



Model Number <b>5308D-03A</b>		<b>TORKDISC® ROTARY TORQUE SENSING SYSTEM</b>		Revision: B ECN #: 44198	
<b>Performance</b>		<b>ENGLISH</b>	<b>SI</b>	<b>OPTIONAL VERSIONS</b>	
Measurement Range(Full Scale Capacity)	30,000 in-lb	3390 Nm		Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.	
Accuracy	± 0.10 % FS	± 0.10 % FS	[3]		
Frequency Range(-3 dB)	0 to 8500 Hz	0 to 8500 Hz			
Filter Type(High Pass)	2-pole	2-pole	[4][5]		
Filter Type(Low Pass - Anti Alias)	Butterworth	Butterworth			
Voltage Output(channel A - AC coupled)	± 10 V	± 10 V			
Voltage Output(channel B - DC coupled)	± 10 V	± 10 V			
Gain(Channel A)	1-16 dB	1-16 dB			
Gain(Channel B)	0.3-1.3 dB	0.3-1.3 dB			
Digital Output	QSPI	QSPI	[6]		
Maximum Load(Axial)	4000 lb	17.8 kN	[7][8]	<b>NOTES:</b> [1]Supplied with universal AC power adaptor. [2]Bolt joint slip torque is calculated assuming a coefficient of friction (μ) of 0.1 and that grade 8 socket head cap screws are used and tightened to 75% of yield. [3]Root sum square of non-linearity, hysteresis, and non repeatability. [4>Selectable High Pass cutoff frequencies of 5, 10, 20, 200 and 500 Hz. [5>Selectable Low Pass cutoff frequencies of 10,000, 5000, 2500, 1200, 625 and 313 Hz. [6]Request Technical Note FTQ-STN5 regarding digital output signal. [7]Extraneous load limits reflect the maximum axial load, lateral load, and bending moment that may be applied singularly without electrical or mechanical damage to the sensor. [8]Where combined extraneous loads are applied, decrease loads proportionally. [9]See PCB Declaration of Conformance PS069 for details.	
Maximum Load(Lateral)	5000 lb	22.2 kN	[7][8]		
Maximum Moment	10,000 in-lb	1130 Nm	[7][8]		
<b>Environmental</b>					
Overload Limit(Bolt Joint Slip)	35,000 in-lb	3955 Nm	[2]		
Overload Limit(Failure)	100,000 in-lb	11,298 Nm			
Overload Limit(Safe)	75,000 in-lb	8474 Nm			
Temperature Range(Rotor/Stator - Operating)	+32 to +185 °F	0 to +85 °C			
Temperature Range(Rotor - Compensated)	+70 to +170 °F	+21 to +77 °C			
Temperature Range(Receiver - Operating)	0 to +122 °F	-17.7 to 50 °C			
Temperature Effect on Output(System - within compensated range)	0.002 %FS/°F	0.0036 %FS/°C			
Temperature Effect on Zero Balance(System - within compensated range)	0.002 %FS/°F	0.0036 %FS/°C			
Position Sensitivity(180° rotation of sensor)	≤ 0.1 % FS	≤ 0.1 % FS			
<b>Electrical</b>				<b>SUPPLIED ACCESSORIES:</b> Model 012AC024AT Cable (1) Model 182-028A Connector (1) Model M0003978 Power supply (1)	
Power Required(50 to 60 Hz)	9 to 18 VDC	9 to 18 VDC	[1]		
Digital Resolution	16 Bit	16 Bit			
Digital Sample Rate	26,484 samples/sec	26,484 samples/sec			
Analog Resolution(based on ±10 V FSO and 16-bit resolution)	0.31 mV	0.31 mV			
<b>Physical</b>					
Maximum Speed	10,000 RPM	10,000 RPM			
Permissible Axial Float(rotor to stator)	0.25 in	6.4 mm			
Permissible Radial Float(rotor to stator)	0.25 in	6.4 mm			
Rotating Inertia(without adaptors)	0.24 in-lb/sec <sup>2</sup>	0.027 N-m/sec <sup>2</sup>			
Dynamic Balance	per ISO G 2.5	per ISO G 2.5			
Torsional Stiffness	10 <sup>8</sup> in-lb/radian	11,298 N-m/radian			
Torsional Angle(at Full Scale Capacity)	0.017 °	0.017 °			
Housing Material(Sensor)	Steel Alloy	Steel Alloy			
Weight(rotor/sensor)	10 lb	4.5 kg			
				Entered: AP    Engineer: JM    Sales: KWW    Approved: JSD    Spec Number:	
				Date: 5/13/2015    Date: 5/13/2015    Date: 5/13/2015    Date: 5/13/2015 <b>40579</b>	
<i>All specifications are at room temperature unless otherwise specified.            In the interest of constant product improvement, we reserve the right to change specifications without notice.</i>				<b>PCB Load &amp; Torque</b> <b>24350 Indoplex Circle</b> <b>Farmington Hills, MI 48335</b> <b>UNITED STATES</b> <b>Phone: 866-684-7107</b> <b>Fax: 716-684-0987</b> <b>E-Mail: <a href="mailto:ltinfo@pcbloadtorque.com">ltinfo@pcbloadtorque.com</a></b> <b>Web site:</b> <b><a href="http://www.pcbloadtorque.com">http://www.pcbloadtorque.com</a></b>	



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