Mod	el Num	ber
411	5K-1	3A

ROTARY TRANSFORMER TORQUE SENSOR

Revision: D ECN #: 43820

Performance	ENGLISH	<u>SI</u>	
Measurement Range(Full Scale Capacity)	10,000 in-lb	1130 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 Environmental	≤ 0.03 % FS	≤ 0.03 % FS	[3]
Overload Limit	15 000 in th	4700 Nm	
	15,000 in-lb	1700 Nm	
Temperature Range(Operating)	-65 to 225 °F	-54 to 107 °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	0=0.01	0.50 01	
Bridge Resistance	350 Ohm	350 Ohm	[1]
Excitation Frequency	3.28 kHz	3.28 kHz	101
Excitation Voltage Insulation Resistance	2 to 10 VAC rms	2 to 10 VAC rms	[2]
	>5,000,000 kohm	>5,000,000 kohm	501
Zero Balance	≤ 2 % FS 50 mA	≤ 2 % FS 50 mA	[3]
Bridge Current(at 5 VAC)	50 IIIA	50 IIIA	
Physical	0.50 : 0.05 :	242.82 200 55	
Size (Shaft Length x Housing Length x Housing Height)	9.56 in x 8.25 in x 6.00 in	242.82 mm x 209.55 mm x 152.40 mm	
Weight	47 lb	21.3 kg	
Mounting	Flange w/ Splined	Flange w/ Splined Shaft	[5]
Modriting	Shaft	r lange w/ Spilited Shart	[2]
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	500.000 in-lb/radian	56,500 N-m/radian	
Rotating Inertia	0.0062 in-lb sec2	0.0007 N-m sec2	
Maximum Speed	15,000 RPM	15,000 RPM	
Maximum Opecu	10,000 111 101	13,000 131 101	

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: 2/13/2015	Date: 2/13/2015	Date: 2/13/2015	Date: 2/13/2015	18493



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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.