

## LX34070

### High Speed Inductive Positions Sensor with Differential Outputs

Status: In Production.

 [Documentation](#)  [Symbols](#)

 [Recommended for Automotive Design](#)

The LX34070 is an inductive position sensor IC for high-speed and noise-immune automotive and industrial application and extremely flexible for other applications. The two output signals that represent the absolute position can be configured as single ended for reduced pin count or differential to maximize noise immunity in remote applications. The device uses PCB traces to both generate an magnetic excitation signal and detect the presence of a metal targets positioned within the generated magnetic field. The advantage of this is a magnetic field sensor that does not require

 [Purchase Options](#)

analog position information to a host processing system over a 6-wire cable, the necessary signals to the processor are power, ground and the two differential analog position signals. The LX34070 has flexible calibration options for many applications. For remote applications, the device is programmed through a power line VIN signal and verified from one of the output signals, eliminating the need for additional pins and signals. In an embedded application where the sensor is on the same PCB as other microcontrollers, the device can be calibrated via digital signals.

The LX34070 is offered in a 14-pin TSSOP package with AEC-Q100 certification to grade 0 with an extended operating range (-40°C to +160°C) making it suitable for a wide range of commercial, industrial, medical and/or automotive sensor applications.

Download your first inductive Position sensor and get a head start on your design by visiting our [Inductive Position Sensor Design Page](#).

To request LX34070 Datasheet, please contact [Mark.Smith@microchip.com](mailto:Mark.Smith@microchip.com).

Microchip can help with your own sensor design with its own unique mechanical constraints. You can start with [one of our Kits](#), but Microchip is ready to help you from day one. Talk with our sales team and describe your



## Product Features

---

- AEC-Q100 Grade 0 Certification
- ISO26262 ASIL C(D) SEOOOC Compliant
- Built-in Oscillator for Driving Primary Coil
- Two Independent Analog Channels With Demodulation
- Automatic Gain Control Maximizes Resolution over Large Target Air gaps Ranges
- 4.5V to 5.5V Input Range with Protection Up to 18V
- Differential Output Buffers with Accurate Common-Mode Level and Protection Circuitry Against Output Shorts
- Calibration Through VIN or GPIO
- Detection of Faults at the Exciter Coil Pins and Receive Coil Pins
- Power Supply and Ground Loss Detection

[▼ Read More](#)

## Parametrics

---

[Overview](#)[Features](#)[Software](#)[Development Environment](#)[RoHS Information](#)[Purchase](#)

Output Interface

SIN/COS

EEPROM Program

VIN, GPIO

Temperature Sensor

Yes

Operating Voltage Range

4.5V to 5.5V

Max Rated Voltage

18V

Reverse Voltage Rating

-18V

MaxRefreshRate

N/A

[All Application Notes](#)[Embedded Software](#)



# Development Environment

## Demo & Evaluation Boards



**LXM9518 - PROGRAMMER  
FOR INDUCTIVE POSITION  
SENSOR**




**EV65W60A - LX34070 90  
Degree Rotary EVB**




**EV39W84A - LX34070 90  
Degree Rotary Kit**

Overview   Features   Software   Development Environment   RoHS Information   Purchase


[Learn More](#)

 [Add to Cart](#)










[Learn More](#)

 [Add to Cart](#)

[Learn More](#)

 [Add to Cart](#)

## RoHS Information

Product	JEDEC Indicator	ROHS	China EFUP	Material Declaration	Device Weight (g)	Shipp
LX34070T-H/STVAO	e3				0.06	0.2468
LX34070T-H/ST	e3				0.06	0.2468
LX34070-H/STVAO	e3				0.06	0.125