Model No	umber
4115A	-05A

ROTARY TRANSFORMER TORQUE SENSOR

Revision: E ECN #: 43820

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Performance	ENGLISH	<u>SI</u>	
Measurement Range(Full Scale Capacity)	1000 in-lb	11 5 Nm	[1]
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	4500 in 1h	470 N	
Overload Limit	1500 in-lb	170 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]
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			
Size (Shaft Length x Housing Length x Housing Height		231.14 mm x 209.55 mm x	
	6.00 in	152.40 mm	
Weight	46 lb	20.9 kg	
Mounting	Flange w/ Splined	Flange w/ Splined Shaft	[5]
Consider Florest	Shaft	Otroin Oran	
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	94,000 in-lb/radian	10,600 N-m/radian	
Rotating Inertia	0.005 in-lb sec2	0.0006 N-m sec2	
Maximum Speed	15,000 RPM	15,000 RPM	
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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.

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.

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

Entered: AP	Engineer: PE	Sales: KWW	Approved: JSD	Spec Number:
Date: 2/12/2015	Date: 2/12/2015	Date: 2/12/2015	Date: 2/12/2015	19262



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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.