Terminus™

SHOCK DETECTION PRODUCTS

Install Manual

SP3224 Wall Mount Conduit Shock Sensor
SP3224D Damped Wall Mount Shock Sensor
Installation Manual 11/30/06
STLIT02074A

SECURITY UL® 528R LISTED

This Product is Listed by
UNDERWRITERS LABORATORIES INC

How Terminus Works

The Terminus SP3224 Shock Sensor is used to detect entry attempts on walls by sensing the mechanical disturbance associated with the attempt. Shocks occur when a material is broken, hammered, cut, sawed, or strained.

Shock detection systems are ideal for perimeter protection because they are generally insensitive to ambient noise. The SP3224 is used with a processor. Adjustments on the processor allow the installer to eliminate alarms from such causes as thunder, passing trains, nearby traffic or other disturbances that would cause false alarms.

The shock sensor uses two contacts that must be activated simultaneously to produce an alarm signal. This redundant technology lessens the chance of false alarms. The gold plating on the contacts provides excellent conductivity and superior corrosion resistance. The sensors are hermetically sealed to keep out moisture, dirt and airborne contamination that can cause malfunction or failure.

Sensor Applications and Spacing

Terminus wall sensors are used for brick, block, metal or wood walls. Typical spacing between sensors will vary depending on wall material and construction. Coverage for plywood, brick, metal or solid block walls is a five foot radius. For hollow block walls a six foot radius of coverage can be expected. In all cases, test the sensors to verify coverage.

Hardware Installation

1. Mount the conduit (EMT) and the SP3224 housing to the wall as shown. Observe spacing requirements for the wall material. The kit contains a plastic block to be used as a spacer.

2. Pull the loop wire through the conduit and the sensor housings. Loop wires should be 22 gauge twisted pair cable for runs less than 1500 feet and 18 gauge twisted pair for runs exceeding 1500 feet. Leave enough loop wire at the top of each conduit section to cut and wire into fence sensors.

3. Connect each sensor to the loop wires (described in sensor wiring section)

4. (Optional) Should the installation require a tamper switch, a hole is provided at the top of the retainer assembly. Reed switch part number MSPM101CS1 manufactured by Alco Switch is recommended for tampering purposes. It requires soldering the loop wires and is an SPST normally-closed switch.

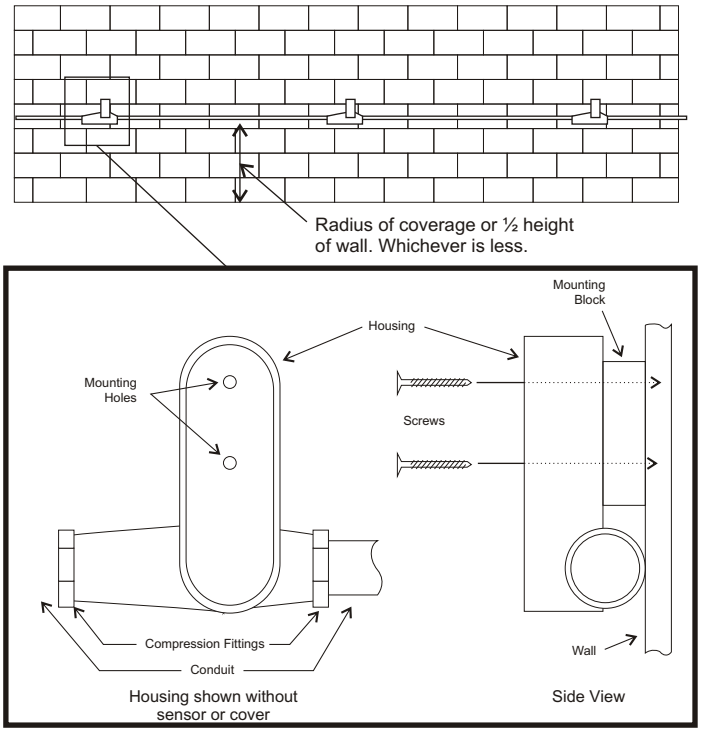


Figure 1

Sensor Installation

1. Cut the sensor lead wire to a length of 4 or 5 inches to ease installation. Solder the sensor lead wires to the loop wires as shown in the Electrical Connections diagram on next page. Properly insulate all wire connections. The end-of-line resistor (supplied with the processor) must be installed at the last sensor as shown.

2. (Optional) Should the installation require a tamper switch, solder the switch to the loop wires in series with the sensor. Alco Switch MSPM101CS1 is recommended.

3. Place the SP3237 sensor into the sensor retainer as shown in figure 2. Insert the sensor and retainer into the housing with leads up in order to prevent moisture from corroding the connections. Dress the excess wire into the slot on the back of the retainer. Using a tie wrap to secure the loop wires to the eyelet at the bottom of the retainer assembly for strain relief.

4. Push the insulated connections and excess wire into the space between the sensor assembly and the top of the housing.

Connections should be made at top of housing in order to prevent moisture from corroding the connections. Do not make loop connections in the conduit tees.

For wire runs under 1500 feet use 22 AWG wire size or greater and for runs 1500 feet or over use 18 AWG wire size.

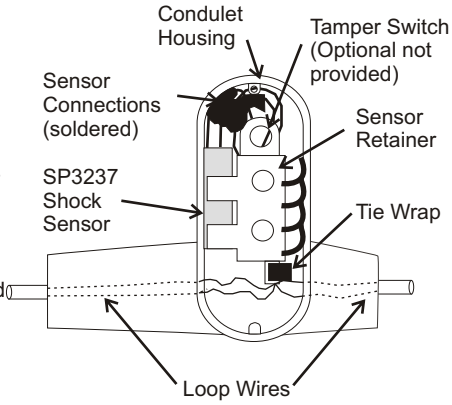
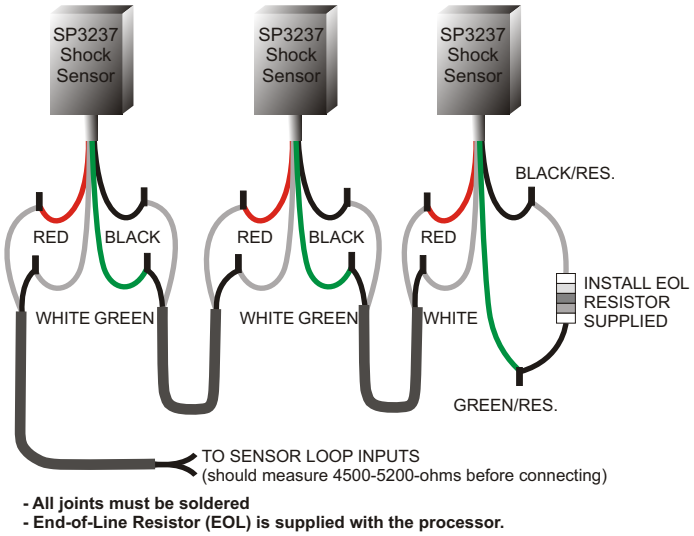


Figure 2

5. Install the condulet gasket and cover.

6. To test the sensor, set the processor to a count of one and shake the fence in the area covered by each sensor. If the response of the processor is not satisfactory, make the necessary adjustments and retest.



- All joints must be soldered
- End-of-Line Resistor (EOL) is supplied with the processor.

Electrical Connections

Completing the Installation

If the previous steps have been followed in the correct order, all the sensors should be wired together and ready to complete the installation. Before connecting the sensor loop to the processor, we suggest that the following be checked:

1. The end-of-line resistor has been connected to the last sensor of each loop.

2. Lightning arrestor devices have been installed between the loop and the processor unit. The ground terminal of the arrestor should be attached to a cold water ground or earth ground.

3. All electrical connections have been taped or insulated to avoid short/grounds.

4. Loop wires to be connected to processor inputs should measure 4500-5200 ohms before being connected.

5. All joints should be sealed using RTV sealant.

You are now ready to connect the sensor loop to the zone processor and adjust the level of zone sensitivity as required. Test the system at least once a year.