

# LSIA15290

HIGH STABILITY AND ACCURACY, DUAL-AXIS DIGITAL INCLINOMETER



## Features

- Tilt Measurement
- Dual Axis operation pitch  $\pm 180^\circ$  and roll  $\pm 180^\circ$
- High accuracy  $0.1^\circ$
- High resolution  $0.025^\circ$
- No Manual calibration required
- Industry standard RS-485 Interface
- Industry standard IP-65 grade protection
- 3500g powered shock survivability
- Variable Input supply 5.0V to 15V

## Application

- Leveling
- Orientation Measurement
- Robotics
- Motion measurement



## General Description

LSIA15290 is a high accuracy digital inclinometer. It employs latest MEMS based high accuracy advanced sensors for tilt measurement and embedded processing devices for algorithmic computations and for external world communication. Thanks to the latest technologies employed in the LSIA15290. It eliminates the need to manual and elaborated calibration methodologies.

LSIA15290 measures digital angle of pitch and roll axis about  $\pm 180^\circ$ . The output from LSIA15290 can be accessed by using standard RS-485 serial interface. The LSIA15290 supports multiple input voltages ranging from 5V to 15V.

As LSIA15290 is IP-65 protected and also can be operated extreme low and high temperatures, this device can be used in harsh environmental conditions such as factories, Industries, Constructions and Antenna Control applications. The compact size of the LSIA15290 allows users to integrate this with their application easily.

# Specification

Parameter	Type	Units
Sensing range	$\pm 90^{\circ}$ (pitch/roll)	degree
Accuracy	$0.1^{\circ}$	degree
Resolution	$0.025^{\circ}$	degree
Operating Voltage	5V to 15V DC	voltage
Power Consumption	150mW @ 15V	watts
Shock survivability	3500	g
Start-up time	< 10	seconds

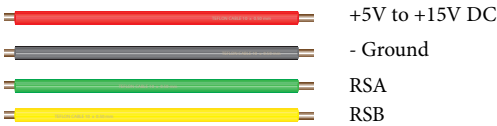
## Output Data Format

xxx should be connected at 4800 baud rate to serial interface. xxx sensor transmits the pitch and roll angle in ASCII represented string. The below is the string format.

<pitch angle>;<roll angle>\r

The pitch and roll angle are separated by ; and the string is terminated by 0x0D ASCII character.

## Connection Details



## Mechanical Dimensions

