Model Number 4106-02A		ROTARY	TRANSFORME	R TO	RQUE SENSOR
Performance		ENGLISH	SI		Optional Versions (Opti
Measurement Ra	nge (Full Scale Capacity)	20000 in-lb	2260 Nm	[1]	for standard model excep
Sensitivity (outp	ut at rated capacity)	2.0 mV/V	2.0 mV/V	[1][3]	
Non-Linearity		≤0.05 % FS	≤0.05 % FS	[3]	Notes
Hysteresis		≤0.05 % FS	≤0.05 % FS	[3]	[1] Nominal.
Non-Repeatability	y	≤0.02 % FS	≤0.02 % FS	[3]	[2] Recommended
Environmental					[3] FS - Full Scale
Overload Limit		60000 in-lb	6775 Nm		[4] Over compens
Temperature Rar	nge (Operating)	-65 to 170 °F	-54 to 77 °C		[5] See Outline Dr
Temperature Rar	nge (Compensated)	+70 to +170 °F	+21 to 77 °C		[6] See PCB Decla
Temperature Effe	ect on Output (Maximum)	±0.001	±0.0018 %Reading/°C	[4]	
		%Reading/°F			
	ect on Zero Balance	±0.001 %FS/°F	±0.0018 %FS/°C	[3][4]	Supplied Accessories
(Maximum)					180-019A 5-socket mat
Electrical					8113-105A Relay activa
Bridge Resistanc		350 Ohm	350 Ohm	[1]	
Excitation Freque		3.28 kHz	3.28 kHz		
Excitation Voltage		2 to 10 VAC rms	2 to 10 VAC rms	[2]	
Insulation Resista	ance	>5000 MOhm	>5000 MOhm		
Zero Balance		≤1 % FS	≤1 % FS	[3]	
Bridge Current (	at 5 VAC)	50 mA	50 mA		
Physical					
	h x Housing Length x	15.75 in x 8.25 in x	400.1 mm x 209.6	[5]	
Housing Height)		5.50 in	mm x 139.7 mm		
Weight		40 lb	18.2 Kg		
Mounting		2.25 in Dia. Keyed	57.2 mm Dia. Keyed		
0		Shaft	Shaft		
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		11800 kin-lb/radian 0.036 in-lb-sec <sup>2</sup>	1330000 N-m/radian 0.004 N-m-sec <sup>2</sup>		
Rotating Inertia Maximum Speed		6700 RPM	6700 RPM		
waxiifiuffi Speed		0700 KPIVI	0700 RPIVI		

Optional Versions (Optional versions have identical specifications and accessories as listed for standard model except where noted below. More than one option maybe used.)

Revision E

ECN #: 36946

## Notes

- [1] Nominal.
- [2] Recommended 10 VAC RMS.
- [3] FS Full Scale.
- [4] Over compensated operating temperature range.
- [5] See Outline Drawing 24650 for Complete Dimensions
- [6] See PCB Declaration of Conformance PS062 for details.

## **Supplied Accessories**

180-019A 5-socket mating connector for Series 3100, 4100, 4200 torque sensors (1) 8113-105A Relay activated precision shunt calibration module (1)



All specifications are at room temperature unless otherwise specified.

In the interest of constant product improvement, we reserve the right to change specifications without

ICP® is a registered trademark of PCB group, Inc.

Entered: DMW	Engineer: PE	Sales: RR	Approved: JC	Spec Number:
Date:	Date:	Date:	Date:	19114
12/14/2011	12/14/2011	12/14/2011	12/14/2011	



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 4106-03A		ROTARY	TRANSFORME	R TO	RQUE SENSOR
Performance		ENGLISH	SI		Optional Versions (Opti
Measurement Ra	nge (Full Scale Capacity)	36000 in-lb	4067 Nm	[1]	for standard model excep
Sensitivity (outp	ut at rated capacity)	2.0 mV/V	2.0 mV/V	[1][3]	
Non-Linearity		≤0.05 % FS	≤0.05 % FS	[3]	Notes
Hysteresis		≤0.05 % FS	≤0.05 % FS	[3]	[1] Nominal.
Non-Repeatability	У	≤0.02 % FS	≤0.02 % FS	[3]	[2] Recommended
Environmental					[3] FS - Full Scale.
Overload Limit		60000 in-lb	6775 Nm		[4] Over compensa
Temperature Rar	nge (Operating)	-65 to 170 °F	-54 to 77 °C		[5] See Outline Dra
Temperature Rar	nge (Compensated)	+70 to +170 °F	+21 to 77 °C		[6] See PCB Decla
Temperature Effe	ect on Output (Maximum)	±0.001	±0.0018 %Reading/°C	[4]	
		%Reading/°F			
Temperature Effe	ect on Zero Balance	±0.001 %FS/°F	±0.0018 %FS/°C	[3][4]	Supplied Accessories
(Maximum)					180-019A 5-socket mat
Electrical					8113-105A Relay activa
Bridge Resistanc		350 Ohm	350 Ohm	[1]	
Excitation Freque		3.28 kHz	3.28 kHz		
Excitation Voltage		2 to 10 VAC rms	2 to 10 VAC rms	[2]	
Insulation Resista	ance	>5000 MOhm	>5000 MOhm		
Zero Balance		≤1 % FS	≤1 % FS	[3]	
Bridge Current (	at 5 VAC)	50 mA	50 mA		
Physical					
	h x Housing Length x	15.75 in x 8.25 in x	400.1 mm x 209.6	[5]	
Housing Height)		5.50 in	mm x 139.7 mm		
Weight		40 lb	18.2 Kg		
Mounting		2.25 in Dia. Keyed	57.2 mm Dia. Keyed		
0		Shaft	Shaft		
Sensing Element		Strain Gage	Strain Gage		
Housing Material		Black Oxided Steel	Black Oxided Steel		
Shaft Material		Steel	Steel		
Electrical Connector Torsional Stiffness		MS3102A-14S-5P	MS3102A-14S-5P		
	o5	11800 kin-lb/radian 0.036 in-lb-sec <sup>2</sup>	1330000 N-m/radian 0.004 N-m-sec <sup>2</sup>		
Rotating Inertia Maximum Speed		6700 RPM	6700 RPM		
iviaxiifiuffi Speed		0700 KPIVI	0700 RPIVI		

Optional Versions (Optional versions have identical specifications and accessories as listed for standard model except where noted below. More than one option maybe used.)

Revision E

ECN #: 36946

## Notes

- [1] Nominal.
- [2] Recommended 10 VAC RMS.
- [3] FS Full Scale.
- [4] Over compensated operating temperature range.
- [5] See Outline Drawing 24650 for Complete Dimensions
- [6] See PCB Declaration of Conformance PS062 for details.

## **Supplied Accessories**

180-019A 5-socket mating connector for Series 3100, 4100, 4200 torque sensors (1) 8113-105A Relay activated precision shunt calibration module (1)



All specifications are at room temperature unless otherwise specified.

In the interest of constant product improvement, we reserve the right to change specifications without

ICP® is a registered trademark of PCB group, Inc.

Entered: DMW	Engineer: PE	Sales: RR	Approved: JC	Spec Number:
Date: 12/14/2011	Date: 12/14/2011	Date: 12/14/2011	Date: 12/14/2011	19115



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