

B100R 系列多量程闭环型霍尔电流传感器 B100R Series Multi-range Closed Loop Mode Hall Effect Current Sensor

B100R 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。

B100R 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	B100R-6A	B100R-15A	B100R-25A	B100R-50A	单位 Unit
额定输入电流 (I _{pn}) Rated current (I _{pn})	6	15	25	50	A
测量电流范围 (I _p) Measure range (I _p)	19.2	48	80	150	A
匝比 (N _p /N _s) Turns ratio(N _p /N _s)	1: 960	1: 1200	1: 1000	1: 1000	T
内接取样电阻 Internal resister	100±0.1%	50±0.1%	25±0.1%	12.5±0.1%	Ω
额定输出电压 Rated output	@I _p =±I _{pn} ±0.625±0.5%				V
电源电压 Supply voltage	+5V				V
功耗电流 Power Consumption	≤20+ I _p X(N _p /N _s)				mA
零点电压 Zero voltage	@I _p =0 +2.5±0.5%				V
零点电压温漂 Zero voltage drift	@ -40~+85°C ≤±0.5				mV /°C
线性度 Linearity	@I _p =0-±I _{pn} ≤0.1				%FS
总精度 Total precision	≤±0.7				%
di/dt 跟随精度 di/dt accurately followed	>50				A /μ S
响应时间 Response time	@100A/μ S,10%-90% ≤500				ns
绝缘电压	@ 50HZ,AC,1min 2.5				KV

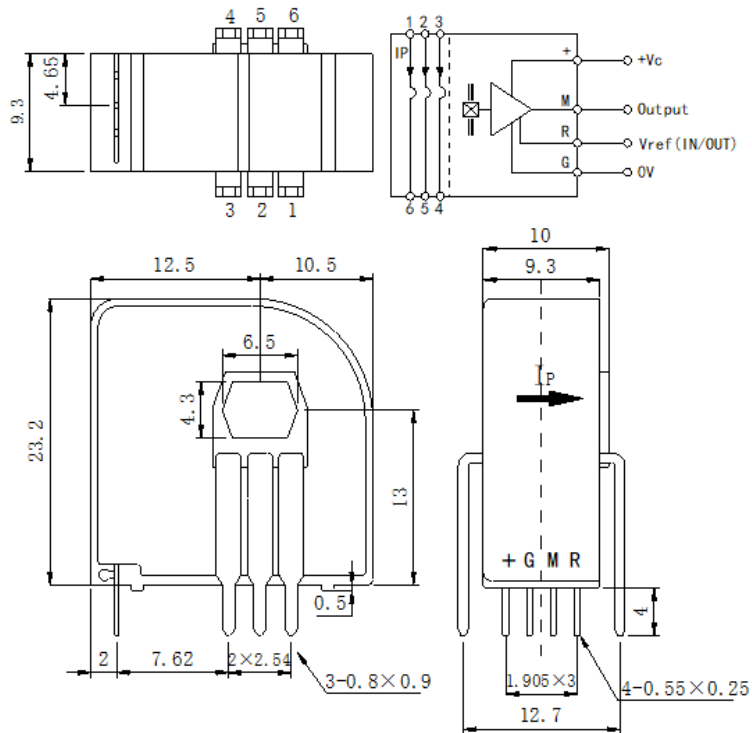
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B100R Series Multi-range Closed Loop Mode
Hall Effect Current Sensor

Galvanic isolation			
带宽 Bandwidth	@ -1db	DC~200	KHZ

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)



Remarks:

1. All dimensions are in mm.
2. General tolerance $\pm 1\text{mm}$.

接线图 Pin connections

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匝数 Turns	初级额定电流 IPN (A) Primary rated current	额定输出电压 Vout (V) Rated output voltage	初级电阻[mΩ] Primary impedance	初级电感[uH] Primary inductance	连接点 Connect point
1	±6 (±15, ±25, ±50)	2.5±0.625	0.18	0.013	
2	±3 (±7.5, ±12.5, ±25)	2.5±0.625	0.81	0.05	
3	±2 (±5, ±8.3, ±16.6)	2.5±0.625	1.62	0.12	

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

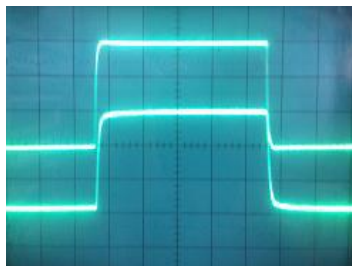
总体参数 General date

	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)	10	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)