

**B1H 系列多量程闭环型霍尔电流传感器**  
**B1H Series Multi-range Closed Loop Mode**  
**Hall Effect Current Sensor**

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B1H 多量程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。

B1H series multi-range 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	B1H-25A		单位 Unit
额定输入电流 (Ip <sub>n</sub> ) Rated current (Ip <sub>n</sub> )	25		A
测量电流范围 (Ip) Measure range (Ip)	±55		A
测量电阻范围 Measure resister range	100~420		Ω
额定输出电流(Is <sub>n</sub> ) Rated output (Is <sub>n</sub> )	±25		mA
电源电压 Supply voltage	±12, ±15		V
功耗电流 Power Consumption	≤20+ IpX(Np/Ns)		mA
匝比 (Np/Ns) Turns ratio(Np/Ns)	1-2-3:1000		T
零点失调电流 Zero offset current	@Ip=0 ≤±0.2		mA
失调电流温漂 Offset current drift	@ -40~+85°C ≤±0.005		mA
响应时间 Response time	@50A/μ S,10%-90% ≤1		μ S
线性度 Linearity	@Ip=0-±Ip <sub>n</sub> ≤0.1		%FS
绝缘电压 Galvanic isolation	@ 50HZ/60HZ,AC,1min 5		KV
di/dt 跟随精度 di/dt accurately followed	>50		A / μ S

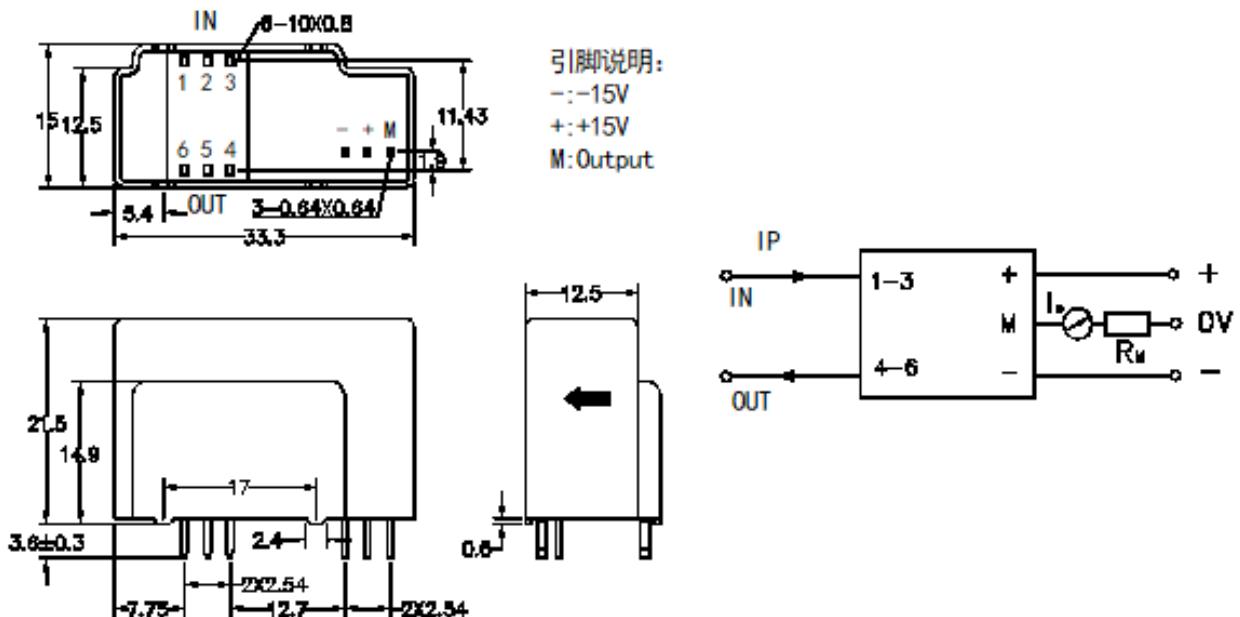
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带宽 Bandwidth	DC~200	KHZ
次级线圈电阻 @70 °C Secondary coil resistor	35	Ω

### 应用 Applications

- 交流变速驱动器  
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)



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### 接线图 Pin connections

初级匝数	额定电流 IPN (A)	输出电流 Is (mA)	初级阻抗 [mΩ]	初级电感 [uH]	初级引脚连接
1	25	25	0.15	0.01	6---○---○---4 OUT IN1---○---○---3
2	12	24	0.75	0.05	6---○---○---4 OUT IN1---○---○---3
3	8	24	1.45	0.14	6---○---○---4 OUT IN1---○---○---3

### 使用说明 Directions for use

- 当待测电流从传感器穿过，即可在输出端测得电流大小。(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 current will be measured at the output end.  
 (Note: The false wiring may result in the damage of the sensor)
- 可按用户需求定制不同额定输入电流和输出电流的传感器。  
 Custom design in the different rated input current and the output current are available.

### 执行标准 Standards

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

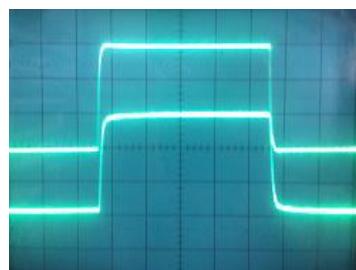
### 总体参数 General date

	数值 Value	单位 Unit
工作温度 (TA) Operating temperature	-40 to +85	°C
储存温度 (TS) Storage temperature	-40 to +125	°C
毛重(约) (M) Mass(approx)	15	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 )