

**B203 系列闭环型霍尔电流传感器**  
**B203 Series Closed Loop Mode**  
**Hall Effect Current Sensor**

正角电子™



B203 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。

B203 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	B203-25A	B203-50A	B203-75A	B203-100A	单位 Unit
额定输入电流 (I <sub>pn</sub> ) Rated current (I <sub>pn</sub> )	25	50	75	100	A
测量电流范围 (I <sub>p</sub> ) Measure range (I <sub>p</sub> )	37.5	75	112.5	150	A
匝比 (N <sub>p</sub> /N <sub>s</sub> ) Turns ratio(N <sub>p</sub> /N <sub>s</sub> )	1: 1000	1: 2000	1: 2000	1: 2000	T
测量电阻 Measure resister	0~495	0~470	0~290	0~205	Ω
额定输出电流 Rated output	25	25	37.5	50	mA
次级线圈内阻 Coil resister	35	60	60	60	Ω
电源电压 Supply voltage	±12, ±15				V
功耗电流 Power Consumption	≤20+ I <sub>p</sub> X(N <sub>p</sub> /N <sub>s</sub> )				mA
失调电流 Offset current	@I <sub>p</sub> =0	±0.02			mA
失调电流温漂 Offset drift	@ -40~+85°C	≤±0.005			mA
线性度 Linearity	@I <sub>p</sub> =0-±I <sub>pn</sub>	≤0.1			%FS
总精度 Total precision	≤±0.7				%
di/dt 跟随精度 di/dt accurately followed	>50				A / μ S

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响应时间 Response time	@100A/ $\mu$ S, 10%-90%	$\leq 1$	$\mu$ S
绝缘电压 Galvanic isolation	@ 50HZ, AC, 1min	2.5	KV
带宽 Bandwidth	@ -1db	DC~100	KHZ

**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)

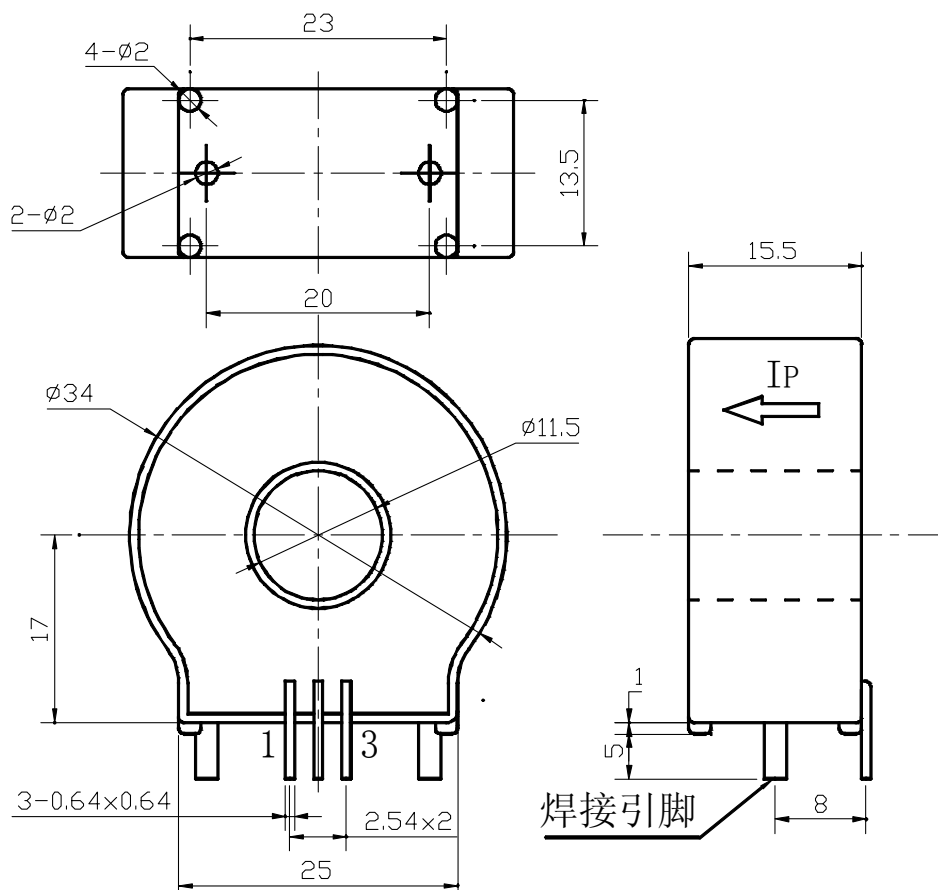
- 开关电源

Switched Mode Power Supplies (SMPS)

- 电焊机

Power supplies for welding applications

**结构参数 Mechanical dimension(for reference only)**



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Remarks:

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

**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)

2. 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

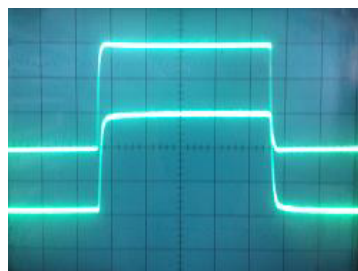
**总体参数 General date**

	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)	25	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 )