



SERIES 5300D

TORKDISC® IN-LINE ROTARY

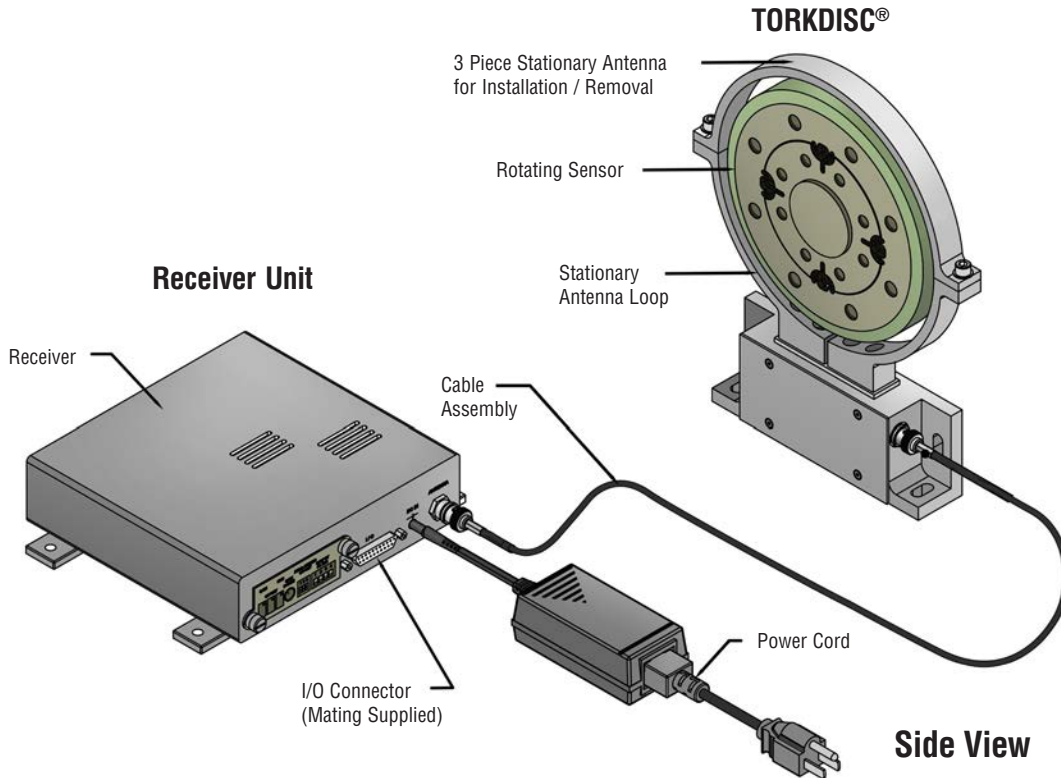
- DC to 8500 Hz bandwidth
- AC coupled, 0 to ± 10 volt analog output with 2-pole Butterworth high pass filter with user-selectable cutoff frequencies
- DC-coupled, 0 to ± 10 volt analog output with 8-pole elliptical low pass filter with user-selectable cutoff frequencies
- Digital system alleviates noise and data corruption
- Full-scale capacities from 1000 to 225k lbf-in (113 to 25.4k Nm)



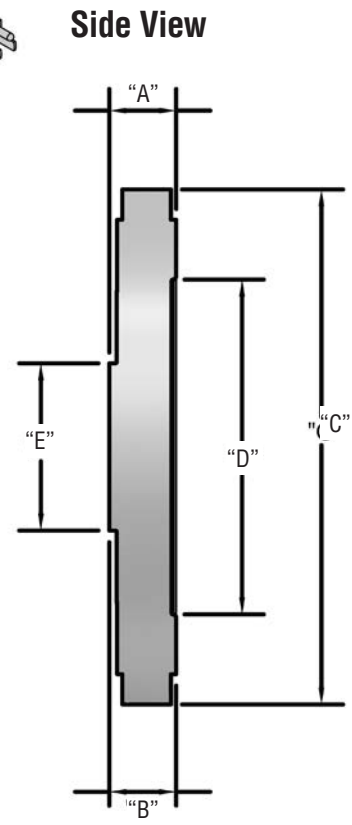
TYPICAL APPLICATIONS

- Automotive engine, powertrain, chassis dynamometer testing for:
 - Performance
 - Emissions
 - Fuel economy
- Development of:
 - Transfer cases
 - Axles
 - Differentials
- Production line validation of powertrain components including:
 - Gear mesh
 - Cold engine signature analysis
 - Chassis dynamometer
- Rotational dynamics testing
- Torque studies on pumps, fans, electric motors
- Gearbox efficiency testing

The TORKDISC® and receiver make up a complete system. No additional signal conditioning is required. The receiver box provides voltage and digital output via a 25-pin I/O connector. A standard 24-foot cable is supplied, but an 80-foot, 112-foot or 176-foot cable can be used as well.



TORKDISC® IN-LINE ROTARY TORQUE SENSOR SYSTEM DIMENSIONS						
	A	B	C	D	E	F
Series	O.D. - Outside Diameter //(including telemetry/collar)	Overall Thickness	Pilot	Pilot	Driven (inner) Bolt Circle	Load (outer) Bolt Circle
5302D	7.0 in 177.8 mm	1.1 in 27.9 mm	2.0 in 50.8 mm	4.4 in 111.1 mm	(8) 3/8-24 threaded holes, equally spaced on a 3.00 in (76.20 mm) B.C.	(8) 0.406 in (10.31 mm) dia. through holes equally spaced on a 5.00 in (127.0 mm) B.C.
5308D	8.5 in 215.5 mm	1.1 in 27.9 mm	2.7 in 69.9 mm	5.5 in 140.0 mm	(8) 5/8-11 threaded holes, spaced on a 3.75 in (95.25 mm) B.C.	(8) 0.531 in (13.49 mm) dia. through holes equally spaced on a 6.5 in (165.0 mm) B.C.
5309D	10.5 in 241.0 mm	1.6 in 41.7 mm	4.0 in 101.5 mm	7.5 in 190.5 mm	(12) 5/8-11 threaded holes, spaced on a 6.0 in (152.4 mm) B.C.	(16) 0.531 in (13.49 mm) dia. through holes equally spaced on a 8.5 in (215.9 mm) B.C.
5310D	18.0 in 456.7 mm	2.1 in 53.0 mm	5.5 in 139.7 mm	11.0 in 279.4 mm	(12) 7/8-14 threaded holes, spaced on a 9.0 in (228.6 mm) B.C.	(16) 0.780 in (19.8 mm) dia. through holes equally spaced on a 13.0 in (330.2 mm) B.C.



See TORKDISC® In-Line Rotary Sensor System Dimensions Table (page 3) for measurement values.

Superior Customer Service

As with all PCB® instrumentation, the TORKDISC® is complemented with toll-free applications assistance, 24-hour technical service, and backed by a no-risk policy that guarantees total customer satisfaction or your money refunded. We can also calibrate and repair your TORKDISC®.

TORKDISC® ROTARY TORQUE SENSOR SYSTEM					
Model Number	Unit	5302D-03A	5302D-01A	5302D-02A	5308D-01A
Continuous Rated Capacity	lbf-in (Nm)	1000 (113)	2000 (226)	5000 (565)	10k (1130)
Bolt Joint Slip Torque	lbf-in (Nm)	3300 (373)	3300 (373)	10k (1130)	35k (4000)
Safe Overload	lbf-in (Nm)	3000 (339)	6000 (678)	15k (1695)	30k (3400)
Failure Overload	lbf-in (Nm)	4000 (452)	8000 (904)	20k (2260)	40k (4500)
Torsional Stiffness	lbf-in/rad (Nm/rad)	2900k (328k)	5800k (655k)	15M (1600k)	34M (3800k)
Torsional Angle @ Capacity	degrees	0.020	0.020	0.020	0.017
Rotating Inertia	lbf-ft ² (Nm ²)	0.056 (0.006)	0.142 (0.006)	0.309 (0.013)	0.643 (0.027)
Axial Load Limit [1]	lbf (N)	250 (1.1k)	500 (2224)	1000 (4448)	1350 (6000)
Lateral Load Limit [1]	lbf (N)	250 (1.1k)	500 (2224)	1000 (4448)	1650 (7300)
Bending Moment Limit [1]	lbf-in (Nm)	750 (85)	1500 (169)	3000 (339)	5000 (565)
Maximum Speed	RPM	15k	15k	15k	10k
Rotor Weight	lbf (kg)	3.5 (1.6)	3.5 (1.6)	9 (4.1)	10 (4.5)
Rotor Material	–	Aluminum	Aluminum	Steel	Steel

TORKDISC® ROTARY TORQUE SENSOR SYSTEM						
Model Number	Unit	5308D-03A	5309D-01A	5309D-02A	5310D-01A	5310D-04A
Continuous Rated Capacity	lbf-in (Nm)	30k (3390)	50k (5649)	100k (11k)	180k (20k)	225k (25k)
Bolt Joint Slip Torque	lbf-in (Nm)	35k (4000)	85k (9604)	110k (12k)	268k (30k)	268k (30k)
Safe Overload	lbf-in (Nm)	75k (8475)	100k (11k)	200k (23k)	540k (61k)	675k (76k)
Failure Overload	lbf-in (Nm)	100k (11k)	125k (14k)	250k (28k)	720k (81k)	900k (102k)
Torsional Stiffness	lbf-in/rad (Nm/rad)	100M (11.3M)	115M (13M)	230M (26M)	1100M (124M)	1350M (152.5M)
Torsional Angle @ Capacity	degrees	0.017	0.017	0.017	0.01	0.01
Rotating Inertia	lbf-in sec ² (Nm sec ²)	0.643 (0.027)	2.36 (0.099)	2.36 (0.099)	20.15 (0.849)	20.15 (0.849)
Axial Load Limit [1]	lbf (N)	4000 (17.8k)	5000 (22.2k)	10k (44.5k)	14k (60k)	15k (66.7k)
Lateral Load Limit [1]	lbf (N)	5000 (22.2k)	5000 (22.2k)	10k (44.5k)	14k (60k)	15k (66.7k)
Bending Moment Limit [1]	lbf-in (Nm)	10k (1130)	25k (2825)	50k (5650)	90k (10.2k)	100k (11.3k)
Maximum Speed	RPM	10k	10k	10k	4500	4500
Rotor Weight	lbf (kg)	10 (5)	30 (14)	30 (14)	100 (45)	100 (45)
Rotor Material	–	Steel	Steel	Steel	Steel	Steel



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