

Model Number 4115A-03A		ROTARY TRANSFORMER TORQUE SENSOR			Revision: E ECN #: 43820	
Performance		ENGLISH	SI		OPTIONAL VERSIONS	
Measurement Range(Full Scale Capacity)		200 in-lb	23 Nm	[1]	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			
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]	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 Effect on Zero Balance(Maximum)		± 0.002 %FS/°F	± 0.0036 %FS/°C	[4][3]		
Electrical						
Bridge Resistance		350 Ohm	350 Ohm	[1]		
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			
Physical					SUPPLIED ACCESSORIES:	
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		Model 180-019A 5-socket mating connector for Series 3100, 4100, 4200 torque sensors	
Weight		46 lb	20.9 kg		Model 8113-105A Relay activated precision shunt calibration module	
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			
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			
						
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