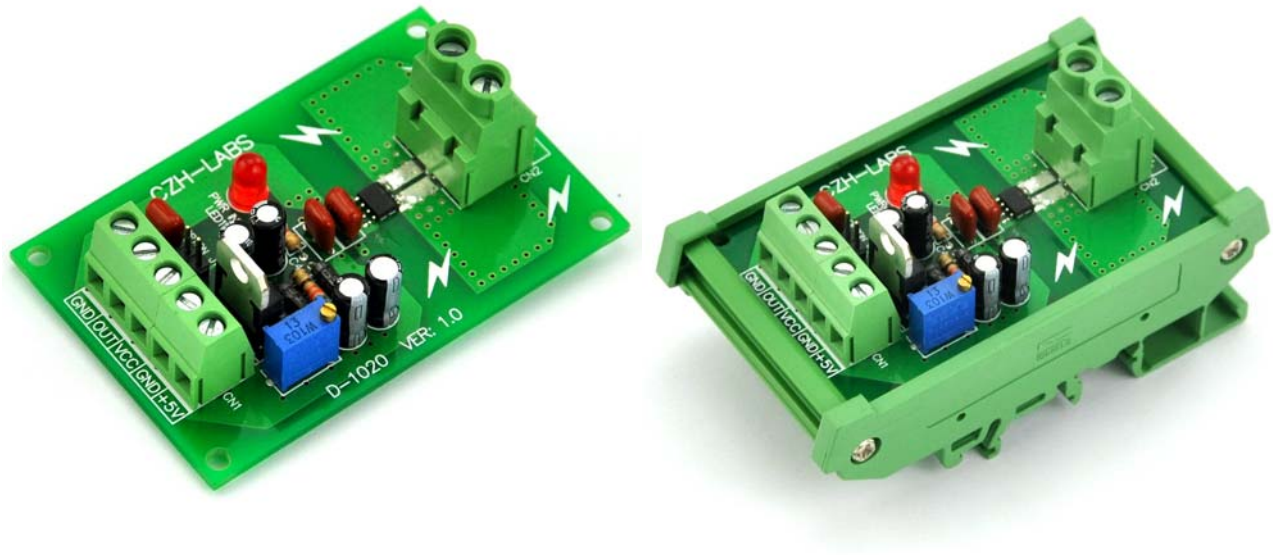
CZH-LABS
Electronics-Salon

Model: D-1020 series

5A / 20A / 30A Current Sensor Module

Based on ACS712 Hall Effect-Based Linear Current Sensor IC



Features：

- **The item provides economical and precise solutions for AC or DC current sensing in industrial, commercial, and communications systems. Typical applications include motor control, load detection and management, switched-mode power supplies, and overcurrent fault protection. The device is not intended for automotive applications.**
- **Optimized current range 5A, 20A or 30A version to choose.**
- **Output voltage proportional to AC or DC currents.**
- **Panel mount or DIN rail mount types to choose. DIN rail mount version can support width 35 / 32 / 15mm rails.**

Electrical Parameters:

- **Load Maximum Current: ±5A, ±20A or ±30A three version.**
- **Load Frequency Bandwidth: DC ~ 80 kHz.**
- **Minimum Isolation Voltage: 2.1 kV(RMS).**
- **Sensitivity: 5A version ----- 185mV/A.**
  20A version ---- 100mV/A.
  30A version ---- 66mV/A.
- **Operating Voltage: Regulated 5VDC, or 8 ~ 35VDC.**
- **Operating Current: 20mA(max).**
- **Load No Current Output Terminal Voltage: 2.5VDC. ***
  *** When the load current IP+ to IP-, sensing output voltage >2.5V. when the load current IP- to IP+, sensing output voltage <2.5V.**
  For example 20A version: 20A current from IP+ to IP-, output signal is 4.5V. 20A current from IP- to IP+, output signal is 0.5V.
- **Other more detailed electrical specifications, you can read Allegro ACS712 datasheet.**

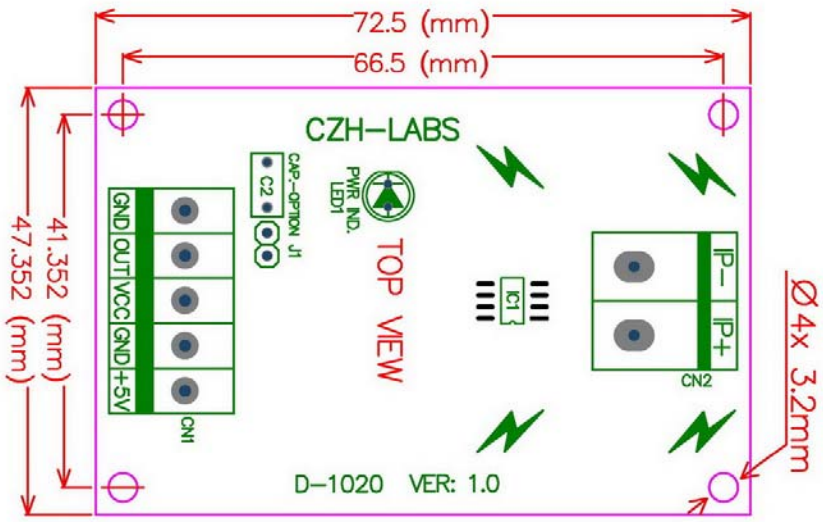
Size:

- **Panel mount version: 72.5 x 47.35 x 24mm (L x W x H)**
- **DIN rail mount version: 83 x 50 x 48mm (L x W x H)**

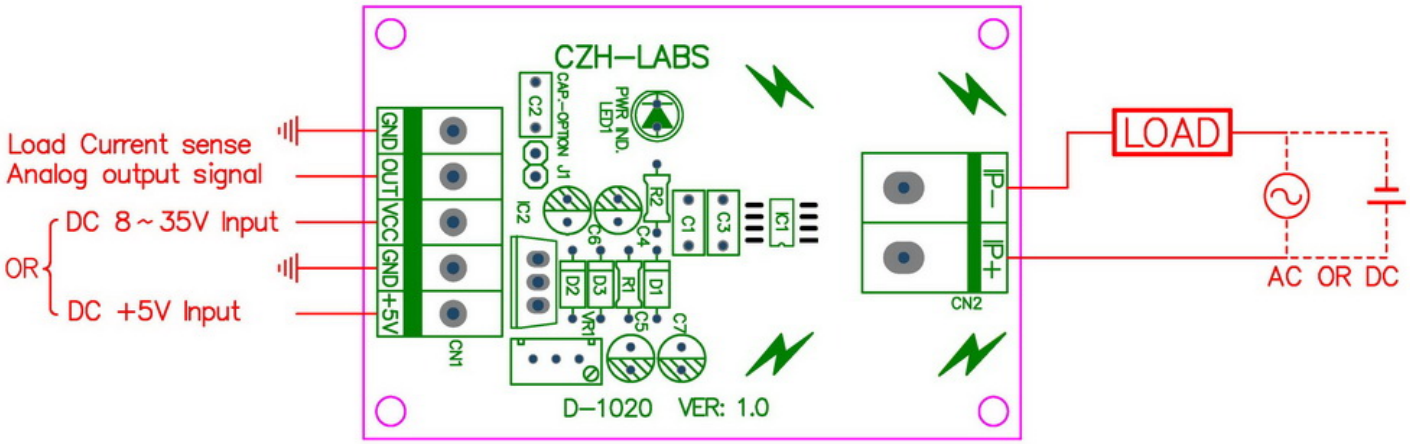
Choose Version List:

1. **MD-D1020/5A, panel mount, maximum ±5A current.**
2. **MD-D1020/20A, panel mount, maximum ±20A current.**
3. **MD-D1020/30A, panel mount, maximum ±20A current**
4. **MD-D1020T/5A, DIN rail mount, maximum ±5A current.**
5. **MD-D1020T/20A, DIN rail mount, maximum ±20A current.**
6. **MD-D020T/30A, DIN rail mount, maximum ±30A current.**

PCB Dimension:



Terminal Blocks Connection Diagram:



IP+, IP- : connect load.

OUT : sensing signal output.

VCC : Operating voltage power supply input, 8 ~ 35VDC.

Note: if use the mode, +5V terminal cannot connect any other circuit or wires.

+5V : Operating voltage power supply input, 5VDC, the 5VDC must is accurate and regulated voltage.

Note: if use the mode, VCC terminal cannot connect any other circuit or wires.

GND: two GND is output signal and power supply neutral terminal, or you can call it is 0V or Ground. but the connection to the earth is not necessary.

Circuit Schematic: