

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

ΦOK®



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	∅ 0.6	∅ 0.6	∅ 0.8	∅ 0.8	∅ 1.0	∅ 1.4	∅ 1.4	∅ 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: 2000	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

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应用 Applications

I 开关式电源

Switched Mode Power Supplies (SMPS)

I AC 变速驱动

AC variable speed drives

I 不间断电源 UPS

Uninterruptible Power Supplies (UPS)

I 电气装置

Electrical appliances

1 通信电源

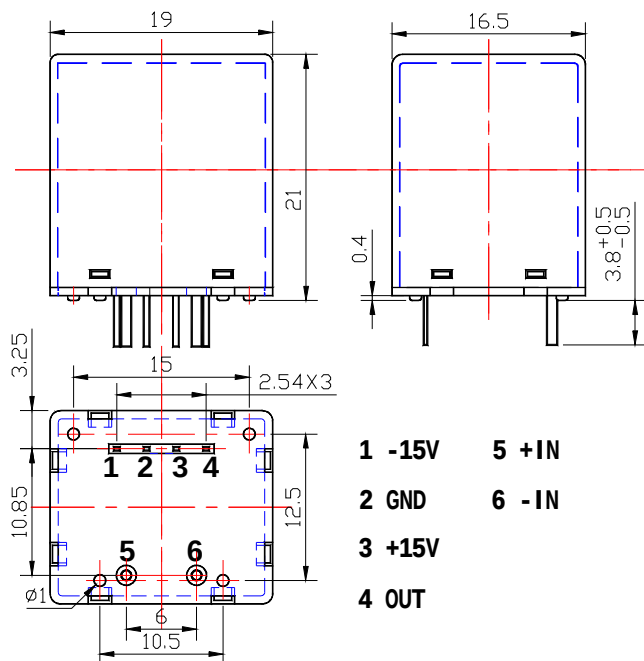
Battery supplied applications

1 直流电动机

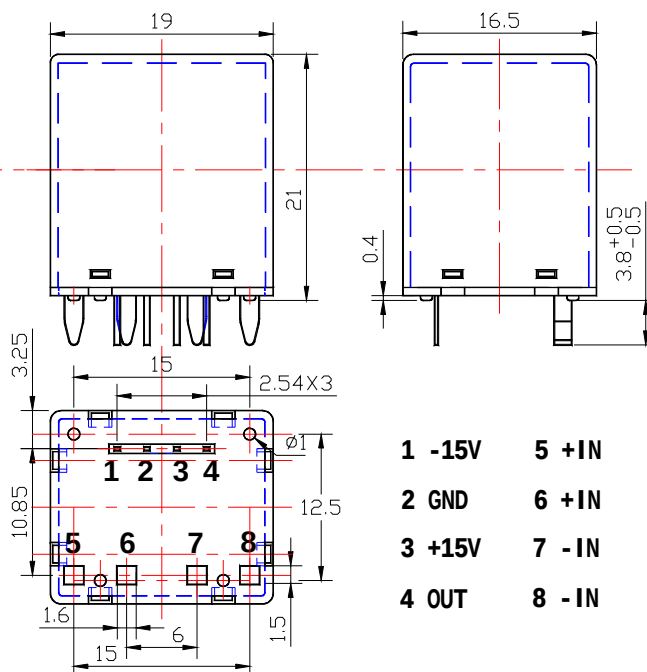
DC motor drives

结构参数 Mechanical dimension(for reference only)

TBC05-30SYH



TBC50SYH

**Remarks:**

1. All dimensions are in mm.
2. Secondary pin size and tolerance: width: $0.5 \pm 0.1\text{mm}$; thickness: $0.25 \pm 0.05\text{mm}$
3. General tolerance $\pm 1\text{mm}$

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.

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执行标准 Standards

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

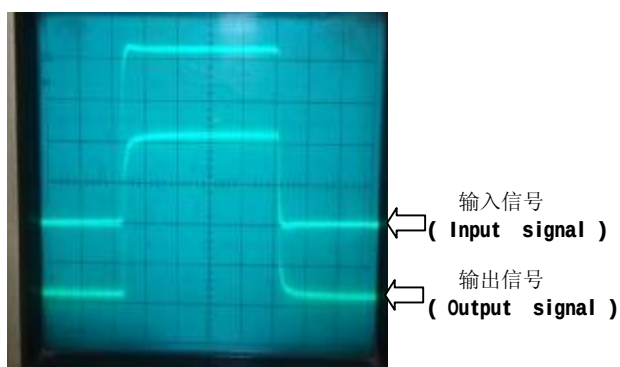
总体参数 General data

	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)	12	g	M

特性图 Characteristics chart

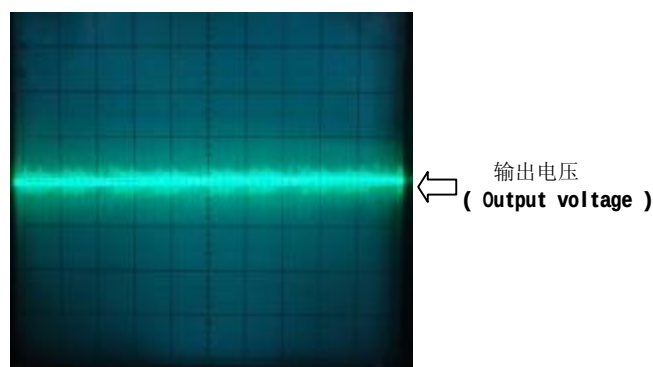
脉冲电流信号响应特性

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

