

正角电子™



D5 系列高精度闭环型电流传感器的初、次级之间是绝缘的，无位置误差，能真正测量分辨1000: 1，用于精密测量直流、交流和脉冲电流。

The D5 Series current sensor is a closed loop device based on the measuring principle of the hall effect, with a galvanic isolation between primary and secondary circuit, the size of primary doesn't affect test precision, no matter the location of primary in the hole of current sensor. It can really measure resolution 1000:1, it uses for precision measurement of DC, AC and pulse current.



**电参数 Electrical data (Ta=25°C ± 5°C)**

Type	D5-50A	D5-100A	D5-200A	D5-300A	单位 Unit
额定输入电流(Ipn) Rated current(Ipn)	±50	±100	±200	±300	A
测量电流范围(Ip) Measure range(Ip)	0—±75	0—±150	0—±300	0—±450	A
匝比 (Np/Ns) Turns ratio(Np/Ns)	1: 1000	1: 2000	1: 2000	1: 2000	T
测量电阻 Measure resister with ± 15V	@±50Amax 0(min)186(max)	@±100Amax 0(min)175(max)	@±200Amax 0(min)100(max)	@±300Amax 0(min)56(max)	Ω
	@±75Amax 0(min)117(max)	@±150Amax 0(min)106(max)	@±300Amax 0(min)56(max)	@±450Amax 0(min)21(max)	Ω
测量电阻 Measure resister with ± 18V	@±50Amax 0(min)304(max)	@±100Amax 0(min)293(max)	@±200Amax 0(min)130(max)	@±300Amax 0(min)75(max)	Ω
	@±75Amax 0(min)159(max)	@±150Amax 0(min)148(max)	@±300Amax 0(min)75(max)	@±450Amax 0(min)31(max)	Ω
次级线圈内阻 Coil resister	14	25	25	25	Ω
额定输出电流 Rated output	50	50	100	150	mA
电源电压 Supply voltage	±12, ±15, ±18				V
功耗电流 Power Consumption	≤20+IpX(Np/Ns)				mA
失调电流 Offset current	@Ip=0	±0.2			mA

**D5 系列闭环型霍尔电流传感器**  
**D5 Series Closed Loop Mode**  
**Hall Effect Current Sensor**

失调电流温漂 Offset drift	@ -40~+85°C	$\leq \pm 0.5$	mA
线性度 Linearity	@ $I_p=0 \sim \pm I_{pn}$	$\leq 0.1$	%FS
响应时间 Response time	@50A/μS, 10%-90%	$\leq 1$	μS
绝缘电压 Galvanic isolation	@ 50HZ,AC,1min	6	KV
跟随精度 di/dt		>100	A/us
带宽 Bandwidth	@ -1dB	0~150	KHZ

**应用 Applications**

- 变频调速系统

Variable speed drives

- 电焊机

Welding machine

- 通讯电源

Battery supplied applications

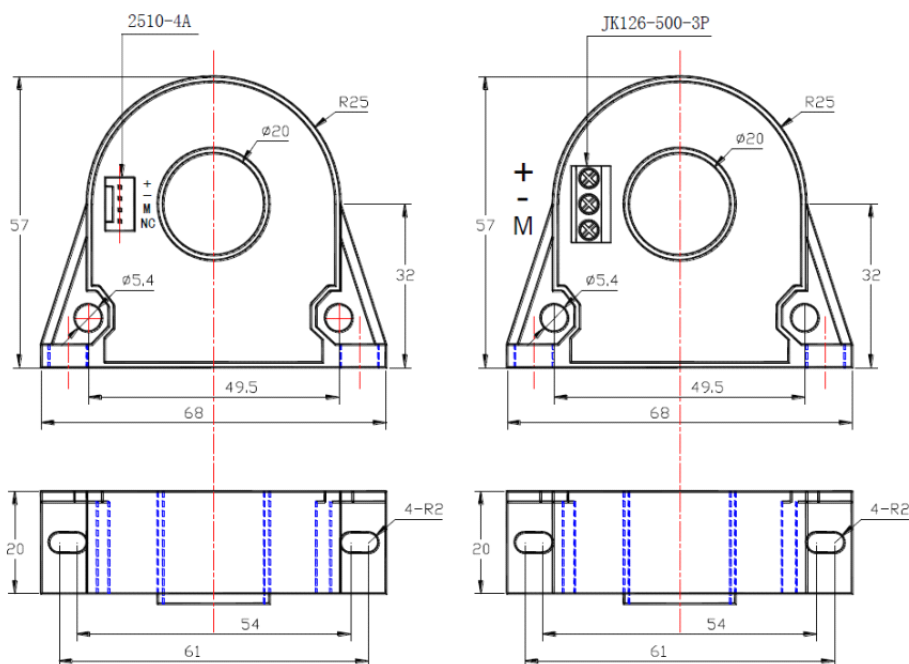
- 不间断电源 UPS

Uninterruptible Power Supplies (UPS)

- 电化学

Electrochemical

**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:I<sub>OUT</sub> 4:NC

**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

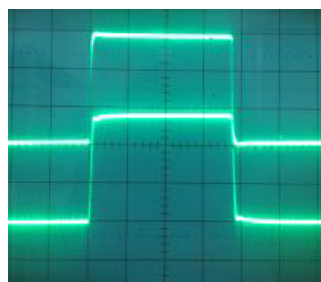
**总体参数 General date**

	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)	79	g

**特性图 Characteristics chart**

脉冲电流信号响应特性

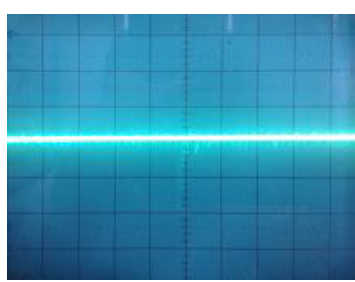
Pulse current signal response characteristic



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 )