



Limit Switch Function – The Basics

Description

There are generally two types of limit switches used in perimeter security equipment:

	
<p style="text-align: center;">Mechanical Switch</p>	<p style="text-align: center;">Proximity Switch</p>
<p>A mechanically operated switch relies on a lever or arm to be displaced mechanically, which activates a micro switch in the body of the device to open or close an electrical contact. These types of switches come with a variety of levers, arms, or shafts to match the particular activation method. Activation methodologies are typically ramps or levers on the moving part of the equipment that is being monitored.</p>	<p>A proximity switch generates a small radio frequency field. When this field is interrupted by a conductive object moving into the field, the switch will detect this interruption and cause a contact closure or contact opening, based on the type of proximity switch utilized. The sensing range at which the proximity switch activates can vary with the type of switch used. Switches can be obtained with fields that activate at 15mm or as low as 1mm. The type of conductive material which moves into the field also makes a difference in functionality. When using nonferrous metals a correction factor must be taken into account to gain proper activation.</p>

Application

In general limit switches are used to indicate that equipment is open or closed or both. In some cases, limit switches signal the equipment drive system to stop the motion of closing or opening. Some equipment utilizes only one limit switch to indicate equipment is in a particular location, i.e. down. For example, a wedge barrier will have a down limit switch, and any position of the wedge barrier other than fully down is considered "UP". Security gates typically have a limit switch for open and closed position indication and drive system control.

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