



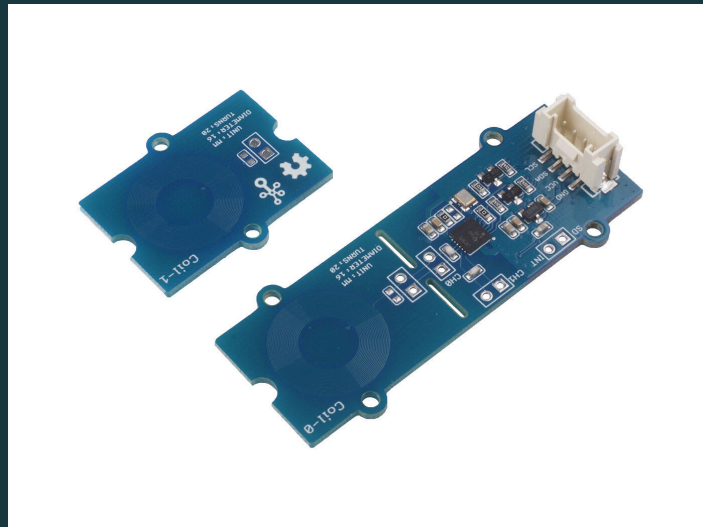
**EN:** This Datasheet/Document is presented by the manufacturer.

Please visit our website for pricing and availability at [www.hestore.hu](http://www.hestore.hu).

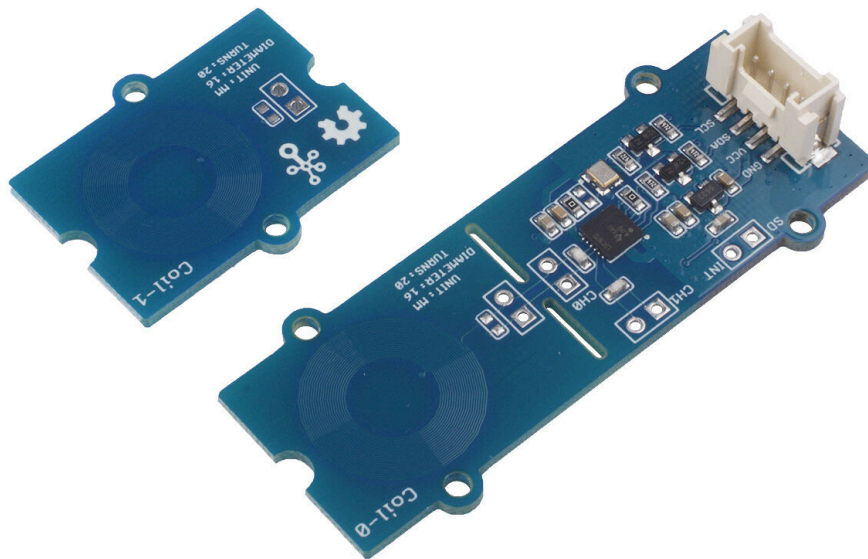
INDUSTRIAL PRODUCT DATASHEET

# Grove - 2-Channel Inductive Sensor (LDC1612)

A 2-channel inductive sensor with >20 cm sensing range, 1 kHz–10 MHz frequency support, low power consumption, and robust anti-interference, ideal for knobs, encoders, buttons, and metal detection in consumer, automotive, an...



# Overview

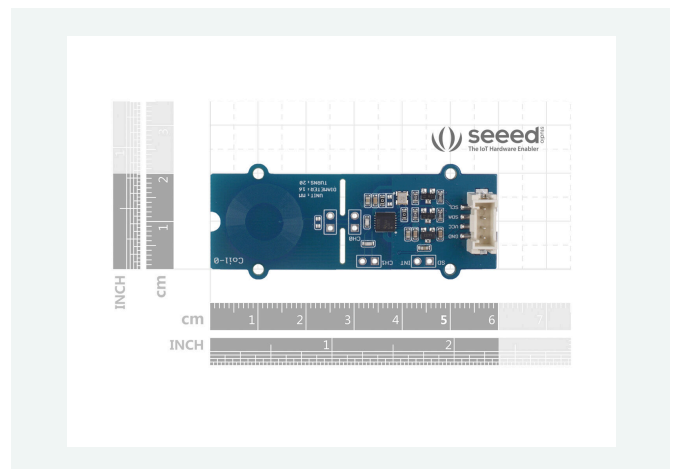
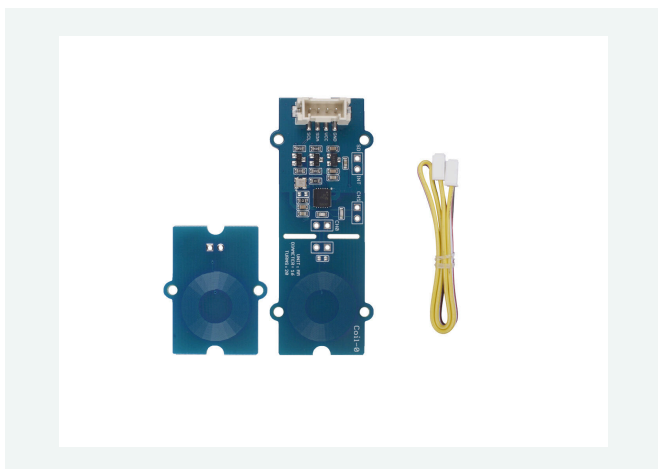
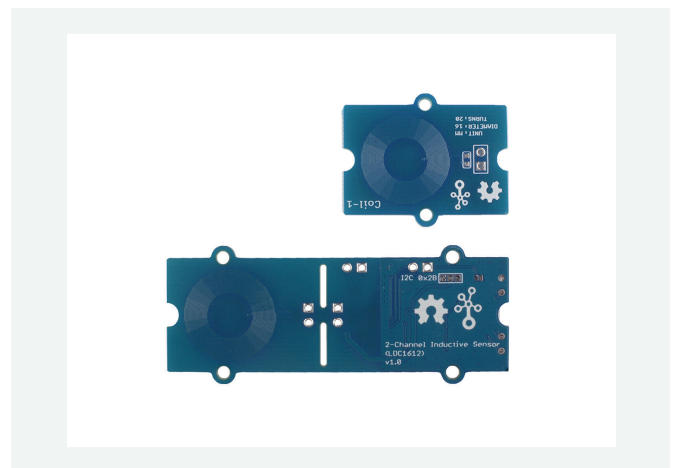
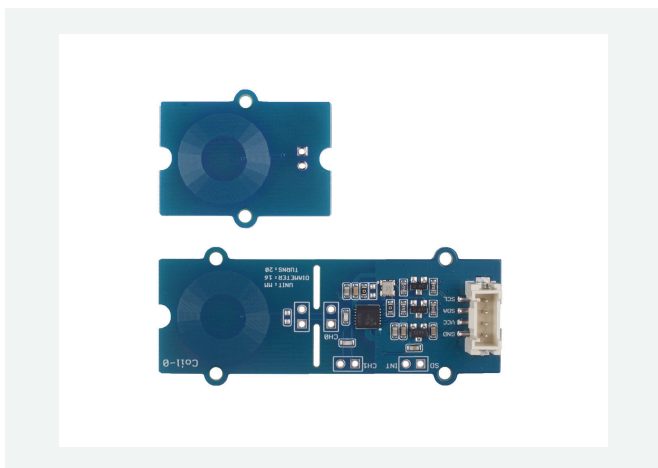


The Grove - 2-Channel Inductive Sensor (LDC1612) offers a remote sensing range of over 20 cm, supporting frequencies from 1 kHz to 10 MHz across two channels with matched sensor drive. It delivers robust performance in harsh environments with immunity to DC magnetic fields, low power sleep (35  $\mu$ A) and shutdown (200 nA) modes, and a Grove socket for versatile plug-and-play applications.

# Key Features

- **Excellent sensing range:** Remote sensor position of >20 cm and supports wide sensor frequency range of 1 kHz to 10 MHz and 2 channels with matched sensor drive
- **Powerful anti-interference and outstanding durability:** Supports operation in harsh environments, Immunity to DC magnetic fields and magnets and aging compensation
- **Multiple reference clocking options:** Included internal clock for lower system cost and support for 40 MHz external clock for higher system performance.
- **Low power consumption:** 35  $\mu$ A low power sleep mode and 200 nA shutdown mode
- **Grove unified socket:** The sensor ensures "Plug and Play" and could be versatile for various applications.

# Product Gallery



## Specification

|                                  |                                     |
|----------------------------------|-------------------------------------|
| Dimensions                       | 130mm x90mm x9.5mm                  |
| Weight                           | G.W 9g                              |
| Battery                          | Exclude                             |
| Supply Voltage                   | 3.3V / 5V                           |
| Junction Temperature             | -55~150°C                           |
| Supported Sensor Frequency Range | 1kHz~10MHz                          |
| Best Detecting Range             | 15mm                                |
| Interface                        | I2C                                 |
| I2C address                      | 0x2B(default)<br>0x2A(configurable) |
| Package size                     | L:140mm W: 90mm H: 10mm             |
| Coil Parameter                   | Diameter: 16mm/ Turns: 20           |

## Applications

- **Knobs in consumer, appliances, and automotive**
- **Linear and rotational encoders**
- **Buttons in home electronics, wearables, manufacturing, and automotive**
- **Keypads in manufacturing and appliances**
- **Slider buttons in consumer products**
- **Metal detection in industrial and automotive**
- **POS and EPOS**
- **Flow meters in consumer and appliances**

## Part List

|                                             |   |
|---------------------------------------------|---|
| Grove - 2-Channel Inductive Sensor(LDC1612) | 1 |
| Standalone Circul Coil                      | 1 |
| Grove Cable                                 | 1 |

## Compliance & Logistics



|          |              |
|----------|--------------|
| HSCODE   | 9031900090   |
| USHSCODE | 9031902100   |
| UPC      | 841454121831 |
| EUHSCODE | 9013101000   |
| COO      | CHINA        |

## Resource Links

- <https://www.seeedstudio.com/Grove-2-Channel-Inductive-Sensor-LDC1612.html>
- [Grove - 2-Channel Inductive Sensor\(LDC1612\) Eagle Files](#)
- [Grove - 2-Channel Inductive Sensor\(LDC1612\) Software Library](#)
- [Datasheet LDC1612](#)

**Seeed Technology Co.,Ltd.**  
9F, Building G3, International E City,  
Zhongshanyuan Road, Nanshan, Shenzhen, China

**Tel:** +86 0755-80695676  
**Web:** [www.seeed.cc](http://www.seeed.cc)  
**Shop:** [www.seeedstudio.com](http://www.seeedstudio.com)