

正角电子™



N1 闭环型霍尔电流传感器的初、次级之间是绝缘的，可用于测量直流、交流和脉冲电流。

N1 series current sensor is a closed loop device based on the measuring principle of the hall effect and null balance method, with a galvanic isolation between primary and secondary circuit. It provides accurate electronic measurement of DC, AC or pulsed currents.



电参数 Electrical data (Ta=25°C ± 5°C)

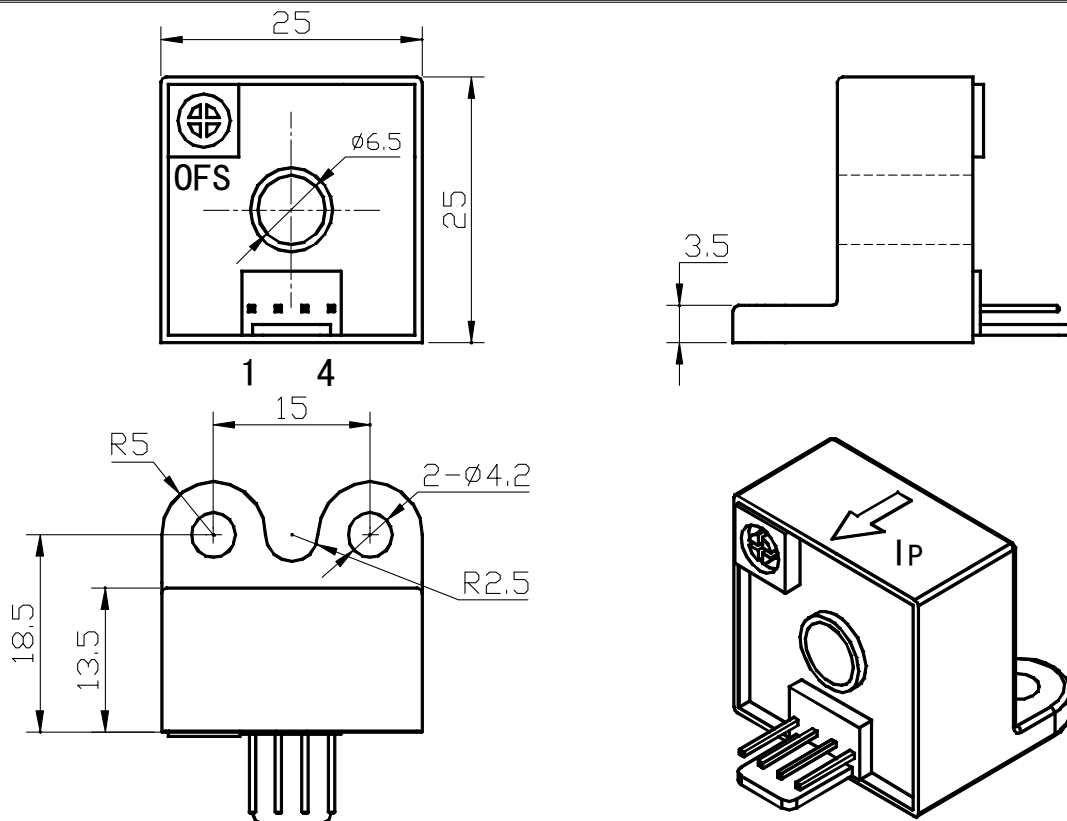
| Type | N1-10A | N1-20A | N1-30A | N1-40A | N1-50A | 单位 Unit |
|---|--|--------|---------|--------|--------|------------|
| 额定输入电流 (I _{pn}) Rated current (I _{pn}) | 10 | 20 | 30 | 40 | 50 | A |
| 测量电流范围 (I _p) Measure range (I _p) | 20 | 40 | 60 | 80 | 80 | A |
| 额定输出电压 Rated output | @I _p = ± I _{pn} ± 4 ± 0.5% | | | | | V |
| 电源电压 Supply voltage | ±12V, ±15V | | | | | V |
| 功耗电流 Power Consumption | ≤ 25 | | | | | mA |
| 零点失调电压 Zero offset voltage | @I _p =0 | | ≤ ± 30 | | | mV |
| 失调电压温漂 Offset voltage drift | @ -40~+85°C | | ≤ ± 0.5 | | | mV / °C |
| 线性度 Linearity | @I _p =0- ± I _{pn} | | ≤ 0.1 | | | %FS |
| 响应时间 Response time | @50A/μ S, 10%-90% | | ≤ 1 | | | μS |
| 绝缘电压 Galvanic isolation | @ 50HZ, AC, 1min | | 2.5 | | | KV |

N1 系列闭环型霍尔电流传感器
N1 Series Closed Loop Mode
Hall Effect Current Sensor

应用 Applications

- 交流变频驱动器
AC variable speed drives
- 直流电机驱动静态转换器
Static converters for DC motor drives
- 通讯电源
Battery supplied applications
- 不间断电源 UPS
Uninterruptible Power Supplies (UPS)
- 开关电源
Switched Mode Power Supplies (SMPS)
- 电焊机
Power supplies for welding applications

结构参数 Mechanical dimension(for reference only)



Remarks:

1. All dimensions are in mm.
2. General tolerance $\pm 1\text{mm}$
3. Elucidation: 1:+15V 2:-15V 3:V_{out} 4:0V

N1 系列闭环型霍尔电流传感器
N1 Series Closed Loop Mode
Hall Effect Current Sensor

使用说明 Directions for use

1. 当待测电流从传感器穿过，即可在输出端测得电压大小。(注意：错误的接线可能导致传感器损坏)

When the current will be measured goes through a sensor, the voltage will be measured at the output end. (Note: The false wiring may result in the damage of the sensor)

2. 可按用户需求定制不同额定输入电流和输出电压的传感器。

Custom design in the different rated input current and the output voltage are available.

执行标准 Standards

- UL94-V0.
- EN60947-1:2004
- IEC60950-1:2001
- EN50178:1998
- SJ 20790-2000

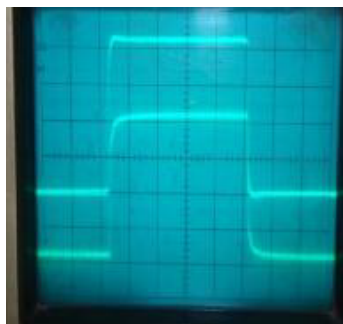
总体参数 General date

| | 数值 Value | 单位Unit |
|------------------------------------|-------------|--------|
| 工作温度 (TA) Operating temperature | -40 to +85 | ℃ |
| 储存温度 (TS) Storage temperature | -40 to +125 | ℃ |
| 毛重(约) (M) Mass(approx) | 12 | g |

特性图 Characteristics chart

脉冲电流信号响应特性

Pulse current signal response characteristic



输入信号
(Input signal)
输出信号
(Output signal)

抗脉冲电压干扰特性

Effects of impulse noise



输出电压
(Output voltage)