

Model Number 4115A-03A		ROTARY TRANSFORMER TORQUE SENSOR			Revision: E ECN #: 43820			
Performance								
Measurement Range(Full Scale Capacity)	200 in-lb	23 Nm		[1]	OPTIONAL VERSIONS Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.			
Sensitivity(± 15 %)(output at rated capacity)	2.5 mV/V	2.5 mV/V		[1][3]				
Non-Linearity	≤ 0.05 % FS	≤ 0.05 % FS		[3]				
Hysteresis	≤ 0.05 % FS	≤ 0.05 % FS		[3]				
Non-Repeatability	≤ 0.03 % FS	≤ 0.03 % FS		[3]				
Environmental								
Overload Limit	600 in-lb	68 Nm			NOTES: [1]Nominal. [2]Recommended 10 VAC RMS. [3]FS - Full Scale. [4]Over compensated operating temperature range. [5]Mounting per AND10262 and AND20002. [6]See PCB Declaration of Conformance PS062 for details.			
Temperature Range(Operating)	-65 to 285 °F	-54 to 141 °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		[4][3]				
Electrical								
Bridge Resistance	350 Ohm	350 Ohm		[1]	SUPPLIED ACCESSORIES: Model 180-019A 5-socket mating connector for Series 3100, 4100, 4200 torque sensors Model 8113-105A Relay activated precision shunt calibration module			
Excitation Frequency	3.28 kHz	3.28 kHz						
Excitation Voltage	2 to 10 VAC rms	2 to 10 VAC rms		[2]				
Insulation Resistance	>5,000,000 kohm	>5,000,000 kohm						
Zero Balance	≤ 2 % FS	≤ 2 % FS		[3]				
Bridge Current(at 5 VAC)	50 mA	50 mA			ENTERED: Entered: AP Engineer: PE Sales: KWW Approved: JSD Spec Number: DATE: Date: 2/12/2015 Date: 2/12/2015 Date: 2/12/2015 Date: 2/12/2015 19260			
Physical								
Size (Shaft Length x Housing Length x Housing Height)	9.10 in x 8.25 in x 6.00 in	231.14 mm x 209.55 mm x 152.40 mm					PCB Load & Torque, Inc. 24350 Indoplex Circle Farmington Hills, MI 48335 UNITED STATES Phone: 866-684-7107 Fax: 716-684-0987 E-Mail: linfo@pcbloadtorque.com Web site: http://www.pcbloadtorque.com	
Weight	46 lb	20.9 kg						
Mounting	Flange w/ Splined Shaft	Flange w/ Splined Shaft		[5]				
Sensing Element	Strain Gage	Strain Gage						
Housing Material	Black Oxided Steel	Black Oxided Steel						
Shaft Material	Steel	Steel			CE [6]			
Electrical Connector	MS3102A-14S-5P	MS3102A-14S-5P						
Torsional Stiffness	33,000 in-lb/radian	3700 N-m/radian						
Rotating Inertia	0.0049 in-lb sec ²	0.0005 N-m sec ²						
Maximum Speed	15,000 RPM	15,000 RPM						
<p>CE [6]</p> <p>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.</p>								