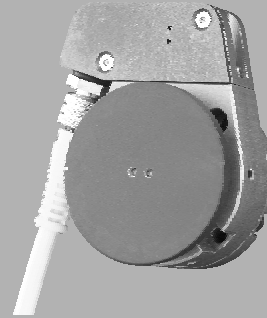


# QS - 7

## QuickSTOP Collision Sensor

QuickSTOP is a dynamically variable collision sensor that operates on air pressure. At impact, the air chamber is opened, and the shutdown signal is immediately sent to the system controller.



### Features and Benefits

- Dynamically Variable Trip points allow you to program your collision sensor at all speeds of an operation. The breakaway threshold adjusts to match the working force ranges of your robot/application.
- All QuickSTOP models feature a noncompressive, metal to metal seal which ensures reliable and consistent operation, giving you permanent repeatability.
- Senses Angular and Compressive Forces. QuickSTOP's unique design offers protection in the X,Y, and Z axes.
- QuickSTOP monitors Performance Readiness. When pressurized, the pressure switch is closed indicating that the QuickSTOP is reset in the proper position.
- At the moment of impact, the QuickSTOP's air chamber is opened, exhausting pressure which instantly opens the pressure switch and causes loss of signal.
- Pressure loss upon impact offers better tool protection as the QuickSTOP absorbs energy and removes the force from your tool and robot wrist.

### Applications

- Material Handling
- Machine loading/unloading
- Pick and place operations

Not exactly what your application requires? Applied Robotics can design a solution that meets your particular application needs.

### SPECIFICATIONS

|                                                        |                                                                                                               |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Compliance Angle                                       | +/- 5 Deg                                                                                                     |
| Axial Compliance (z+)                                  | 1.33 mm<br>0.052 in                                                                                           |
| Rotary Compliance                                      | No Limit                                                                                                      |
| Operating Pressure                                     | 1.0-6.0 bar (14.5-87 psig)                                                                                    |
| Torque trip point Mz<br>continuously variable          | .28 -1.5 N-m<br>2.5 - 13.5 in-lb                                                                              |
| Moment trip point Mx & My<br>continuously variable     | .31 - 1.5 N-m<br>2.7 - 13.2 in-lb                                                                             |
| Repeatability at tool mounting surface<br>X and Y axes | +/-0.013<br>+/-0.0005 in                                                                                      |
| Z axis                                                 | +/-0.013 mm<br>+/-0.0005 in                                                                                   |
| Rotational                                             | +/-0.489 radians (10 <sup>-3</sup> )<br>+/-0.028 degrees                                                      |
| Mass                                                   | .11 kg<br>.24 lb                                                                                              |
| Center of mass<br>(from robot adaptor plate)           | 11 mm<br>.43 in                                                                                               |
| Average response time                                  | <15 ms                                                                                                        |
| Operating Temperature                                  | Min. 0 Deg C (32 Deg F)<br>Max. 70 Deg C (158 Deg F)                                                          |
| Switch Description                                     | High reliability aircraft snap acting type.<br>UL/CSA Approved. Average mechanical life<br>- 7 million cycles |
| UL Recognized Rating 42.4 VDC max. 3 amps max.         |                                                                                                               |

