

Series 300 Interlock Switches

Installation Instructions

The interlock switch and actuator should be mounted in only three configurations for actuation:

Figure 1

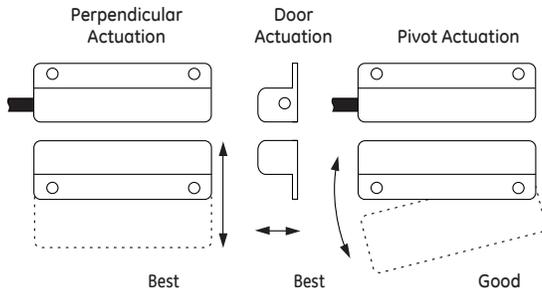
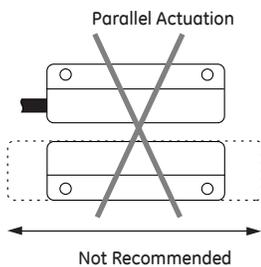


Figure 2



Installation

Mounting Instructions

1. Position the switch and actuator so the labels are reading in the same direction.
2. Mount the switch on the stationary frame of the machine and mount the actuator on the moveable guard, door or gate. To determine the optimum sense range, shown under the electrical specifications for each product, attach an ohmmeter to the black and white wires.

The meter should read "Infinity" with the actuator away from the switch. Bring the actuator toward the switch until the meter reads 0 ohms. Mark this point and bring the actuator closer to the switch until the meter again reads "Infinity". Mark this point and position the actuator between the two marks. Align the actuator with the switch so the labels read in the same direction.

* (For DT models, which incorporate a triac, the meter will read some resistance when the switch is "on," and the direct current (DC) from the meter may cause the switch to latch in the "on" state until the meter is disconnected.)

The switch and actuator must be mounted so that the actuator moves in one of the approved directions (Figure 1).

Parallel actuation is NOT recommended. An on/off/on (double actuation) signal may result when the actuator passes by the switch rather than coming to rest in proximity to it (Figure 2).

3. Mounting on a ferrous material will effect the sense range a minimum of 50 %. However, a 1/4" nonferrous spacer positioned under the actuator and/or switch should restore most of the lost sensor range.
4. For best protection against operator defeat, mount with non-removable screws, bolts or nuts (see Accessories).
5. When mounting a metal switch to an ungrounded machine, connect the ground lead to one of the switch mounting screws.

CAUTION — Particular care must be taken to determine the actual load of the switch circuit.

Surges from coils, motors, contactors, solenoids and tungsten filaments must be considered.

Transient protection, such as back-to-back zener diodes (Transorb) or an RC network, is recommended for such loads to ensure that maximum ratings of the switch are not exceeded.

Line capacitance and load capacitance must be considered. An in-line resistor can be added to limit the inrush current.

The resistor can only be added in series with the last wire just before the load.

The voltage drop and the power rating of the resistor must be considered.

$$\text{Voltage drop} = I \cdot R$$

$$\text{Watts} = I^2 \cdot R$$

(I = maximum continuous current of the load)