



# LVM-20 Series

## Level Track Mounting System Sensor Car



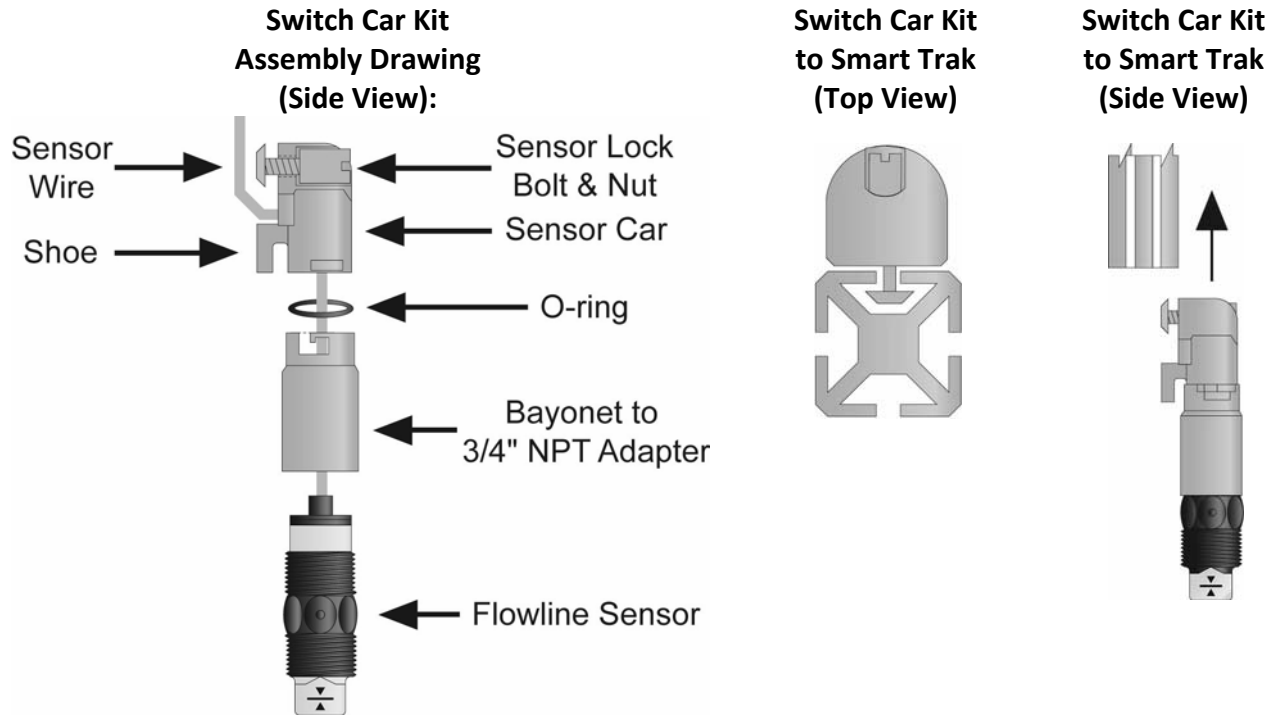
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**Sensor car and bayonet adapter:** The sensor car, LVM-20 series, is the heart of the Level Trak mounting system (LVM-10 series). It slides in the grooves of the track, and is locked into position by a plastic bolt and screw. The bayonet to 3/4" NPT adapter has a female 3/4" NPT fitting on one end where the sensor (not included) will screw in, and a bayonet fitting on the other end that attaches it onto the sensor car with a slight turn, with an O-ring in-between to provide tension for the push-and-turn connection.

**Material Compatibility:** The Bayonet to 3/4" NPT adapter and Sensor Car are made of glass filled Polypropylene (PP). The Locking Bolt and Locking Nut are made of Polychlorotrifluoroethylene (PCTFE) and the O-ring is made of FKM. Make sure that the application liquids are compatible with the materials that will be wetted.



**Components:** One Switch Car kit (LVM-20) includes the following parts:

- 1 Locking Bolt
- 1 Locking Nut
- 1 Sensor Car
- 1 O-ring
- 1 Bayonet to 3/4" NPT Adapter
- 2 Wire Clips
- Owner's Manual

**1. Attach the sensor(s) to the sensor car(s):**

- a. Thread the sensor wire through the bayonet to the  $\frac{3}{4}$ " NPT adapter, making the approach from the threaded side.
- b. Screw the bayonet adapter onto the sensor until the cap of the sensor seats against the pit inside the adapter.
- c. Thread the black O-ring onto the sensor wire and push it into the bayonet side of the bayonet adapter, seating it firmly into the adapter.
- d. Thread the sensor wire into the sensor car and out through the hole between the sensor car shoe and the locking bolt.

**⚠ Note:** The sensor wire insulation is made from polypropylene or perfluoroalkoxy to ensure chemical compatibility. This makes it stiffer than conventional wire. Take care not to bend the wire too sharply to the point where the insulation is broken. Such a break could cause liquid to enter the wiring, damaging the sensor.

- e. Pull the sensor wire through the hole while pushing the sensor and bayonet towards the sensor car until the bayonet is in position. Align the slots on the bayonet with the pins on the sensor car, and firmly push together. When the pin is in the correct position, turn the bayonet until it is in the locked position.

**2. Slide the first sensor car into the track:**

- a. Place the sensor car locking bolt (with the square tapered head) through the hole on the flat side of the sensor car, and place the slot-head nut through the other side. Screw them together several turns, but do not tighten them all the way yet.
- b. One end of the track has a hole drilled horizontally through it. This is the top of the track. You will want to insert the sensor car on the bottom end of the track (opposite the hole). Slide the bolt of the sensor car into the track (make sure the bolt head is turned so that the beveled edges are aligned with the beveled edges of the track, see illustration on previous page). Then slide the shoe (the lower end closest to the sensor) of the sensor car into the track.
- c. Slide the sensor to the desired position/depth. Tighten the sensor car lock screw with a screwdriver. To not over tighten. Route the wire inside the track. Slide the wire clips into the track to hold the wire in the track. Do not cut the wire to length yet.

**Procedure for two or more sensors:** If more than one sensor will be installed on the track, repeat the procedures above for each sensor. However, do not mount the sensors too closely together because two sensors on different side of the track cannot fit through a 2" NPT fitting at the top of the tank. If adjacent mounting is necessary you may need to install the other sensor in temporary staggered positions, sliding them into the correct position after the Level Track mounting system (LVM-10 series) has been mounted in the tank.



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