

Single/Dual Axis General Tilt Sensors (Z/XY)

Overview

High performance, high IP rating, resistance to shock and vibrations, and high electromagnetic compatibility make this sensor suitable for mobile hydraulic applications.

Developed to guarantee a robust, high-performance solution for applications such as agricultural vehicles, earth-moving machines, and hoisting equipment.

The GIG Inclination series offers two independent but redundant sensors and outputs to provide ultimate reliability.

Features

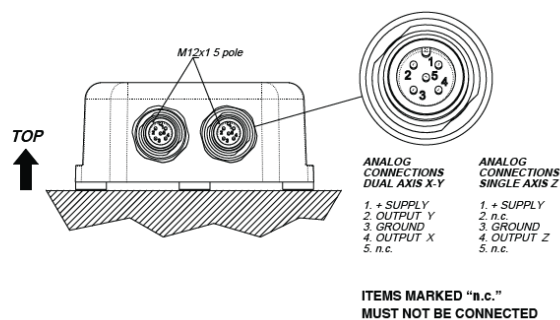
- Voltage or current analog output
- 8 models available
- M12 quick-disconnect model (purchase cable separately)
- IP67/IP69K rated
- 3-year warranty



GIG-XY-015-V-M12

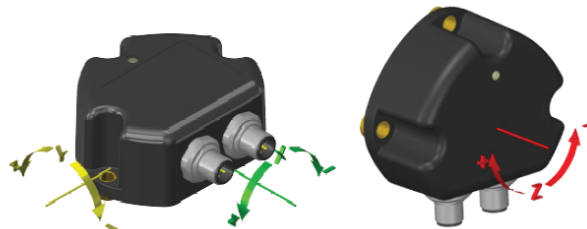


GIG Inclination Sensors							
Part Number	Price	Number of Axis	Measuring Range	Accuracy	Output	Connection	Drawing Link
GIG-Z-360-V-M12	\$;05eb]:	1	+/- 180 degrees	+/-0.5 degrees	redundant 0-10 VDC	(2) 5-pin M12 quick-disconnect	PDF
GIG-Z-360-A-M12	\$;05eb]:	1	+/- 180 degrees	+/-0.5 degrees	redundant 4-20 mA	(2) 5-pin M12 quick-disconnect	PDF
GIG-XY-015-V-M12	\$05ec0:	2	+/- 15 degrees	+/-0.5 degrees	redundant 0-10 VDC	(2) 5-pin M12 quick-disconnect	PDF
GIG-XY-015-A-M12	\$05ec1:	2	+/- 15 degrees	+/-0.5 degrees	redundant 4-20 mA	(2) 5-pin M12 quick-disconnect	PDF
GIG-XY-045-V-M12	\$05ec2:	2	+/- 45 degrees	+/-0.5 degrees	redundant 0-10 VDC	(2) 5-pin M12 quick-disconnect	PDF
GIG-XY-045-A-M12	\$05ec3:	2	+/- 45 degrees	+/-0.5 degrees	redundant 4-20 mA	(2) 5-pin M12 quick-disconnect	PDF
GIG-XY-085-V-M12	\$05ec4:	2	+/- 85 degrees	+/-0.5 degrees	redundant 0-10 VDC	(2) 5-pin M12 quick-disconnect	PDF
GIG-XY-085-A-M12	\$05ec6:	2	+/- 85 degrees	+/-0.5 degrees	redundant 4-20 mA	(2) 5-pin M12 quick-disconnect	PDF



DUAL AXIS
REDUNDANT CIRCUIT

SINGLE AXIS
REDUNDANT CIRCUIT

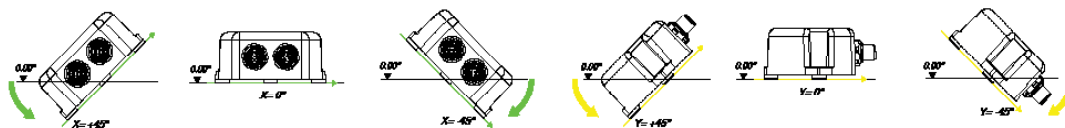
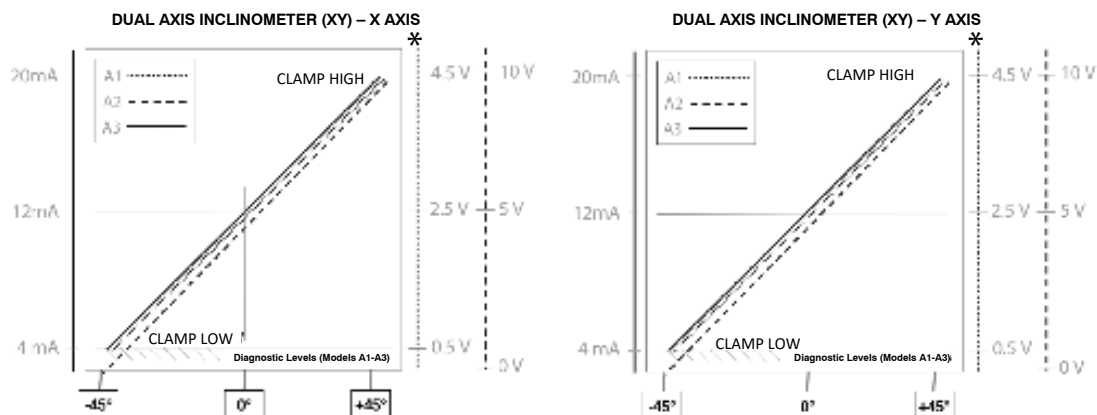


Specifications

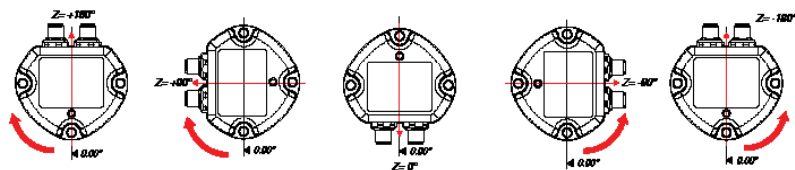
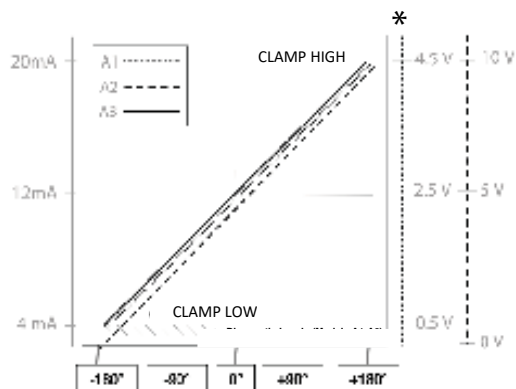
GIG Inclination Sensor Specifications	
Specification	
Measurement Range	$\pm 15^\circ \pm 45^\circ \pm 85^\circ$ (single axis Z for analog output-dual axis XY) $360^\circ (\pm 180^\circ)$ single axis Z only
Supply Voltage	+10 to +36 VDC
Output Signal	0-10 VDC; 4-20mA
Electrical Connections	(2) 5 Pole M12 Connector
Resolution	12 bit
Accuracy (Factory Verification @ 25°C)	< $\pm 0.5\%$ FS
Response Time	~650 ms
Working Temperature	-40 to +85°C [-40 to 185°F]
Temperature Coefficient at 0-deg inclination	Typical < ± 0.006 deg/°C
Long Term Repeatability	Single Axis: Typical < ± 0.5 deg in the range of ± 180 deg Dual Axis: Typical < ± 0.5 deg in the range $\leq \pm 60$ deg, ± 2 deg otherwise
Vibrations	20g 10Hz to 2000Hz IEC 60068-2-6
Shock	Impulsive on 3 axis: 50g 11ms IEC 60068-2-27
Electromagnetic Compatibility	2014/30/EU Electromagnetic Compatibility (EMC)
IP Protection Level	IP67-IP69X
Housing Material	PBT [Polybutylene Terephthalate]
Agency Approval	CE

To obtain the latest agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

OPERATING SPECIFICATIONS: OUTPUT SIGNAL GRAPHS



SINGLE AXIS INCLINOMETER ($\pm 180^\circ$) – Z AXIS



LOAD CONDITIONS

- * +0.5 VDC to +4.5 VDC output with supply +10 to 36 VDC and +0 to 10 VDC output with supply +11 to 36 VDC: apply a load resistance > 100k ohm
- * +0.5 VDC to +4.5 VDC output (with supply +5 VDC): apply a load resistance > 100k ohm
- 4 to 20mA output (with supply < 15 VDC to 10 VDC): maximum allowed load resistance is 200 ohm
- 4 to 20mA output (with supply > 15 VDC to 36 VDC): maximum allowed load resistance is 500 ohm

* 0-5V models are not offered by AutomationDirect at this time.