GEFRAN
BEYOND TECHNOLOGY

GIG Inclination Sensors

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

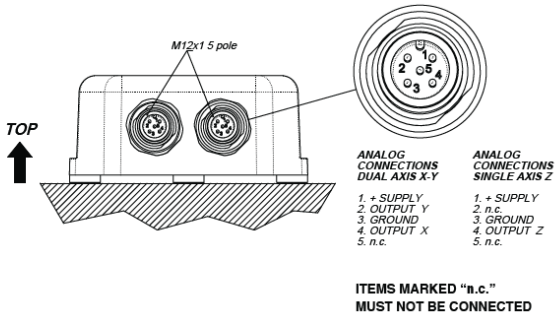
- Voltage or current analog output
- 8 models available
- M12 quick-disconnect model (purchase cable separately)
- IP67/IP69K rated
- 3-year warranty

GIG-XY-015-V-M12

3 YEAR WARRANTY

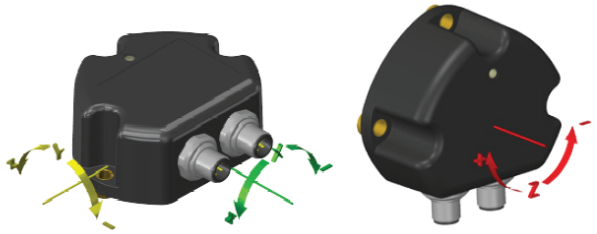
CE

GIG Inclination Sensors							
Part Number	*Price*	*Number of Axis*	*Measuring Range*	*Accuracy*	*Output*	*Connection*	*Drawing Link*
GIG-Z-360-V-M12	$319.00	1	+/- 180 degrees	+/-0.5 degrees	redundant 0-10 VDC	(2) 5-pin M12 quick-disconnect	PDF
GIG-Z-360-A-M12	$309.00	1	+/- 180 degrees	+/-0.5 degrees	redundant 4-20 mA	(2) 5-pin M12 quick-disconnect	PDF
GIG-XY-015-V-M12	$319.00	2	+/- 15 degrees	+/-0.5 degrees	redundant 0-10 VDC	(2) 5-pin M12 quick-disconnect	PDF
GIG-XY-015-A-M12	$309.00	2	+/- 15 degrees	+/-0.5 degrees	redundant 4-20 mA	(2) 5-pin M12 quick-disconnect	PDF
GIG-XY-045-V-M12	$319.00	2	+/- 45 degrees	+/-0.5 degrees	redundant 0-10 VDC	(2) 5-pin M12 quick-disconnect	PDF
GIG-XY-045-A-M12	$309.00	2	+/- 45 degrees	+/-0.5 degrees	redundant 4-20 mA	(2) 5-pin M12 quick-disconnect	PDF
GIG-XY-085-V-M12	$319.00	2	+/- 85 degrees	+/-0.5 degrees	redundant 0-10 VDC	(2) 5-pin M12 quick-disconnect	PDF
GIG-XY-085-A-M12	$309.00	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



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Specifications

GIG Inclination Sensor Specifications	
Specification	
Measurement Range	±15° ±45° ±85° (single axis Z for analog output-dual axis XY) 360° (±180°) 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)	< ±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 ≤ ±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.

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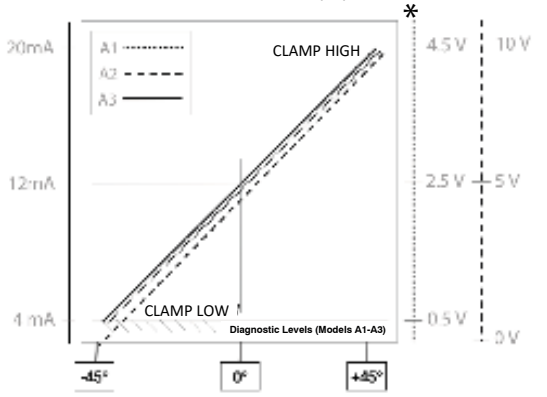
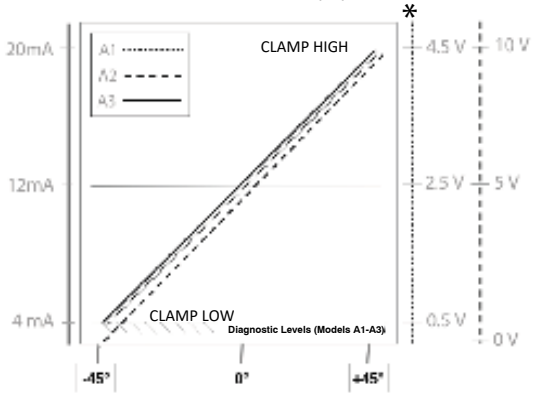
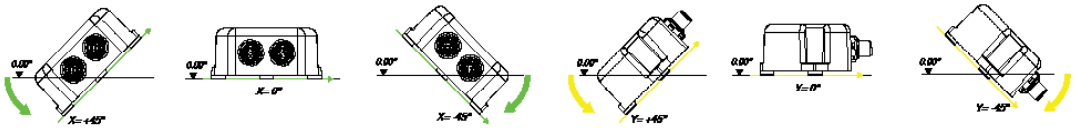
OPERATING SPECIFICATIONS: OUTPUT SIGNAL GRAPHS

DUAL AXIS INCLINOMETER (XY) – X AXIS

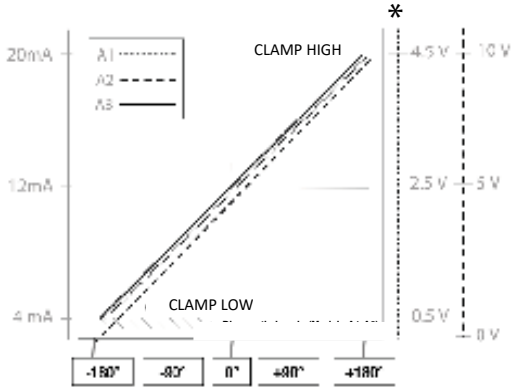


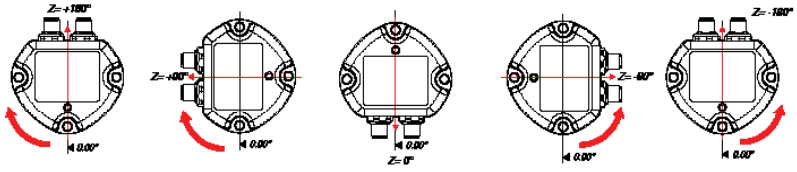
DUAL AXIS INCLINOMETER (XY) – Y AXIS





SINGLE AXIS INCLINOMETER (±180°) – 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.