

Model Number 2304-01A		REACTION TORQUE SENSOR			Revision D 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)		100000 lbf-in	11298 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 26442 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		690 Hz	690 Hz													
Maximum Torque		150000 lbf-in	16948 Nm													
Environmental					Supplied Accessories 181-012A PT06A-10-6S(SR) (1)											
Overload Limit (Axial Thrust)		100000 lbf	444.8 kN	[3]												
Overload Limit (Overhung Moment)		50000 lbf-in	5650 Nm	[3]												
Overload Limit (Shear)		15000 lbf	66.72 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		≤1.0 %RO	≤1.0 %RO													
Physical																
Size (Diameter x Length)		9.75 in x 8.50 in	247.65 mm x 215.90 mm	[6]												
Weight		80 lb	36.29 Kg													
Mounting		Flange (3/4in Bolts)	Flange (M20 Bolts)													
Torsional Stiffness		21400 klbf-in/radian	2417 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.																
		<table><tr><td>Entered: DMW</td><td>Engineer: PE</td><td>Sales: RR</td><td>Approved: JC</td><td>Spec Number:</td></tr><tr><td>Date: 01/24/2012</td><td>Date: 01/24/2012</td><td>Date: 01/24/2012</td><td>Date: 01/24/2012</td><td>18732</td></tr></table>					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	18732
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		 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 2304-02A		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)		200000 lbf-in	22596 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 26442 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		1.1 kHz	1100 Hz		Supplied Accessories 181-012A PT06A-10-6S(SR) (1)											
Maximum Torque		300000 lbf-in	33895 Nm													
Environmental																
Overload Limit (Axial Thrust)		200000 lbf	889.6 kN	[3]												
Overload Limit (Overhung Moment)		100000 lbf-in	11298 Nm	[3]												
Overload Limit (Shear)		30000 lbf	133.44 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)		9.75 in x 8.50 in	247.65 mm x 215.90 mm	[6]												
Weight		80 lb	36.29 Kg													
Mounting		Flange (3/4in Bolts)	Flange (M20 Bolts)													
Torsional Stiffness		53900 klbf-in/radian	6090 kN-m/radian													
Sensing Element		Strain Gage	Strain Gage		 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.											
Housing Material (Sensor)		Plated Steel	Plated Steel													
Electrical Connector		PT02E-10-6P	PT02E-10-6P													
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