TBC-SYH 系列高精度闭环型霍尔电流传感器
TBC-SYH Series High Precision Closed Loop Mode Hall Effect Current Sensor

TBC-SYH 系列高精度闭环型霍尔电流传感器的初、次级之间是绝缘的，具有超强抗干扰能力；用于测量直流、交流和脉动电流。

TBC-SYH series high-precision 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. It has strong anti-jamming ability and it provides accurate electronic measurement of DC, AC or pulsed currents.

电参数 Electrical data((Ta=25℃±5℃,RL=2KΩ,CL=10000PF)

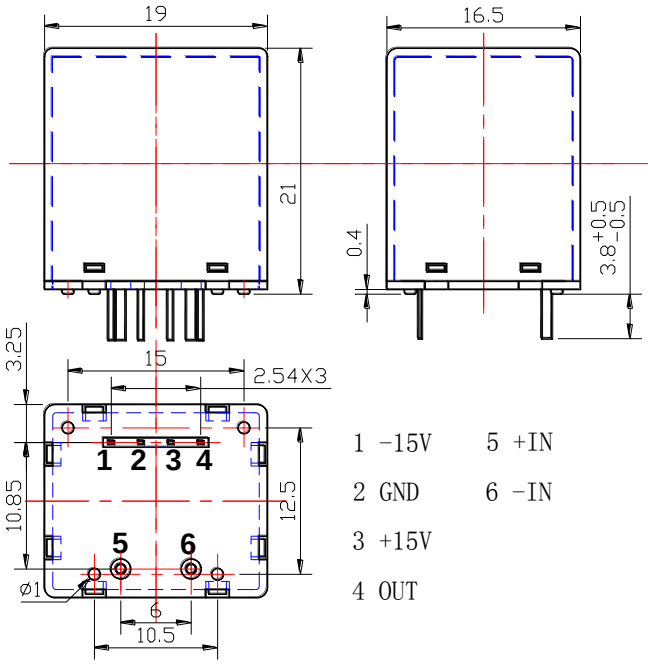
型号 Type / 参数 Parameter	TBC 03SYH	TBC 05SYH	TBC 7.5SYH	TBC 10SYH	TBC 15SYH	TBC 20SYH	TBC 25SYH	TBC 30SYH	TBC 50SYH	单位 Unit
额定输入电流(Ipn) Rated input (Ipn)	3	5	7.5	10	15	20	25	30	50	A
测量电流范围(Ip) Measuring range(Ip)	9	15	22.5	30	45	60	75	90	150	A
输入脚尺寸 Size of input pins	ø 0.6	ø 0.6	ø 0.8	ø 0.8	ø 1.0	ø 1.4	ø 1.4	ø 1.6	□1.6 ×1.5 ×2	mm
匝 比 (Np/Ns) Turns ratio(Np/Ns)	5：1500	5：2500	3：2250	3：3000	2：3000	1：2500	1：2500	1：3000	1：3125	
内接测量电阻 Inside resistance	400 ±0.1%	400 ±0.1%	400 ±0.1%	400 ±0.1%	400 ±0.1%	400 ±0.1%	400 ±0.1%	400 ±0.1%	250 ±0.1%	Ω
额定输出电压 Rated output	@ Ip=±Ipn				±4±0.5%					V
电源电压 Supply voltage	±15±5%									V
功耗电流 Power consumption	20+IpX(Np/Ns)									mA
零点失调电压 Zero voltage	≤±30									mV
失调电压温漂 Offset drift	@ -40～+85℃				≤±0.5					mV/℃
线性度 Linearity	@ Ip=0-±Ipn				≤0.1					%FS
响应时间 Response time	@ Ip=Ipn, 50 A/μS ,10%-90%				＜1.0					μS
带宽 Bandwidth	@-3dB				0-100					KHz
绝缘电压 Galvanic isolation	@ 50Hz,AC,1min				5.0					KV

应用 Applications

- 开关式电源
Switched Mode Power Supplies (SMPS)
- AC 变速驱动
AC variable speed drives
- 不间断电源 UPS
Uninterruptible Power Supplies (UPS)
- 电气装置
Electrical appliances
- 通信电源
Battery supplied applications
- 直流电动机
DC motor drives

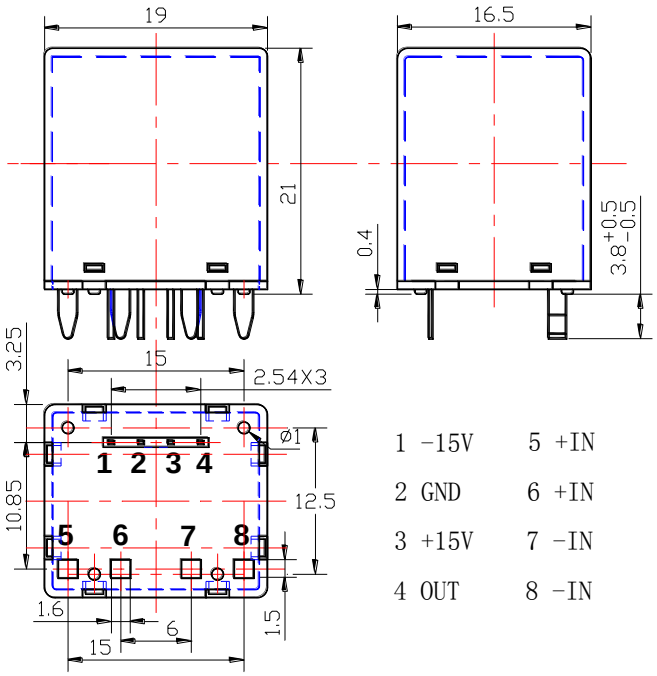
结构参数 Mechanical dimension(for reference only)

TBC05-30SYH



1 -15V 5 +IN
2 GND 6 -IN
3 +15V
4 OUT

TBC50SYH



1 -15V 5 +IN
2 GND 6 +IN
3 +15V 7 -IN
4 OUT 8 -IN

Remarks:

1. All dimensions are in mm.
2. Secondary pin size and tolerance: width:0.5±0.1mm;thickness:0.25±0.05mm
3. General tolerance ±1mm

使用说明 Directions for use

1. 当待测电流从传感器初级引脚穿过，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 the primary pin of 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

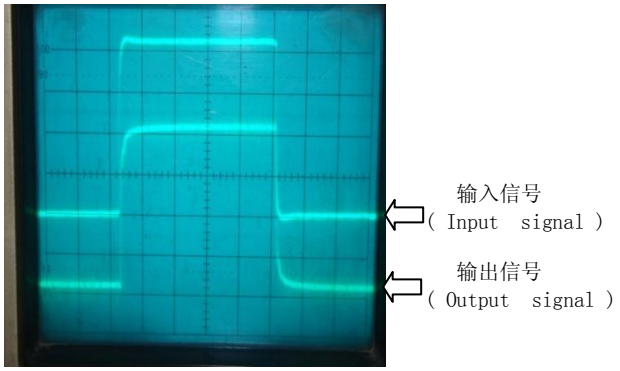
总体参数 General date

	数值 Value	单位 Unit	符号 Symbol
工作温度 Operating temperature	-25 to +85	°C	TA
储存温度 Storage temperature	-40 to +125	°C	TS
毛重(约) Mass(approx)	12	g	M

特性图 Characteristics chart

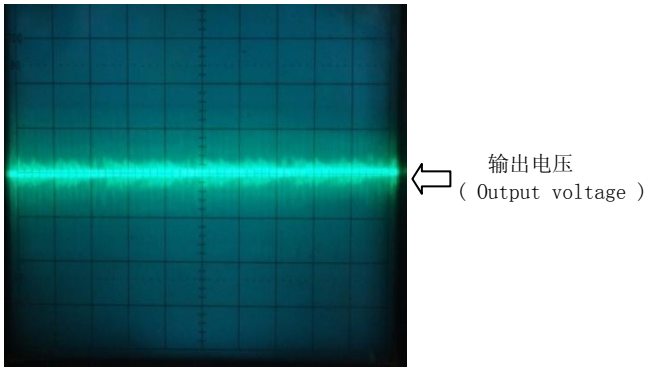
脉冲电流信号响应特性

Pulse current signal response characteristic



抗脉冲电压干扰特性

Effects of impulse noise



输入电流-输出电压特性

Input current-Output Voltage characteristic