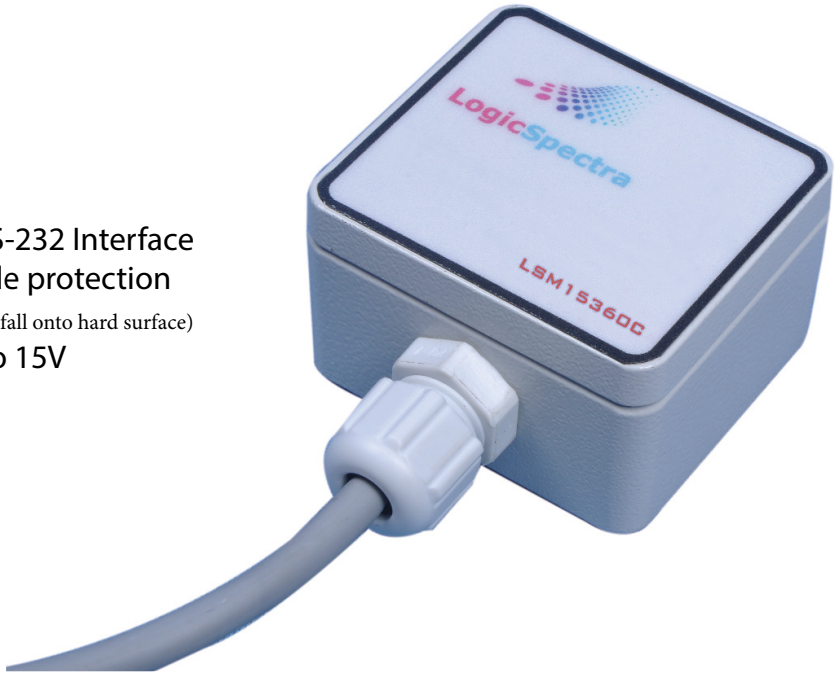
LSM15360C

High Stability and Accuracy, DIGITAL COMPASS

LogicSpectra

Features

Heading Measurement
Heading operation 0-360°
Accuracy ±2.5° (Max)
High resolution 0.0625°
Manual/Auto calibration
Industry standard RS-485/RS-232 Interface
Industry standard IP-65 grade protection
1.8m shock survivability (Free fall onto hard surface)
Variable Input supply 5.0V to 15V



Application

Navigation
Orientation Measurement
Robotics
Motion measurement

General Description

LSM15360C is a high accuracy digital compass. It employs latest MEMS based high accuracy advanced sensors for Heading measurement and embedded processing devices for algorithmic computations and for external world communication. Thanks to the latest technologies employed in the LSM15360C. It eliminates the need to manual and elaborated calibration methodologies. In built algorithm offsets the tilt and any magnetic field interferences for accurate heading angle.

LSM15360C measures digital angle of heading axis about 0-360°. The output from LSM15360 can be accessed by using standard RS-485/RS-232 serial interface. The LSM15360C supports multiple input voltages ranging from 5V to 15V.

As LSM15360C 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, Industires, Constructions and Antenna Control applications. The compact size of the LSM15360C allows users to integrate this with their application easily.

Specification

Parameter	Type	Units
Sensing range	± 360°	degree
Accuracy	± 2.5° (Max)	degree
Resolution	0.0625°	degree
Operating Voltage	5V to 15V DC	voltage
Power Consumption	150mW @ 15V	watts
Operating Temperature	-40°C to 65°C	C
Shock survivability	1.8 (Free fall onto hard surface)	m
Start-up time	< 5	seconds
RS-232 Interface	2400 - 38400 (user selectable)	Baud rate
Output/Input (RS-232)	0 to +5V logic levels	V

Output Data Format

LSM15360C outputs data in NMEA 0183 compatible format. Output data is transmitted via industry standard RS-232/RS-485 for reliable and longer distance communication. Output baud rates can be configurable.
LSM15360C sensor transmits the heading angle in ASCII represented string in NMEA 0183 format.
Sample output:-

$LSM,233.234*24<CR><LF>

Connection Details

+5V to +15V DC
Ground (-)
RS-232 (TX)
RS-232 (RX)

Mechanical Dimensions