SPECTROTILT IItm – Dual Axis Inclinometers

The SPECTROTILT^{Im} II family of Dual Axis Inclinometers combine the SP 5000 Series sensor with CMOS or custom designed hybrid signal conditioning circuitry. The result is a high performance / low cost dual axis inclinometer which can tackle the most demanding applications. All models are temperature compensated to the full industrial range, and feature null and scale adjustments (factory set). The open architecture construction makes them ideal for OEM applications, and for easy installation into custom enclosures. An optional flame retardant, molded ABS plastic enclosure is available for the *SSY0090P* and *SSY0091P models* (*see note below).



Model #SSY0091P shown above

Specifications

Characteristic	Model							
	SS Y0090	SSY0091	SSY0090C	SSY0091C	SSY0090P	SSY0091P	SSY0091D	SSY0091C-D
Range (arc degrees)	+/-45	+/-20	+/-45	+/-20	+/-45	+/-20	+/-20	+/-20
Output (Vdc, referenced to input common)	+/-7	+/-7	+1 to +4	+1 to +4	+1 to +4	+1 to +4	+/-7	+1 to +4
Input Voltage (Vdc, unregulated)	+/-11 to +/-16	+/-11 to +/-16	+5, +/-5%	+5, +/-5%	+4.85 to +16	+4.85 to +16	+/-11 to +/16	+5, +/-5%
Input Current (mA)	12	12	1.5	1.5	1	1	15	7
Resolution (arc degrees)	0.02	0.005	0.01	0.01	0.01	0.01	0.005	0.01
Repeatability (arc degrees)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Output Ripple								
% of signal value	0.2	0.2	0.2	0.2	-	-	-	-
mV RMS	-	-	-	-	0.5	0.5	-	-
Accuracy (arc degrees)								
at 10 degrees	-	+/-0.06	-	+/-0.06	-	+/-0.06	+/-0.05	+/-0.05
at 20 degrees	-	+/-0.6	-	+/-0.6	-	+/-0.6	+/-0.2	+/-0.2
at 30 degrees	+/-2	-	+/-2	-	+/-1	-	-	-
at 45 degrees	+/-5	-	+/-5	-	+/-5	-	-	-
Settling Time (mSec @ 20 degrees C)	500						50	
Temperature Range (degrees C)								
Operating	-40 to +80							
Storage	-40 to +80							
Temp. Coefficient of Null (arc seconds / deg.C)	20	10	20	10	20	20	10	10
Temp. Coefficient of Scale (%/deg.C typ.)	0.1	0.1	0.1	0.1	0.1	0.1	0.02	0.02
Null Adjustment Range	+/-1	+/-1	+/-0.2	+/-0.2	+/-0.2	+/-0.2	+/-1	+/-0.2
Weight (grams/approx.)	36	34	36	34	15	15	24	24

*Note: Part numbers for available models with ABS plastic housing are as follows.

• SSY0090P w/housing = p/n SSY0194

• SSY0091P w/housing = *p/n* SSY0195



SPECTRON SYSTEMS TECHNOLOGY INC.

595 OLD WILLETS PATH HAUPPAUGE NY 11788 PHONE: 631 582-5600 FAX: 631 582-5671



www.spectronsensors.com

Specifications are subject to change without notice!

SPECTROTILT IItm – Dual Axis Inclinometers

Dimensions, Electrical Connections, and Adjustments

SSY0090 and SSY0091



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SPECTROTILT IItm – Dual Axis Inclinometers

Top View (Mounting Position) Connector Part No: 640442-6; AMP [1.400] Dimensions in mm [inches] [.062] for 26 AWG Wires 35.56 58 R31 Pitch Null 5 Holes, Dia 3,73 mm [0.147] R26 Roll Null R34 Pitch Gain 831 R26 R30 Roll Gain **RAER** Components 0 R30 R34 0 [1.400] [1.800] 45.72 56 (ROLL) > 35. 0000 1000 buuuuu 6 6 6 6 6 6 JP1 -Æ JP1 Connections: 16.00 * Pin 1 + 5 to + 16 V DC [.630] × X ▲ + Pin 2 GND (PITCH) 27.00 ** Pin 3 SSY0091P Pin 4 REF 2.5 V DC [1.062] SSY0090P 45.72 Pin 5 X Axis (PITCH) [1.800] Pin 6 Y Axis (ROLL)

SSY0090P and SSY0091P

ABS Plastic Housing version



• SSY0090P w/housing = p/n SSY0194

• SSY0091P w/housing = p/n SSY0195



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