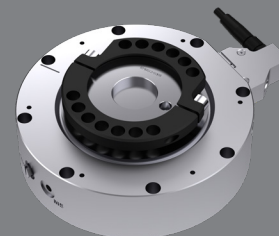


# QuickSTOP™ Collision Sensor

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

## Advantages

- Dynamically Variable Trip Points
  - Programmable sensor at all speeds of operation
- Permanent Repeatability
  - Non-compressive, metal-to-metal seal
- Senses Angular and Compressive Forces
  - Protection in the X, Y, and Z axes
- Monitors Performance Readiness



## SPECIFICATIONS

Model	Compliance Angle	Axial Compliance (z+)	Rotary Compliance	Operating Pressure	Torque Trip Point * (Mx and My)	Torque Trip Point * (Mz)	Repeatability at Tool Mounting Surfaces x and y	Rotational Repeatability	Average Response Time **	Mass
QS-7	±5 °	1.38 mm 0.054 in	No Limit	1.0 – 6.0 bar 14.5 – 87 psi	0.31 - 1.5 Nm 2.7 – 13.2 in-lb	0.28 - 1.5 Nm 2.5 – 13.5 in-lb	± 0.013 ± 0.0005	±0.028 °	4 - 7 ms	0.11 kg 0.24 lb
QS-25	±5 °	3.40 mm 0.134 in	No Limit	1.0 – 6.0 bar 14.5 – 87 psi	1.0 - 6.4 Nm 9 – 56 in-lb	1.0 - 6.4 Nm 9 – 56 in-lb	± 0.013 ± 0.0005	±0.024 °	2 - 6 ms	0.26 kg 0.56 lb
QS-50	±5 °	4.30 mm 0.169 in	No Limit	1.0 – 6.0 bar 14.5 – 87 psi	2.6 - 11.8 Nm 23 – 104 in-lb	2.2 - 14.0 Nm 19 – 124 in-lb	± 0.025 ± 0.0010	±0.024 °	2 - 6 ms	0.29 kg 0.65 lb
QS-100	±5 °	4.50 mm 0.177 in	No Limit	1.0 – 6.0 bar 14.5 – 87 psi	4.1 - 20.3 Nm 36 – 180 in-lb	5.3 - 30.4 Nm 47 – 270 in-lb	± 0.025 ± 0.0010	±0.024 °	4 - 7 ms	0.45 kg 0.99 lb
QS-200	±5 °	5.20 mm 0.205 in	No Limit	1.0 – 6.0 bar 14.5 – 87 psi	5.9 - 32.4 Nm 52 – 287 in-lb	7.5 - 45.2 Nm 66 – 400 in-lb	± 0.025 ± 0.0010	±0.024 °	4 - 7 ms	0.68 kg 1.50 lb
QS-400	±5 °	6.60 mm 0.256 in	No Limit	1.0 – 6.0 bar 14.5 – 87 psi	11.3 - 63.9 Nm 100 – 566 in-lb	11.8 - 84.6 Nm 104 – 749 in-lb	± 0.025 ± 0.0010	±0.024 °	4 - 8 ms	1.30 kg 2.87 lb
QS-800	±5 °	9.30 mm 0.366 in	± 25 °	1.4 – 6.0 bar 20.0 – 87 psi	36 - 158 Nm 292 – 1400 in-lb	53 - 255 Nm 427 – 2250 in-lb	± 0.025 ± 0.0010	±0.029 °	4 - 8 ms	3.72 kg 8.20 lb
QS-1500	±5 °	10.80 mm 0.425 in	± 25 °	1.4 – 6.0 bar 20.0 – 87 psi	87 - 371 Nm 727 – 2573 in-lb	82 - 291 Nm 784 – 3284 in-lb	± 0.038 ± 0.0015	±0.029 °	4 - 18 ms	5.50 kg 12.12 lb
QS-3000	±5 °	14.30 mm 0.563 in	± 25 °	1.4 – 6.0 bar 20.0 – 87 psi	105 - 414 Nm 924 – 3664 in-lb	153 - 478 Nm 1353 – 4232 in-lb	± 0.038 ± 0.0015	±0.029 °	4 - 18 ms	12.20 kg 26.90 lb
QS-4500	±4 °	10.68 mm 0.420 in	± 25 °	1.4 – 6.0 bar 20.0 – 87 psi	220 - 614 Nm 1950 – 5433 in-lb	345 - 1185 Nm 3315 – 10490 in-lb	± 0.038 ± 0.0015	±0.029 °	4 - 18 ms	12.80 kg 28.22 lb
QS-7500	±4 °	12.68 mm 0.499 in	± 25 °	1.4 – 6.0 bar 20.0 – 87 psi	472 - 1049 Nm 4181 – 9289 in-lb	1007 - 2098 Nm 8919 – 18568 in-lb	± 0.038 ± 0.0015	±0.029 °	4 - 18 ms	16.80 kg 37.04 lb

QS800 Rotation angle limited to +/- 25° to prevent the tool from freely rotating when triggered and causing damage.  
 QS7500 for arc welding is supplied with a screen collar.

\* Torque Trip Points are Continuously Variable.

\*\* Average Response Time varies with Air Pressure and Speed of Impact.

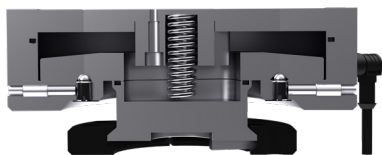
Rotational Repeatability at Tool Mounting Surface Z ± 0.013 mm (± 0.0005 in)

Operating Temperature 0 - 70 °C (32 - 158 °F) (from QS-7 to QS-400) / 0 - 100 °C (32 - 212 °F) (from QS-800 to QS-7500)

Noise Emissions (Sound Pressure) ≤ 70 dB(A) in jede Richtung

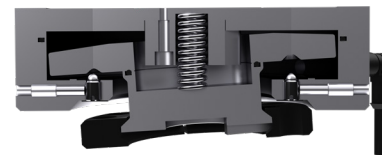
Note: Specifications provided are maximum recommended limits under static conditions. For correct product sizing, consideration must be given to all dynamic forces, including manipulator inertia, tooling configuration, and external process forces. Please contact EFFECTO Applications Engineering for correct product sizing assistance.

## SECTIONAL DIAGRAMM



### Switch Information

High reliability aircraft snap acting type.  
 UL/CSA rated at 3 amps, 120 VAC.  
 Average mechanical life: 7 million cycles  
 UL recognized rating: 42.4 VDC Max., 3 amps Max.



# PRODUCT INFORMATION



## • Coolant resistance

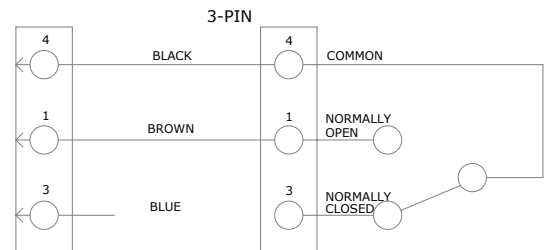
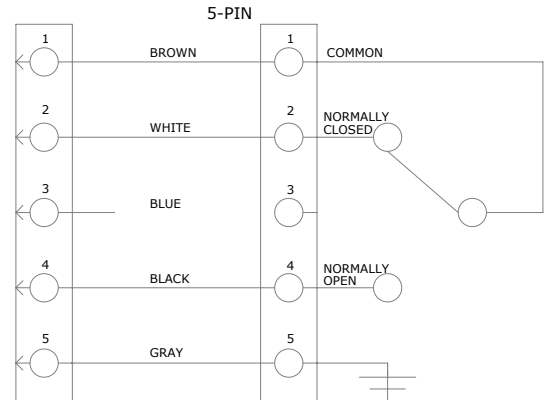
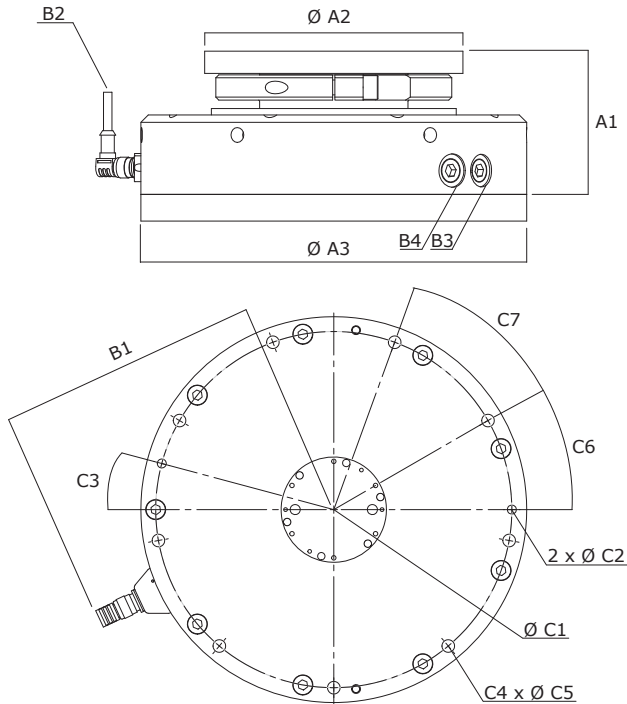
Includes protective sleeve, coolant-resistant switch assembly and coolant-resistant signal plug for additional protection against environmental conditions.

## • Arc welding

Designed for arc welding, laser cutting or plasma cutting; equipped with a heat-resistant cable, a metal shield to protect the pressure chamber, an insulating plate and an inverted design to prevent dirt accumulation.

## • Robot-specific

Ready-to-mount adapter plates in a wide range of different variants for easy mounting on tools and robots.



	Overall Dimensions							Connection / Connections							Mounting dimensions						
	A1		A2		A3		B1		B2		B3		B4		Mounting holes		Fitting holes		Mounting holes		
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
<b>QS-7</b>	27	1.06	40	(1.57)	40	(1.57)	39	(1.54)	3-PIN M5 MALE	M3x0.5	N/A	34.50	(1.358)	2.545/2.571	(0.1002/0.1012)	0°	4	M3	45°	90°	
<b>QS-25</b>	32	(1.26)	40	(1.57)	63.5	(2.50)	65	(2.56)	3-PIN M8 MALE	M5x0.8	10-32UNF-2B	56.00	(2.205)	2.545/2.571	(0.1002/0.1012)	0°	6	M2.5	15°	60°	
<b>QS-50</b>	35	(1.38)	43	(1.69)	71	(2.80)	66	(2.60)	3-PIN M8 MALE	M5x0.8	10-32UNF-2B	65.03	(2.560)	2.545/2.571	(0.1002/0.1012)	0°	6	M2.5	30°	60°	
<b>QS-100</b>	37	(1.46)	54	(2.13)	83	(3.27)	73	(2.87)	3-PIN M8 MALE	M5x0.8	10-32UNF-2B	77.00	(3.031)	2.545/2.571	(0.1002/0.1012)	0°	6	M2.5	30°	60°	
<b>QS-200</b>	43.5	(1.71)	63	(2.48)	97	(3.82)	78	(3.07)	3-PIN M8 MALE	M5x0.8	10-32UNF-2B	90.00	(3.543)	3.045/3.071	(0.1199/0.1209)	0°	6	M3	30°	60°	
<b>QS-400</b>	55.5	(2.19)	80	(3.15)	122	(4.80)	92	(3.62)	3-PIN M8 MALE	M5x0.8	10-32UNF-2B	113.00	(4.449)	4.055/4.094	(0.1596/0.1612)	0°	8	M4	25°	45°	
<b>QS-800</b>	81.5	(3.21)	112	(4.41)	167	(6.57)	135	(5.31)	5-PIN M12 MALE	1/4 BSPT	1/4 NPT	154.00	(6.063)	6.055/6.094	(0.2384/0.2399)	15°	8	M6	25°	45°	
<b>QS-1500</b>	95	(3.74)	130	(5.12)	193	(7.60)	145	(5.71)	5-PIN M12 MALE	1/4 BSPT	1/4 NPT	179.00	(7.047)	6.030/6.050	(0.2374/0.2382)	15°	9	M6	28°	40°	
<b>QS-3000</b>	115	(4.53)	174	(6.85)	260	(10.24)	174	(6.85)	5-PIN M12 MALE	3/8 BSPT	3/8 NPT	240.00	(9.449)	6.030/6.050	(0.2374/0.2382)	15°	9	M8	30°	40°	
<b>QS-4500</b>	115	(4.53)	174	(6.85)	260	(10.24)	174	(6.85)	5-PIN M12 MALE	3/8 BSPT	3/8 NPT	240.00	(9.449)	6.055/6.094	(0.2384/0.2399)	15°	9	M8	30°	40°	
<b>QS-8000</b>	115	(4.53)	174	(6.85)	288	(11.34)	190	(7.48)	5-PIN M12 MALE	3/8 BSPT	3/8 NPT	266.00	(10.472)	6.055/6.094	(0.2384/0.2399)	15°	9	M8	25°	40°	

\* Dimensions are in millimeters (inches).

\*\* Product Adaptor Kits do not come standard with QuickSTOP™ assemblies but can be provided upon request.

\*\*\* All dimensions are descriptive and subject to variation for technical upgrading. We reserve the right to make variations without prior notification.



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