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

TBC-XNA /XNPA 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-XNA/XNPA 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=200Ω,CL=10000PF)

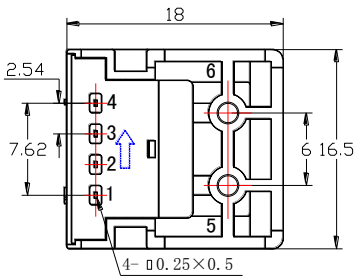
型号 Type / 参数 Parameter	TBC 03XNA	TBC 05XNA	TBC 10XNA	TBC 15XNA	TBC 20XNA	TBC 25XNA	TBC 30XNA	TBC50 XNA/XNPA	单位 Unit
额定输入电流(Ipn) Rated input (Ipn)	3	5	10	15	20	25	30	50	A
测量电流范围(Ip) Measuring range(Ip)	±6	±10	±20	±30	±40	±50	±60	±100	A
输入脚尺寸 Size of input pins	ø 0.8	ø 0.8	ø 1.4	ø 1.4	ø 1.6	ø 1.6	ø 1.6	□6.38 ×1.2 □6.0 ×1.2	mm
匝 比 (Np/Ns) Turns ratio(Np/Ns)	7：1050	7：1750	2：1000	2：1500	1：1000	1：1250	1：1500	1：2500	T
测量电阻范围 Sample resistance	100--300								Ω
额定输出电流(Isn) Rated output	20±0.5%								mA
电源电压 Supply voltage	±15±5%								V
功耗电流 Power consumption	15+IpX(Np/Ns)								mA
零点失调电流 Zero current	≤±0.2								mA
失调电流温漂 Offset drift	@ -40～+85℃			≤±0.5					mA
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			3.0					KV

应用 Applications

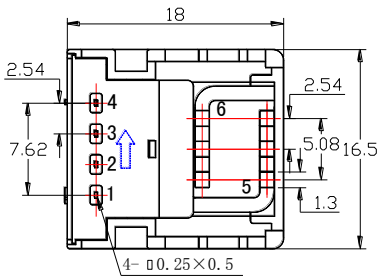
- 开关式电源
Switched Mode Power Supplies (SMPS)
- AC 变速驱动
AC variable speed drives
- 不间断电源 UPS
Uninterruptible Power Supplies (UPS)
- 电气装置
Electrical appliances
- 通信电源
Battery supplied applications
- 直流电动机
DC motor drives

结构参数 Mechanical dimension(for reference only)

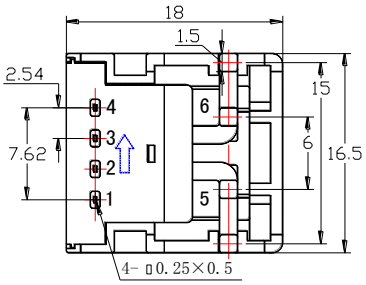
TBC 03-30 XNA

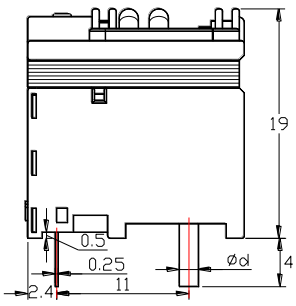


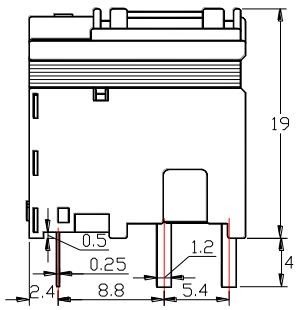
TBC 50-100 XNA

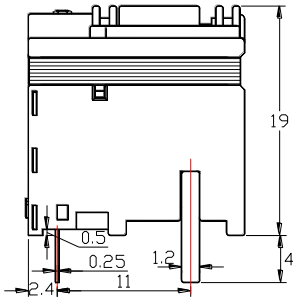


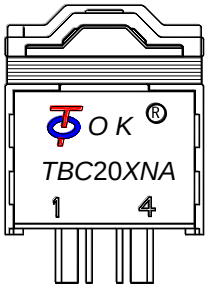
TBC 50-100 XNPA











Terminal Pin Identification

1 ..... -15V
2 ..... NC
3 ..... +15V
4 ..... Output
5 ..... +IN
6 ..... -IN

		Ød
XNA	3A / 5A	Ø0.8mm
	10A / 15A	Ø1.4mm
	20A / 25A / 30A	Ø1.6mm
	50A	□6.38×1.2
XNPA	50A	□ 6.0×1.2

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 the primary pin of 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

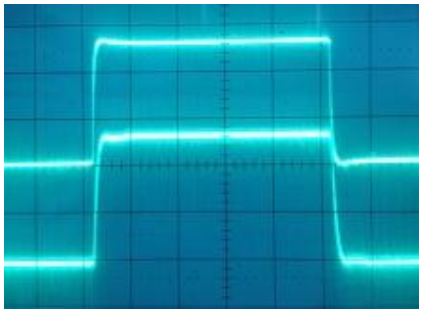
总体参数 General date

	数值 Value	单位 Unit	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



⇦ 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)