


ULTIMATIC™ Collision Sensors – Specifications

Model Number	U-4618	U-4619	U-4619-HA	U-4620	U-4621	U-4622	U-4622-SA	U-4623
Moment Resistance [†] Variable from 10 to 90 psi (0.68 to 6.2 bar) *	15-62 in-lb 2-7 Nm	29-274 in-lb 3-31 Nm	29-274 in-lb 3-31 Nm	129-704 in-lb 15-80 Nm	260-1,736 in-lb 29-196 Nm	409-3,982 in-lb 46-450 Nm	3,500-7,630 in-lb 396-862 Nm	1,240-11,159 in-lb 140-1,261 Nm
Torque Resistance [†] Variable from 10 to 90 psi (0.68 to 6.2 bar) *	12-66 in-lb 1-7 Nm	56-362 in-lb 6-41 Nm	56-362 in-lb 6-41 Nm	96-784 in-lb 11-89 Nm	231-1,766 in-lb 26-200 Nm	681-4,660 in-lb 77-527 Nm	3,290-8,520 in-lb 372-963 Nm	1,426-12,833 in-lb 161-1,450 Nm
Force Resistance [†] Variable from 10 to 90 psi (0.68 to 6.2 bar) *	18-91 lbf 80-405 N	25-229 lbf 111-1,019 N	25-229 lbf 111-1,019 N	67-425 lbf 298-1,891 N	97-762 lbf 432-3,390 N	142-1,353 lbf 631-6,021 N	950-2,260 lbf 107-255 N	300-2,697 lbf 1,334-11,997 N
Angular Compliance	±8 deg (0.14 rad)	±8 deg (0.14 rad)	±13 deg (0.23 rad)	±8 deg (0.14 rad)	±8 deg (0.14 rad)	±8 deg (0.14 rad)	±5 deg (0.09 rad)	±8 deg (0.14 rad)
Rotary Compliance	±24 deg (0.42 rad)	±24 deg (0.42 rad)	±24 deg (0.42 rad)	±24 deg (0.42 rad)	±24 deg (0.42 rad)	±28 deg (0.49 rad)	±11 deg (0.19 rad)	±24 deg (0.42 rad)
Axial Compliance Compression	0.18 in 4.6 mm	0.31 in 7.9 mm	0.31 in 7.9 mm	0.42 in 10.7 mm	0.55 in 14.0 mm	0.75 in 19.1 mm	0.50 in 12.7 mm	1.06 in 26.9 mm
Repeatability (x, y & z) Measured at center and O.D. of tool plate	±0.0005 in ±0.0127 mm	±0.0005 in ±0.0127 mm	±0.0005 in ±0.0127 mm	±0.0005 in ±0.0127 mm	±0.0005 in ±0.0127 mm	±0.0005 in ±0.0127 mm	±0.0005 in ±0.0127 mm	±0.0005 in ±0.0127 mm
Repeatability (about z axis) Measured at center and O.D. of tool plate	±0.017 deg	±0.017 deg	±0.017 deg	±0.017 deg	±0.017 deg	±0.017 deg	±0.017 deg	±0.017 deg
Mass**	0.2 lb (0.09 kg)	1 lb (0.45 kg)	1 lb (0.45 kg)	2.25 lb (1.02 kg)	5 lb (2.27 kg)	12.25 lb (5.56 kg)	13.50 lb (6.12 kg)	32 lb (14.52 kg)
Height	1.12 in (28.5 mm)	2.03 in (51.6 mm)	2.67 in (67.8 mm)	2.49 in (63.3 mm)	3.10 in (78.7 mm)	4.14 in (105.2 mm)	4.14 in (105.2 mm)	5.61 in (142.6 mm)
Diameter	1.95 in (49.5 mm)	3.40 in (86.4 mm)	3.40 in (86.4 mm)	4.50 in (114.3 mm)	5.91 in (150.2 mm)	8.00 in (203.2 mm)	8.00 in (203.2 mm)	10.93 in (277.6 mm)
Pre-Trip Compliance Range of Adjustability	Factory adjustable from 0 to 0.080 in. 0 to 2.03 mm	0 to 0.100 in 0 to 2.54 mm	0 to 0.100 in 0 to 2.54 mm	0 to 0.100 in 0 to 2.54 mm	0 to 0.100 in 0 to 2.54 mm	0 to 0.100 in 0 to 2.54 mm	0 to 0.100 in 0 to 2.54 mm	0 to 0.100 in 0 to 2.54 mm
Temperature Rating	-30° to 180°F -34° to 82°C	-30° to 180°F -34° to 82°C	-30° to 180°F -34° to 82°C	-30° to 210°F -34° to 82°C	-30° to 180°F -34° to 82°C	-30° to 180°F -34° to 82°C	-30° to 180°F -34° to 82°C	-30° to 180°F -34° to 82°C
Sensor	10-30 VDC 200mA normally closed switch							
Response Time	2-6 ms	2-6 ms	2-6 ms	2-6 ms	4-10 ms	4-10 ms	4-10 ms	4-10 ms
Standards								

NOTE: Collision sensor must be electrically isolated from the robot when the tooling below it has a voltage potential.

[†]Resistance at the factory setting of 0.025" (0.64 mm) compliance. Resistance increases slightly as the pre-trip compliance is increased.

*Model U-4622-SA is variable from 0 to 90 psi (0 to 6.2 bar).

**Stainless steel construction will increase product mass.