

Model Number 2301-01A		REACTION TORQUE SENSOR			Revision B ECN #: 38223		
Performance		ENGLISH	SI		Optional Versions (Optional versions have identical specifications and accessories as listed for standard model except where noted below. More than one option maybe used.) Notes [1] Calibrated at 10 VDC, usable 5 to 20 VDC or VAC RMS. [2] Singularly applied, i.e. no other extraneous loads. [3] Over compensated operating temperature range. [4] FS - Full Scale. [5] Nominal. [6] See Drawing 26439 for Complete Dimensions Supplied Accessories 181-012A PT06A-10-6S(SR) (1)		
Measurement Range (Full Scale Capacity)		2000 lbf-in	226 Nm	[5]			
Sensitivity (±15 %) (output at rated capacity)		2 mV/V	2 mV/V	[5]			
Non-Linearity		≤0.1 % FS	≤0.1 % FS	[4]			
Hysteresis		≤0.1 % FS	≤0.1 % FS	[4]			
Non-Repeatability		≤0.02 % FS	≤0.02 % FS	[4]			
Resonant Frequency		1 kHz	1000 Hz				
Maximum Torque		3000 lbf-in	339 Nm				
Environmental							
Overload Limit (Axial Thrust)		2000 lbf	8900 N	[2]			
Overload Limit (Overhung Moment)		1000 lbf-in	113 Nm	[2]			
Overload Limit (Shear)		1000 lbf	4448 N	[2]			
Temperature Range (Operating)		-65 to +200 °F	-54 to +93 °C				
Temperature Range (Compensated)		+70 to +170 °F	+21 to +77 °C				
Temperature Effect on Output (Maximum)		±0.002 %Reading/°F	±0.0036 %Reading/°C	[3]			
Temperature Effect on Zero Balance (Maximum)		±0.002 %FS/°F	±0.0036 %FS/°C	[4]			
Electrical							
Bridge Resistance		350 Ohm	350 Ohm				
Excitation Voltage (Recommended)		10 VDC	10 VDC	[1]			
Insulation Resistance		5 GOhm	5 GOhm				
Zero Balance		≤1 %RO	≤1 %RO				
Physical							
Size (Diameter x Length)		4.00 in x 3.00 in	101.6 mm x 76.2 mm	[6]			
Weight		5.00 lb	2268 g				
Mounting		Flange (5/16in Bolts)	Flange (M8 Bolts)				
Torsional Stiffness		380 klbf-in/radian	42.9 kN-m/radian				
Sensing Element		Strain Gage	Strain Gage				
Housing Material (Sensor)		Plated Steel	Plated Steel				
Electrical Connector		PT02E-10-6P	PT02E-10-6P				
							
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. ICP® is a registered trademark of PCB group, Inc.							
Entered: DMW		Engineer: PE		Sales: RR	Approved: JC	Spec Number:	
Date: 01/24/2012		Date: 01/24/2012		Date: 01/24/2012	Date: 01/24/2012	18721	
		Company: PCB Load & Torque, Inc. Address: 24350 Indoplex Circle Farmington Hills, MI 48335 UNITED STATES Phone: 866-684-7107 Fax: 716-684-0987 E-mail: ltinfo@pcbloadtorque.com Web site: http://www.pcbloadtorque.com					

Model Number 2301-02A		REACTION TORQUE SENSOR			Revision C ECN #: 38221											
Performance		ENGLISH	SI		Optional Versions (Optional versions have identical specifications and accessories as listed for standard model except where noted below. More than one option maybe used.)											
Measurement Range (Full Scale Capacity)		5000 lbf-in	565 Nm	[1]	Notes [1] Nominal. [2] Calibrated at 10 VDC, usable 5 to 20 VDC or VAC RMS. [3] Singularly applied, i.e. no other extraneous loads. [4] Over compensated operating temperature range. [5] FS - Full Scale. [6] See Drawing 26439 for Complete Dimensions											
Sensitivity (±15 %) (output at rated capacity)		2 mV/V	2 mV/V	[1][5]												
Non-Linearity		≤0.1 % FS	≤0.1 % FS	[5]												
Hysteresis		≤0.1 % FS	≤0.1 % FS	[5]												
Non-Repeatability		≤0.02 % FS	≤0.02 % FS	[5]												
Resonant Frequency		1.8 kHz	1800 Hz													
Maximum Torque		7500 lbf-in	847 Nm													
Environmental					Supplied Accessories 181-012A PT06A-10-6S(SR) (1)											
Overload Limit (Axial Thrust)		5000 lbf	22.2 kN	[3]												
Overload Limit (Overhung Moment)		2500 lbf-in	282 Nm	[3]												
Overload Limit (Shear)		2500 lbf	11.1 kN	[3]												
Temperature Range (Operating)		-65 to +200 °F	-54 to +93 °C													
Temperature Range (Compensated)		+70 to +170 °F	+21 to +77 °C													
Temperature Effect on Output (Maximum)		±0.002 %Reading/°F	±0.0036 %Reading/°C	[4]												
Temperature Effect on Zero Balance (Maximum)		±0.002 %FS/°F	±0.0036 %FS/°C	[5][4]												
Electrical																
Bridge Resistance		350 Ohm	350 Ohm	[1]												
Excitation Voltage (Recommended)		10 VDC	10 VDC	[2]												
Insulation Resistance		5 GOhm	5 GOhm													
Zero Balance		≤1 %RO	≤1 %RO													
Physical																
Size (Diameter x Length)		4.00 in x 3.00 in	101.6 mm x 76.2 mm	[6]												
Weight		5 lb	2268 g													
Mounting		Flange (5/16in Bolts)	Flange (M8 Bolts)													
Torsional Stiffness		1290 klbf-in/radian	145.7 kN-m/radian													
Sensing Element		Strain Gage	Strain Gage													
Housing Material (Sensor)		Plated Steel	Plated Steel													
Electrical Connector		PT02E-10-6P	PT02E-10-6P													
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