



TBC- LPN 系列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- LPN series current sensor is a closed 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.

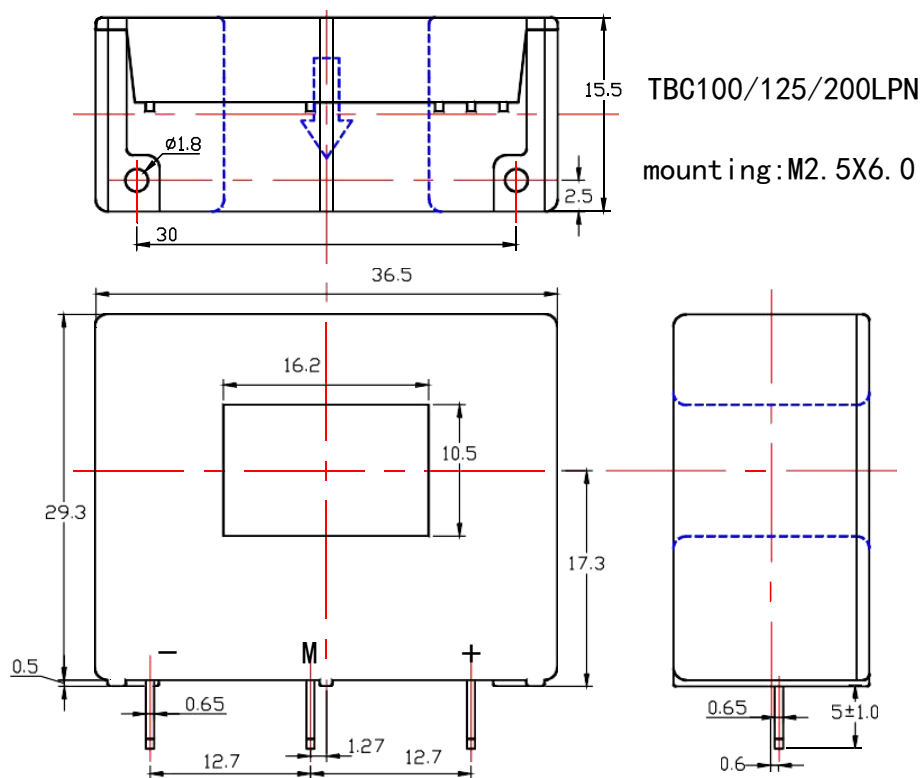
电参数 Electrical data (Ta=25 °C±5°C)

型号 Type 参数 Parameter	TBC50LPN	TBC100LPN	TBC125LPN	TBC200LPN	单位 Unit
额定输入电流 (I _{pn}) Rated input (I _{pn})	±50	±100	±125	±200	A
测量电流范围 (I _p) Measure range (I _p)	±150 (±18V, 80 Ω)	±300 (±18V, 65 Ω)	±375 (±18V, 20 Ω)	±600 (±18V, 10 Ω)	A
匝比 (N _p /N _s) Turns ratio (N _p /N _s)	1:1000	1:2000	1:1000	1:2000	T
次级线圈内阻 Secondary coil resistor	20	40	20	40	Ω
额定输出电流 (I _{sn}) Rated output (I _{sn})	50±0.5%	50±0.5%	125±0.5%	100±0.5%	mA
电源电压 Supply voltage	±12~±18				V
功耗电流 Power consumption	≤20+I _p X(N _p /N _s)				mA
失调电流 Offset current	@I _p =0	≤±0.2			mA
失调电流温漂 Offset current drift		≤±0.5			mA
线性度 Linearity	@I _p =0~±I _{pn}	≤0.1			%FS
带宽 Bandwidth	@-3dB	DC-200			KHz
响应时间 Response time	@100A/μs, 10%-90	≤1			μs
绝缘电压 Galvanic isolation	@ 50HZ, AC, 1min	3.0			KV

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)



Remarks:

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

使用说明 Directions for use

- 当测量电流按传感器箭头方向时，输出端获得同相电流。
When measure current flows according to the direction of the arrowhead, Output terminal gets the same phase current.
- 初级导体温度不应超过 120℃。
The primary conductor should be $\leq 120^{\circ}\text{C}$.
- 母排完全充满初级穿孔时动态表现 (di/dt 和响应时间) 为最佳。
The dynamic performance (di/dt and the response time) is the best when the primary hole is fully filled with the bus bar.
- 为了达到最佳的磁耦合，初级线匝应绕在传感器顶部。
The primary turns should be at the top of the sensor for the best magnetic coupling.
- 当待测电流从传感器穿过，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 a sensor, the voltage will be measured at the output end.
(Note: The false wiring may result in the damage of the sensor)
- 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	$^{\circ}\text{C}$	TA
储存温度 Storage temperature	-40 to +125	$^{\circ}\text{C}$	TS
毛重(约) Mass(approx)	25	g	M

特性图 Characteristics chart

脉冲电流信号响应特性 抗脉冲电压干扰特性

Pulse current signal response characteristic Effects of impulse noise

