

Thief Hatch Switch Kit

MODEL NUMBERS

- SX1000-T10: 10 ft Thief Hatch Switch Kit
- SX1000-T30: 30 ft Thief Hatch Switch Kit

OVERVIEW

Components:

- Latch Switch Pin
- Magnetic Trigger Hinge Pin
- 10 ft or 30 ft cable for wiring to Level Transmitters (WT-XXXX-LL3/3D, SM5X00-RL1/2), Discrete Transmitter (WT-XXXX-DS1 / SM5X00-DJ1/DS1), High Level Switch Transmitters (WT-XXXX-HL1, SMXXXX-HLT)

ELECTRICAL SPECIFICATIONS

1. Switched Power Max: 10 watts
2. Switched Voltage Max: 180 VDC or 130 VAC
3. Breakdown Voltage: 200 V
4. Switched Current Max: 250 mA
5. Carry Current Max: 1,000 mA
6. Operating Temperature: -40 °C to +125 °C

The Thief Hatch Switch Kit is a turnkey solution for monitoring and instantly detecting open or closed status of a thief hatch when used with an OleumTech Liquid Level Transmitter, LL3, LL3D, LL5, RL1, RL2 or any Discrete Transmitter including High Level Switch Transmitter (top mount). In addition, these Transmitters counts the number of times the thief hatch was opened.

The Thief Hatch Switch Kit consists of a latch switch pin and a magnetic trigger hinge pin along a 10 or 30 ft outdoor-rated wiring. The switch wires are then attached to a discrete input available on the Transmitter. When the Transmitter powers up, it checks to see if the circuit is "closed" or "open." The circuit is only closed when the hatch is properly latched. If the latch is not closed or the sensor wires have been damaged or disconnected, the Transmitter will send an "open" signal.

INSTALLATION

To install the switch, you will need to remove the lower pin that the latch catches on. You can do this by simply removing one of the retaining clips found on the side of the pin and sliding it out. Then, you insert the new security switch pin into the same position and secure it using the retaining clip. Typical installations will route the cable around to backside of the hatch so it will not get caught during normal operation.

The cable is Outdoor UV exposure rated, so while conduit is always recommended for long runs, it is not necessary. The switch should be mounted to the hatch so that it does not move when the hatch is open. The wired connection can be secured to the bolts sealing the hatch to the tank, but it is not required.

To install the trigger hinge pin, the process is similar to the switch. Remove one of the retaining clips from the steel pin that holds the hasp to the lid of the hatch. Remove the existing pin and replace it with the new trigger pin, being sure to secure it using the supplied clip. You can confirm the operation of the switch at this time by testing the hatch resting unlatched and confirming the circuit is open. Latch the hinge hasp and confirm continuity. Below is a picture of the switch and pin installed for reference.

NOTE: You can put up to 4 pins on the same circuit.

This product is a simple apparatus. Digital inputs constitute almost one-third of all process signals. They also are known as binary, on-off, 0/1, or simple switching signals where a switch is either opened or closed. The most common examples of these are mechanical or reed contacts, transistors, limit, float, on-off, and pushbutton switches. As defined in paragraph 3.12 of the ANSI/ISA-RP12.6-1987, switches are simple devices that neither generate nor store more than 1.2 V, 0.1 A, 25 mW, or 20µJ. Since switches are simple devices, they do not have to be approved as intrinsically safe. If they are connected to an approved intrinsically safe associated apparatus (barrier), the circuit is deemed to be intrinsically safe.

Simple apparatus is considered not to require certification by a notified body. The responsibility for compliance with the relevant parts of the standard rests with the persons claiming compliance, who may be a manufacturer or user. Certification to the ATEX Directive is not required because of the low levels of energy, which are added to the intrinsically safe circuit by this apparatus. Simple apparatus is required to be clearly identified when it is installed.

