

TBC-A05 型多量程闭环型霍尔电流传感器 TBC-A05 Series Multi-range Closed Loop Mode Hall Effect Current Sensor



TBC-A05 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。

TBC-A05 multi-range current sensor is a close 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)

型号 Type 参数 Parameter	TBC25A05	TBC35A05	单位 Unit
额定输入电流 (I _{pn}) Rated input (I _{pn})	25	35	A
测量电流范围 (I _p) Measure range (I _p)	50	70	A
额定输出电流 (I _{sn}) Rated output (I _{sn})	±25±0.5% (@I _p =±I _{pn})	±35±0.5% (@I _p =±I _{pn})	mA
次级线圈电阻 Secondary coil resister	45	35	Ω
匝比 (N _p /N _s) Turns ratio (N _p /N _s)	1-2-3-4-5:1000		T
电源电压 Supply voltage	±12~±18		V
功耗电流 Power consumption	20+I _p X (N _p /N _s)		mA
零点失调电流 Zero offset current	@I _p =0	≤±0.2	mA
失调电流温漂 Offset current drift	@ -40°C~+85°C	≤±0.5	mA
响应时间 Response time	@50A/μ S, 10%-90%	<1	μs
线性度 Linearity	@I _p =0-±I _{pn}	≤0.1	%FS
绝缘电压 Galvanic isolation	@ 50HZ, AC, 1min	2.5	KV
di/dt 跟随精度 di/dt accurately followed	>50		A/μ s
带宽 Bandwidth	@ -3dB	DC...150	KHz

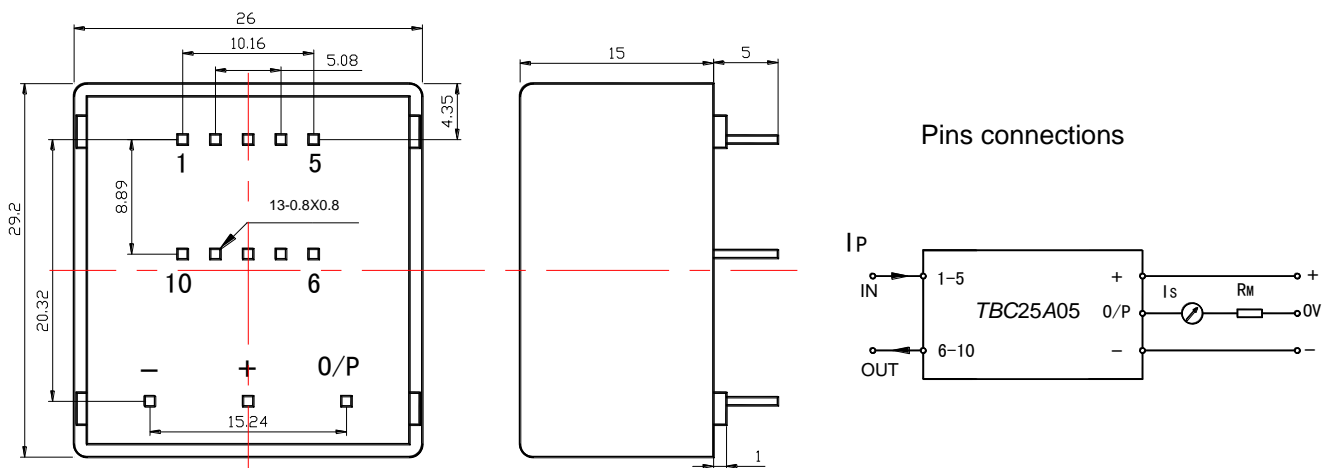
TBC-A05 型多量程闭环型霍尔电流传感器

TBC-A05 Series Multi-range Closed Loop Mode Hall Effect Current Sensor

应用 Applications

- 交流变速与伺服马达驱动器
AC variable speed drives and servo motor drives
- 直流电机驱动静态转换器
Static converters for DC motor drives
- 变频调速系统
Variable speed drives
- 电焊机
Power supplies for welding applications
- 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)

结构参数 Mechanical dimension(for reference only)



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

接线图 Pin connections

匝数 Turns	额定电流 Rated current IPN (A)	峰值电流 Measure range Ip(A)	额定输出 Rated output Isn(mA)	匝比 Turns ratio	初级阻抗 Primary resistor (mΩ)	初级漏感 Primary inductance (uH)	初级连接 Pins connections
1	25 (35)	50 (70)	25 (35)	1/1000	0.3	0.023	
2	12 (17.5)	24 (35)	24 (35)	2/1000	1.1	0.09	
3	8 (12)	16 (24)	24 (36)	3/1000	2.5	0.21	
4	6 (9)	12 (18)	24 (36)	4/1000	4.4	0.37	
5	5 (7)	10 (14)	25 (35)	5/1000	6.3	0.58	

TBC-A05 型多量程闭环型霍尔电流传感器

TBC-A05 Series Multi-range Closed Loop Mode Hall Effect Current Sensor

使用说明 Directions for use

1. 当待测电流从传感器输入脚流过，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 voltage are available.

执行标准 Standards

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

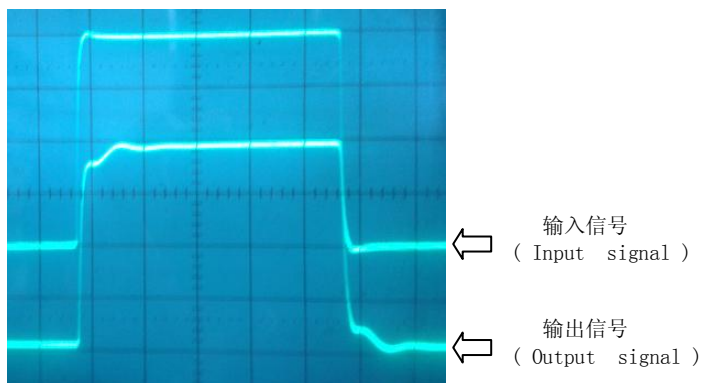
总体参数 General date

	数值 Value	单位 Unit	符号 Symbol
工作温度 Operating temperature	-40 to +85	°C	TA
储存温度 Storage temperature	-40 to +125	°C	TS
毛重(约) Mass (approx)	20	g	M

特性图 Characteristics chart

脉冲电流信号响应特性

Pulse current signal response characteristic



抗脉冲电压干扰特性

Effects of impulse noise

