

Gimatic Sensor Box

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Microprocessor Box

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Terminal Box

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Vacuum Monitor

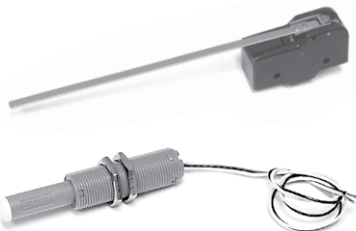
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Cables

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Simple Contact Sensors

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Photo Sensors

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>ASS< Sensor Boxes

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Sensor Reference Charts

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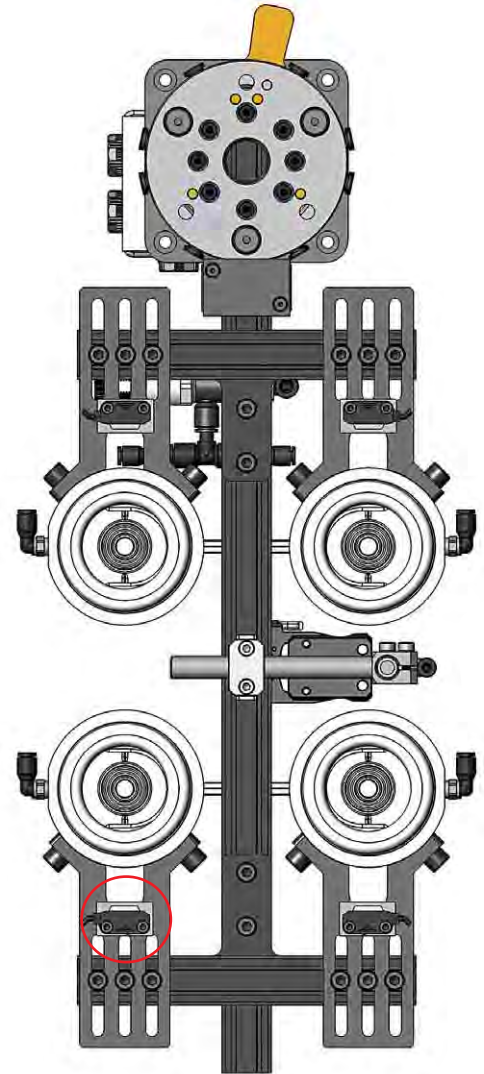
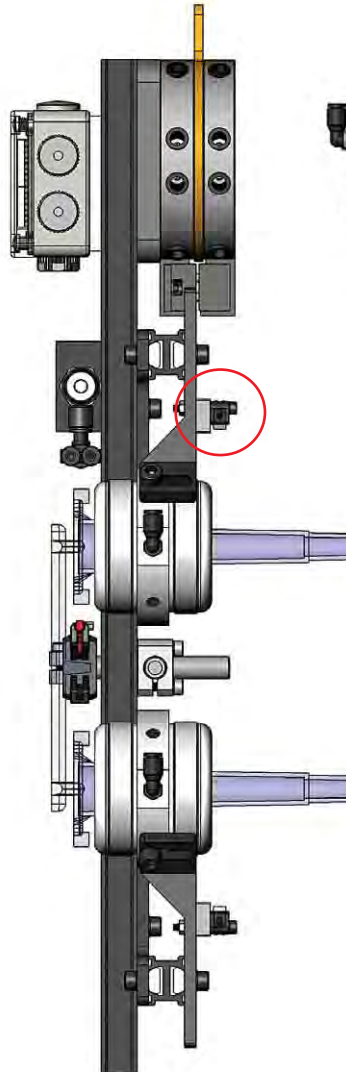
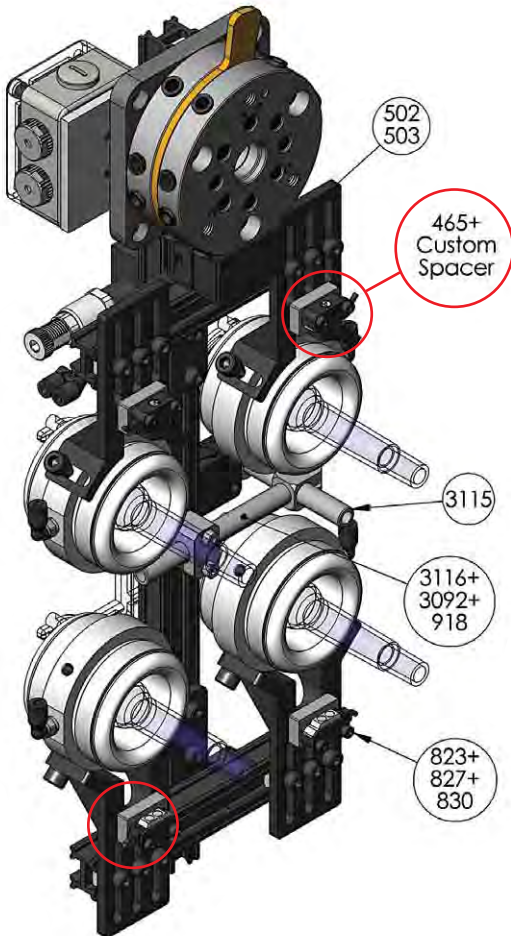
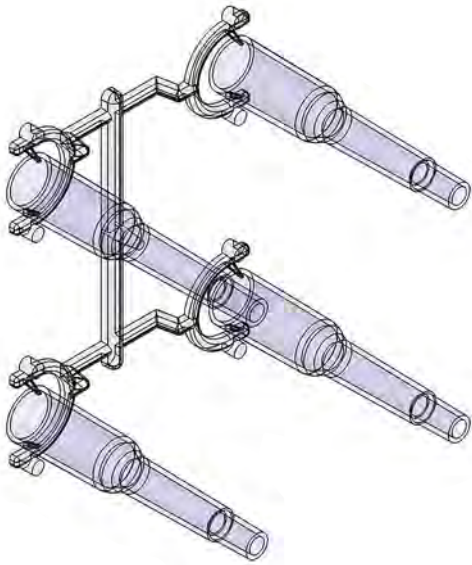

Sensor Switch Basics

A sensor switch is an electrical switch that is actuated when it passes through a magnetic field. The magnetic field is created by a magnet on the piston of a gripper or air cylinder.

Hall effect sensor switches are electronic switches with no moving parts. They give a very repeatable signal, have long life expectancy, and they operate on low DC supply voltage. They are designated as NPN "sinking" if the switch is between ground [-] and the load or PNP "sourcing" if the switch is between positive [+] and the load. (Typically, Japanese and American robots use NPN signaling and European robots use PNP signaling.) Unless a relay is used—as they are in the SB6S Sensor Box on page 810—Hall effect sensor switches cannot be connected in series with each other.

Reed sensor switches are electromechanical switches which will operate on either AC or DC voltage. They are subject to current 'spikes' which can occur with capacitive, reactive, or inductive loads. Reed switches can be connected in series, but will experience cumulative voltage drops across each unless relays are used like in the SB6S Sensor Box. This style of switch is not as commonly used on robot EOAT as Hall effect.

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