (with JCT option standard) Ground Lead* Customer Information on standard nameplate Terminal Block Connector* Top Mounted (No tee models only)*

*Options that do not have ATEX, IECEX or KC.

Attention: Units without the "AT" suffix are not Directive 2014/34/EU (ATEX) compliant. These units are not intended for use in potentially hazardous atmospheres in the EU. These units may be CE marked for other Directives of the EU.

MAXIMUM PRESSURE CHART

Model Number	Float	Pressure Rating psig (kg/cm ²)
L6EPB-B-S-3-A	Cylindrical SS	200 (13.8)
L6EPB-B-S-3-B	Polypropylene	250 (17.2)
L6EPB-B-S-3-C	Round SS	350 (24.1)
L6EPB-B-S-3-H	Round SS	250 (17.2)
L6EPB-B-S-3-O	Polypropylene	1000 (69)
L6EPB-S-S-3-A	Cylindrical SS	200 (13.8)
L6EPB-S-S-3-C	Round SS	350 (24.1)
L6EPB-S-S-3-L	Round SS	350 (24.1)
L6EPB-S-S-3-O	Polypropylene	2000 (138)
L6EPB-S-S-3-S	Polypropylene	2000 (138)

INSTALLATION

Unpack switch and remove any packing material found inside lower housing or float chamber.

Switch must be installed with body in a horizontal plane and arrow on side pointing down.

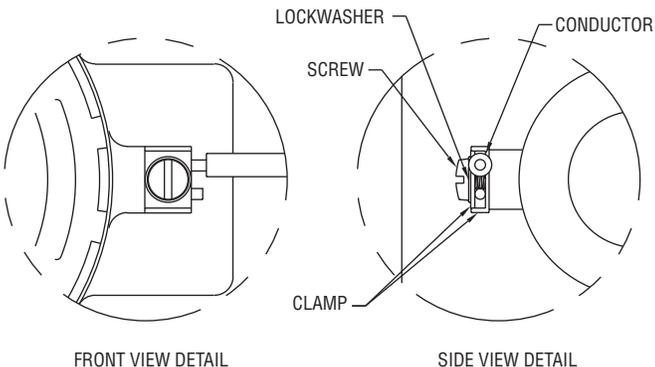
If switch has an external float chamber (tee), connect it to vertical sections of 1" NPT pipe installed outside vessel walls at appropriate levels. If unit has no external float chamber, it must be mounted in a 1" NPT half coupling welded to the vessel wall. The coupling must extend through the wall.

Inspect and clean wetted parts at regular intervals.

ELECTRICAL CONNECTIONS

Connect wire leads in accordance with local electrical codes and switch action required. N.O. contacts will close and N.C. contacts will open when liquid level causes float to rise. They will return to "normal" condition on decreasing liquid level. Black = common, Blue = N.O. and Red = N.C.

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. Some CSA listed models are furnished with a separate green ground wire. Such units must be equipped with a junction box, not supplied but available on special order.



EC-Type Certificate IECEX and KC 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. For $T_a \geq 65^\circ\text{C}$ cable and cable gland rated $\geq 90^\circ\text{C}$ 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. For $T_a \geq 65^\circ\text{C}$ wiring and setting compound, in the conduit seal, rated $\geq 90^\circ\text{C}$ shall be used.

WETTED MATERIALS CHART

Model	Brass	Bronze	Ceramic	Polypropylene	301SS	303SS	304SS
B-S-3-A	X		X		X		X
B-S-3-B	X	X	X	X	X		
B-S-3-C	X		X		X		X
B-S-3-H	X	X	X		X		
B-S-3-O	X		X	X	X		
S-S-3-A			X	X	X		X
S-S-3-C			X		X	X	X
S-S-3-L			X		X	X	X
S-S-3-O			X	X	X	X	
S-S-3-S			X	X	X	X	

Note: ATEX, IECEX and KC units only: The temperature class is determined by the maximum ambient and or process temperature. Units are intended to be used in ambient of $-20^\circ\text{C} \leq T_{amb} \leq 75^\circ\text{C}$. Units may be used in process temperatures up to 105°C providing the enclosure and switch body temperatures do not exceed 75°C . The standard Temperature Class is T6 Process Temp $\leq 75^\circ\text{C}$.

Refer to Certificate No: IECEX DEK 11.0039 for conditions of safe use for IECEX compliant units.

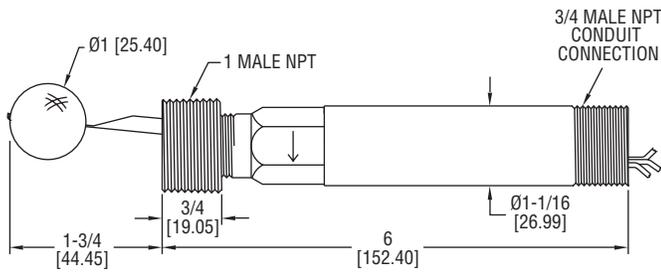
All wiring, conduit and enclosures must meet applicable codes for hazardous areas. Conduits and enclosures must be properly sealed. For outdoor or other locations where temperatures vary widely, precautions should be taken to prevent condensation inside switch or enclosure. Electrical components must be kept dry at all times.

CAUTION: To prevent ignition of hazardous atmospheres, disconnect the device from the supply circuit before opening. Keep assembly tightly closed when in use.

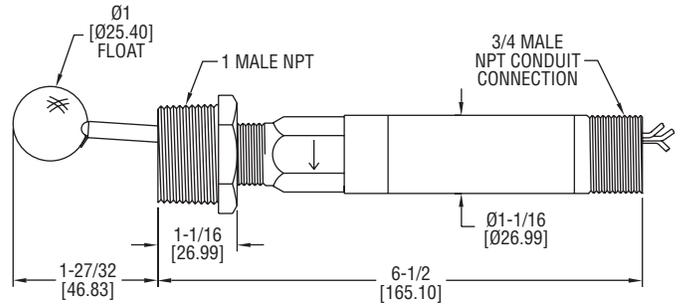
MAINTENANCE

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 Dwyer Instruments, Inc. Units in need of repair should be returned to the factory prepaid.

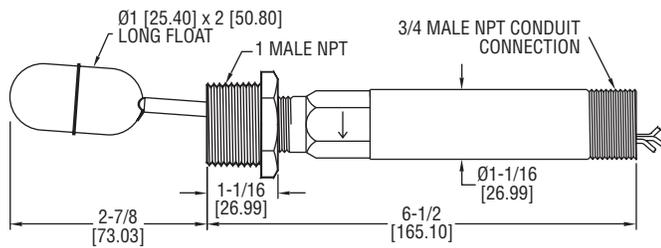
FLOTECT® MODEL L-6 FLOAT SWITCH — DIMENSION DRAWINGS



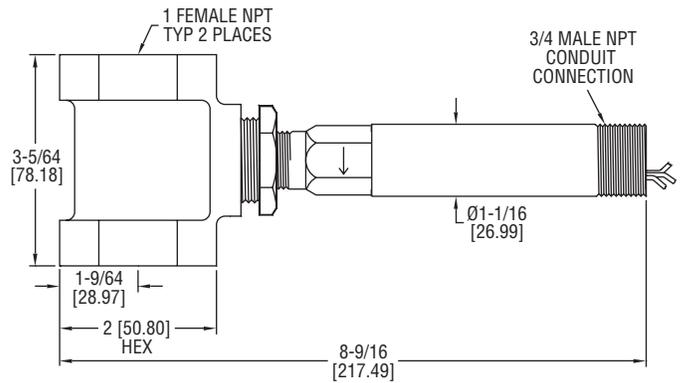
Polypropylene Float



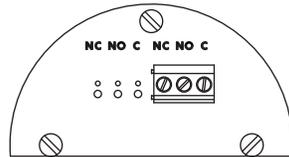
Round Stainless Steel Float



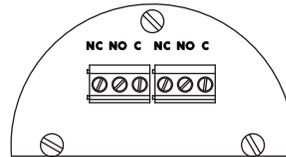
Cylindrical Stainless Steel Float



With External Chamber (Tee)

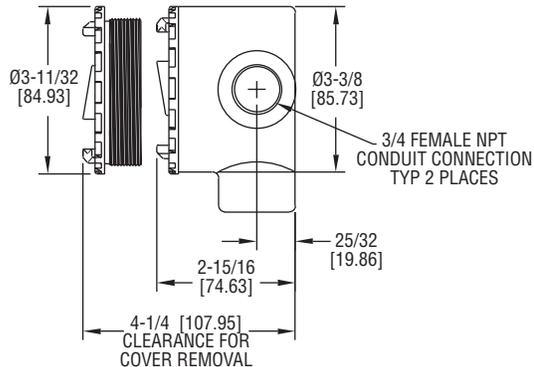
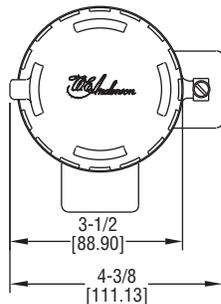


SPDT



DPDT

Terminal Connections CSA, ATEX Enclosures



CSA, ATEX Conduit Enclosure

Limited Warranty: The Seller warrants all Dwyer instruments and equipment to be free from defects in workmanship or material under normal use and service for a period of one year from date of shipment. Liability under this warranty is limited to repair or replacement F.O.B. factory of any parts which prove to be defective within that time or repayment of the purchase price at the Seller's option provided the instruments have been returned, transportation prepaid, within one year from the date of purchase. All technical advice, recommendations and services are based on technical data and information which the Seller believes to be reliable and are intended for use by persons having skill and knowledge of the business, at their own discretion. In no case is Seller liable beyond replacement of equipment F.O.B. factory or the full purchase price. This warranty does not apply if the maximum ratings label is removed or if the instrument or equipment is abused, altered, used at ratings above the maximum specified, or otherwise misused in any way.

THIS EXPRESS LIMITED WARRANTY IS IN LIEU OF AND EXCLUDES ALL OTHER REPRESENTATIONS MADE BY ADVERTISEMENTS OR BY AGENTS AND ALL OTHER WARRANTIES, BOTH EXPRESS AND IMPLIED. THERE ARE NO IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE FOR GOODS COVERED HEREUNDER.

Buyers Remedies: THE BUYER'S EXCLUSIVE AND SOLE REMEDY ON ACCOUNT OF OR IN RESPECT TO THE FURNISHING OF NON-CONFORMING OR DEFECTIVE MATERIAL SHALL BE TO SECURE REPLACEMENT THEREOF AS AFORESAID. THE SELLER SHALL NOT IN ANY EVENT BE LIABLE FOR THE COST OF ANY LABOR EXPENDED ON ANY SUCH MATERIAL OR FOR ANY SPECIAL, DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES TO ANYONE BY REASON OF THE FACT THAT IT SHALL HAVE BEEN NON-CONFORMING OR DEFECTIVE.