Model Number 4115K-01A		ROTARY	TRANSFORME	R TO	RQUE SENSOR
Performance		ENGLISH	SI		Optional Versions (Opti
Measurement Ra	nge (Full Scale Capacity)	50 in-lb	5.6 Nm	[1]	for standard model excep
Sensitivity (±15	%) (output at rated	2.5 mV/V	2.5 mV/V	[1][3]	
capacity)					Notes
Non-Linearity		≤0.05 % FS	≤0.05 % FS	[3]	[1] Nominal.
Hysteresis		≤0.05 % FS	≤0.05 % FS	[3]	[2] Recommended
Non-Repeatability	/	≤0.03 % FS	≤0.03 % FS	[3]	[3] FS - Full Scale
Environmental					[4] Over compens
Overload Limit		150 in-lb	17 Nm		[5] Mounting per A
Temperature Ran	ge (Operating)	-65 to 285 °F	-54 to 141 °C		[6] See PCB Decla
	ige (Compensated)	+70 to +170 °F	+21 to 77 °C		
Temperature Effe	ct on Output (Maximum)	±0.002	±0.0036 %Reading/°C	[4]	
		%Reading/°F			Supplied Accessories
	ct on Zero Balance	±0.002 %FS/°F	±0.0036 %FS/°C	[3][4]	180-019A 5-socket mat
(Maximum)					8113-105A Relay activa
Electrical					
Bridge Resistance		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	ince	>5000 MOhm	>5000 MOhm	101	
Zero Balance	\	≤2 % FS	≤2 % FS	[3]	
Bridge Current (	at 5 VAC)	50 mA	50 mA		
Physical		0.50: 0.05:	0.40.00		
	h x Housing Length x	9.56 in x 8.25 in x	242.82 mm x 209.55		
Housing Height)		6.00 in	mm x 152.40 mm		
Weight		47 lb	21.3 Kg	[6]	
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 Connec		MS3102A-14S-5P	MS3102A-14S-5P		
Torsional Stiffnes	S	4.5 kin-lb/radian	.500 N-m/radian		
Rotating Inertia		0.0048 in-lb/sec2	0.0005 N-m/sec2		
Maximum Speed		15000 RPM	15000 RPM		

Revision D

ECN #: 38181

## 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**

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



All specifications are at room temperature unless otherwise specified.

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

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Entered: DMW	Engineer: JSD	Sales: RR	Approved: JC	Spec Number:
Date:	Date:	Date:	Date:	18481
01/12/2012	01/12/2012	01/12/2012	01/12/2012	



Company: PCB Load & Torque, Inc. Address: 24350 Indoplex Circle Farmington Hills, MI 48335 UNITED STATES

Phone: 866-684-7107 Fax: 716-684-0987

Model Number 4115K-02A		ROTARY	TRANSFORME	R TO	RQUE SENSOR
Performance		ENGLISH	SI		Optional Versions (Opti
Measurement Ra	nge (Full Scale Capacity)	100 in-lb	11 Nm	[1]	for standard model excep
	%) (output at rated	2.5 mV/V	2.5 mV/V	[1][3]	
capacity)					Notes
Non-Linearity		≤0.05 % FS	≤0.05 % FS	[3]	[1] Nominal.
Hysteresis		≤0.05 % FS	≤0.05 % FS	[3]	[2] Recommended
Non-Repeatability	/	≤0.03 % FS	≤0.03 % FS	[3]	[3] FS - Full Scale
Environmental					[4] Over compens
Overload Limit		300 in-lb	34 Nm		[5] Mounting per A
Temperature Ran	ge (Operating)	-65 to 285 °F	-54 to 141 °C		[6] See PCB Decla
	ige (Compensated)	+70 to +170 °F	+21 to 77 °C		
Temperature Effe	ct on Output (Maximum)	±0.002	±0.0036 %Reading/°C	[4]	
		%Reading/°F			Supplied Accessories
	ct on Zero Balance	±0.002 %FS/°F	±0.0036 %FS/°C	[3][4]	180-019A 5-socket mat
(Maximum)					8113-105A Relay activa
Electrical					
Bridge Resistance		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	ince	>5000 MOhm	>5000 MOhm		
Zero Balance		≤2 % FS	≤2 % FS	[3]	
Bridge Current (	at 5 VAC)	50 mA	50 mA		
Physical					
	h x Housing Length x	9.56 in x 8.25 in x	242.82 mm x 209.55		
Housing Height)		6.00 in	mm x 152.40 mm		
Weight		47 lb	21.3 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		
Electrical Connec	tor	MS3102A-14S-5P	MS3102A-14S-5P		
Torsional Stiffnes	S	13.5 kin-lb/radian	1500 N-m/radian		
Rotating Inertia		0.0049 in-lb/sec2	0.0005 N-m/sec2		
Maximum Speed		15000 RPM	15000 RPM		

Revision D

ECN #: 38181

## 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**

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



All specifications are at room temperature unless otherwise specified.

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

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Entered: DMW	Engineer: JSD	Sales: RR	Approved: JC	Spec Number:
Date:	Date:	Date:	Date:	18482
01/12/2012	01/12/2012	01/12/2012	01/12/2012	



Company: PCB Load & Torque, Inc. Address: 24350 Indoplex Circle Farmington Hills, MI 48335 UNITED STATES

Phone: 866-684-7107 Fax: 716-684-0987

Model Number 4115K-03A		ROTARY	TRANSFORME	R TO	RQUE SENSOR
Performance		ENGLISH	SI		Optional Versions (Opti
Measurement Ra	nge (Full Scale Capacity)	200 in-lb	23 Nm	[1]	for standard model excep
	%) (output at rated	2.5 mV/V	2.5 mV/V	[1][3]	
capacity)					Notes
Non-Linearity		≤0.05 % FS	≤0.05 % FS	[3]	[1] Nominal.
Hysteresis		≤0.05 % FS	≤0.05 % FS	[3]	[2] Recommended
Non-Repeatability	/	≤0.03 % FS	≤0.03 % FS	[3]	[3] FS - Full Scale
Environmental					[4] Over compens
Overload Limit		600 in-lb	68 Nm		[5] Mounting per A
Temperature Ran		-65 to 285 °F	-54 to 141 °C		[6] See PCB Decla
	ige (Compensated)	+70 to +170 °F	+21 to 77 °C		
Temperature Effe	ct on Output (Maximum)	±0.002	±0.0036 %Reading/°C	[4]	0
		%Reading/°F			Supplied Accessories
	ct on Zero Balance	±0.002 %FS/°F	±0.0036 %FS/°C	[3][4]	180-019A 5-socket mat 8113-105A Relay activa
(Maximum)					6113-105A Relay activa
Electrical		050.01	050.01		
Bridge Resistance		350 Ohm	350 Ohm	[1]	
Excitation Freque		3.28 kHz	3.28 kHz	[0]	
Excitation Voltage		2 to 10 VAC rms	2 to 10 VAC rms	[2]	
Insulation Resista Zero Balance	ince	>5000 MOhm <2 % FS	>5000 MOhm	[3]	
	ot 5 \/AC\	≤2 % FS 50 mA	≤2 % FS 50 mA	[၁]	
Bridge Current ( Physical	at 5 VAC)	50 IIIA	50 MA		
	h x Housing Length x	9.56 in x 8.25 in x	242.82 mm x 209.55		
Housing Height)	II X I lousing Length X	6.00 in	mm x 152.40 mm		
Weight		47 lb	21.3 Kg		
Mounting		Flange w/ Splined	Flange w/ Splined	[5]	
Wounting		Shaft	Shaft	ادا	
Sensing Element		Strain Gage	Strain Gage		
Housing Material		Black Oxided Steel	Black Oxided Steel		
Shaft Material		Steel	Steel		
Electrical Connec	tor	MS3102A-14S-5P	MS3102A-14S-5P		
Torsional Stiffnes		33 kin-lb/radian	3700 N-m/radian		
Rotating Inertia		0.0050 in-lb/sec2	0.0006 N-m/sec2		
Maximum Speed		15000 RPM	15000 RPM		
·					

Revision D

ECN #: 38181

## 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**

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



All specifications are at room temperature unless otherwise specified.

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

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Entered: DMW	Engineer: JSD	Sales: RR	Approved: JC	Spec Number:
Date: 01/12/2012	Date: 01/12/2012	Date: 01/12/2012	Date: 01/12/2012	18483
0 17 12/20 12	01712/2012	0 17 12/2012	0.7.12/2012	



Company: PCB Load & Torque, Inc. Address: 24350 Indoplex Circle Farmington Hills, MI 48335

UNITED STATES Phone: 866-684-7107

Fax: 716-684-0987

Model Number 4115K-04A		ROTARY	TRANSFORME	R TO	RQUE SENSOR
Performance		ENGLISH	SI		Optional Versions (Opti
Measurement Ra	nge (Full Scale Capacity)	500 in-lb	55 Nm	[1]	for standard model excep
Sensitivity (±15 °	%) (output at rated	2.5 mV/V	2.5 mV/V	[1][3]	
capacity)					Notes
Non-Linearity		≤0.05 % FS	≤0.05 % FS	[3]	[1] Nominal.
Hysteresis		≤0.05 % FS	≤0.05 % FS	[3]	[2] Recommended
Non-Repeatability	/	≤0.03 % FS	≤0.03 % FS	[3]	[3] FS - Full Scale
Environmental					[4] Over compens
Overload Limit		1500 in-lb	170 Nm		[5] Mounting per A
Temperature Ran	ge (Operating)	-65 to 285 °F	-54 to 141 °C		[6] See PCB Decla
	ge (Compensated)	+70 to +170 °F	+21 to 77 °C		
Temperature Effe	ct on Output (Maximum)	±0.002	±0.0036 %Reading/°C	[4]	
		%Reading/°F			Supplied Accessories
	ct on Zero Balance	±0.002 %FS/°F	±0.0036 %FS/°C	[3][4]	180-019A 5-socket mat
(Maximum)					8113-105A Relay activa
Electrical					
Bridge Resistance		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	ince	>5000 MOhm	>5000 MOhm		
Zero Balance		≤2 % FS	≤2 % FS	[3]	
Bridge Current (	at 5 VAC)	50 mA	50 mA		
Physical					
	h x Housing Length x	9.56 in x 8.25 in x	242.82 mm x 209.55		
Housing Height)		6.00 in	mm x 152.40 mm		
Weight		47 lb	21.3 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		
Electrical Connec	tor	MS3102A-14S-5P	MS3102A-14S-5P		
Torsional Stiffnes	S	94 kin-lb/radian	10600 N-m/radian		
Rotating Inertia		0.0051 in-lb/sec2	0.0006 N-m/sec2		
Maximum Speed		15000 RPM	15000 RPM		

Revision D

ECN #: 38181

## 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**

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



All specifications are at room temperature unless otherwise specified.

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

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Entered: DMW	Engineer: JSD	Sales: RR	Approved: JC	Spec Number:
Date: 01/12/2012	Date: 01/12/2012	Date: 01/12/2012	Date: 01/12/2012	18484
01/12/2012	01/12/2012	01/12/2012	01/12/2012	



Company: PCB Load & Torque, Inc. Address: 24350 Indoplex Circle Farmington Hills, MI 48335 UNITED STATES

Phone: 866-684-7107 Fax: 716-684-0987

Model Number 4115K-06A		ROTARY	TRANSFORME	R TO	RQUE SENSOR
Performance		ENGLISH	SI		Optional Versions (Opti
Measurement Ra	nge (Full Scale Capacity)	1000 in-lb	115 Nm	[1]	for standard model excep
	%) (output at rated	2.5 mV/V	2.5 mV/V	[1][3]	
capacity)					Notes
Non-Linearity		≤0.05 % FS	≤0.05 % FS	[3]	[1] Nominal.
Hysteresis		≤0.05 % FS	≤0.05 % FS	[3]	[2] Recommended
Non-Repeatability	/	≤0.03 % FS	≤0.03 % FS	[3]	[3] FS - Full Scale
Environmental					[4] Over compens
Overload Limit		3000 in-lb	340 Nm		[5] Mounting per A
Temperature Ran	ge (Operating)	-65 to 285 °F	-54 to 141 °C		[6] See PCB Decla
	ige (Compensated)	+70 to +170 °F	+21 to 77 °C		
Temperature Effe	ct on Output (Maximum)	±0.002	±0.0036 %Reading/°C	[4]	
		%Reading/°F			Supplied Accessories
	ct on Zero Balance	±0.002 %FS/°F	±0.0036 %FS/°C	[3][4]	180-019A 5-socket mat
(Maximum)					8113-105A Relay activa
Electrical					
Bridge Resistance		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	ince	>5000 MOhm	>5000 MOhm		
Zero Balance		≤2 % FS	≤2 % FS	[3]	
Bridge Current (	at 5 VAC)	50 mA	50 mA		
Physical					
	h x Housing Length x	9.56 in x 8.25 in x	242.82 mm x 209.55		
Housing Height)		6.00 in	mm x 152.40 mm		
Weight		47 lb	21.3 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		
Electrical Connec	tor	MS3102A-14S-5P	MS3102A-14S-5P		
Torsional Stiffnes	S	204 kin-lb/radian	23000 N-m/radian		
Rotating Inertia		0.0052 in-lb/sec2	0.0006 N-m/sec2		
Maximum Speed		15000 RPM	15000 RPM		

Revision D

## 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**

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



All specifications are at room temperature unless otherwise specified.

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

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Entered: DMW	Engineer: JSD	Sales: RR	Approved: JC	Spec Number:
Date: 01/12/2012	Date: 01/12/2012	Date: 01/12/2012	Date: 01/12/2012	18486
0 17 12/20 12	0 17 12/2012	0 17 12/2012	0.7.2/20.2	



Company: PCB Load & Torque, Inc. Address: 24350 Indoplex Circle Farmington Hills, MI 48335 UNITED STATES

Phone: 866-684-7107 Fax: 716-684-0987

Model Number 4115K-07A		ROTARY	TRANSFORME	R TO	RQUE SENSOR
Performance		ENGLISH	SI		Optional Versions (Opti
Measurement Ra	nge (Full Scale Capacity)	1200 in-lb	135 Nm	[1]	for standard model excep
	%) (output at rated	2.5 mV/V	2.5 mV/V	[1][3]	
capacity)					Notes
Non-Linearity		≤0.05 % FS	≤0.05 % FS	[3]	[1] Nominal.
Hysteresis		≤0.05 % FS	≤0.05 % FS	[3]	[2] Recommended
Non-Repeatability	<i>'</i>	≤0.03 % FS	≤0.03 % FS	[3]	[3] FS - Full Scale
Environmental					[4] Over compens
Overload Limit		3600 in-lb	405 Nm		[5] Mounting per A
Temperature Ran	ge (Operating)	-65 to 285 °F	-54 to 141 °C		[6] See PCB Decla
	ge (Compensated)	+70 to +170 °F	+21 to 77 °C		
Temperature Effe	ct on Output (Maximum)	±0.002	±0.0036 %Reading/°C	[4]	
		%Reading/°F			Supplied Accessories
	ct on Zero Balance	±0.002 %FS/°F	±0.0036 %FS/°C	[3][4]	180-019A 5-socket mat
(Maximum)					8113-105A Relay activa
Electrical					
Bridge Resistance		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	ince	>5000 MOhm	>5000 MOhm		
Zero Balance		≤2 % FS	≤2 % FS	[3]	
Bridge Current (	at 5 VAC)	50 mA	50 mA		
Physical					
	h x Housing Length x	9.56 in x 8.25 in x	242.82 mm x 209.55		
Housing Height)		6.00 in	mm x 152.40 mm		
Weight		47 lb	21.3 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		
Electrical Connec	tor	MS3102A-14S-5P	MS3102A-14S-5P		
Torsional Stiffnes	S	204 kin-lb/radian	23000 N-m/radian		
Rotating Inertia		0.0052 in-lb/sec2	0.0006 N-m/sec2		
Maximum Speed		15000 RPM	15000 RPM		

Revision D

## 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**

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



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: JSD	Sales: RR	Approved: JC	Spec Number:
Date:	Date:	Date:	Date:	18487
01/12/2012	01/12/2012	01/12/2012	01/12/2012	



Company: PCB Load & Torque, Inc. Address: 24350 Indoplex Circle Farmington Hills, MI 48335 UNITED STATES

Phone: 866-684-7107 Fax: 716-684-0987

Model Number 4115K-08A		ROTARY	TRANSFORME	R TO	RQUE SENSOR
Performance		ENGLISH	SI		Optional Versions (Opti
Measurement Ra	nge (Full Scale Capacity)	2000 in-lb	225 Nm	[1]	for standard model excep
Sensitivity (±15	%) (output at rated	2.5 mV/V	2.5 mV/V	[1][3]	
capacity)					Notes
Non-Linearity		≤0.05 % FS	≤0.05 % FS	[3]	[1] Nominal.
Hysteresis		≤0.05 % FS	≤0.05 % FS	[3]	[2] Recommended
Non-Repeatability	<i>'</i>	≤0.03 % FS	≤0.03 % FS	[3]	[3] FS - Full Scale
Environmental					[4] Over compensa
Overload Limit		6000 in-lb	675 Nm		[5] Mounting per A
Temperature Ran	ge (Operating)	-65 to 285 °F	-54 to 141 °C		[6] See PCB Decla
	ge (Compensated)	+70 to +170 °F	+21 to 77 °C		
Temperature Effe	ct on Output (Maximum)	±0.002	±0.0036 %Reading/°C	[4]	
		%Reading/°F			Supplied Accessories
	ct on Zero Balance	±0.002 %FS/°F	±0.0036 %FS/°C	[3][4]	180-019A 5-socket mat
(Maximum)					8113-105A Relay activa
Electrical					
Bridge Resistance		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	ince	>5000 MOhm	>5000 MOhm		
Zero Balance		≤2 % FS	≤2 % FS	[3]	
Bridge Current (	at 5 VAC)	50 mA	50 mA		
Physical		0.50: 0.05:	0.40.00		
	h x Housing Length x	9.56 in x 8.25 in x	242.82 mm x 209.55		
Housing Height)		6.00 in	mm x 152.40 mm		
Weight		47 lb	21.3 Kg	(6)	
Mounting		Flange w/ Splined	Flange w/ Splined	[5]	
Canaina Flament		Shaft	Shaft		
Sensing Element		Strain Gage	Strain Gage		
Housing Material Shaft Material		Black Oxided Steel Steel	Black Oxided Steel Steel		
	to.	MS3102A-14S-5P	MS3102A-14S-5P		
Electrical Connector Torsional Stiffness		204 kin-lb/radian	23000 N-m/radian		
Rotating Inertia	5	0.0052 in-lb/sec2	0.0006 N-m/sec2		
Maximum Speed		15000 RPM	15000 RPM		
iviaximum Speed		19000 KFIVI	19000 KEIVI		

Revision E

## 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**

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



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: JSD	Sales: RR	Approved: JC	Spec Number:
Date: 01/12/2012	Date: 01/12/2012	Date: 01/12/2012	Date: 01/12/2012	18488
<u> </u>	*			



Company: PCB Load & Torque, Inc. Address: 24350 Indoplex Circle Farmington Hills, MI 48335 UNITED STATES

Phone: 866-684-7107 Fax: 716-684-0987

Model Number 4115K-13A		ROTARY	TRANSFORME	R TO	RQUE SENSOR
Performance		ENGLISH	SI		Optional Versions (Opti
Measurement Ra	nge (Full Scale Capacity)	10000 in-lb	1130 Nm	[1]	for standard model excep
Sensitivity (±15	%) (output at rated	2.5 mV/V	2.5 mV/V	[1][3]	
capacity)					Notes
Non-Linearity		≤0.05 % FS	≤0.05 % FS	[3]	[1] Nominal.
Hysteresis		≤0.05 % FS	≤0.05 % FS	[3]	[2] Recommended
Non-Repeatability	/	≤0.03 % FS	≤0.03 % FS	[3]	[3] FS - Full Scale.
Environmental					[4] Over compensa
Overload Limit		15000 in-lb	1700 Nm		[5] Mounting per A
Temperature Ran		-65 to 225 °F	-54 to 107 °C		[6] See PCB Decla
	ige (Compensated)	+70 to +170 °F	+21 to 77 °C		
Temperature Effe	ct on Output (Maximum)	±0.002	±0.0036 %Reading/°C	[4]	
		%Reading/°F			Supplied Accessories
	ct on Zero Balance	±0.002 %FS/°F	±0.0036 %FS/°C	[3][4]	180-019A 5-socket mat
(Maximum)					8113-105A Relay activa
Electrical					
Bridge Resistance		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	101	
Zero Balance	. = \( \( \alpha \)	≤2 % FS	≤2 % FS	[3]	
Bridge Current (	at 5 VAC)	50 mA	50 mA		
Physical		0.50: 0.05:	0.40.00		
	h x Housing Length x	9.56 in x 8.25 in x	242.82 mm x 209.55		
Housing Height)		6.00 in	mm x 152.40 mm		
Weight		47 lb	21.3 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		
Electrical Connec		MS3102A-14S-5P	MS3102A-14S-5P		
Torsional Stiffnes	S	500 kin-lb/radian	56500 N-m/radian		
Rotating Inertia		0.0062 in-lb/sec2	0.0007 N-m/sec2		
Maximum Speed		15000 RPM	15000 RPM		

Revision C

## 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**

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



All specifications are at room temperature unless otherwise specified.

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

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Entered: DMW	Engineer: PE	Sales: JC	Approved: ECB	Spec Number:
Date:	Date:	Date:	Date:	18493
12/01/2011	12/01/2011	12/01/2011	12/01/2011	



3425 Walden Avenue Depew, NY 14043 UNITED STATES Phone: 800-828-8840 Fax: 716-684-0987 E-mail: info@pcb.com Web site: www.pcb.com