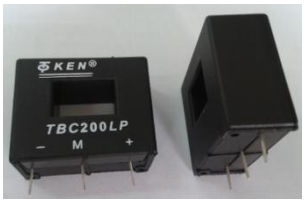
TBC-LP 系列闭环型霍尔电流传感器
TBC-LP Series Closed Loop Mode Hall Effect Current Sensor



TBC- LP 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。

The TBC- LP 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.

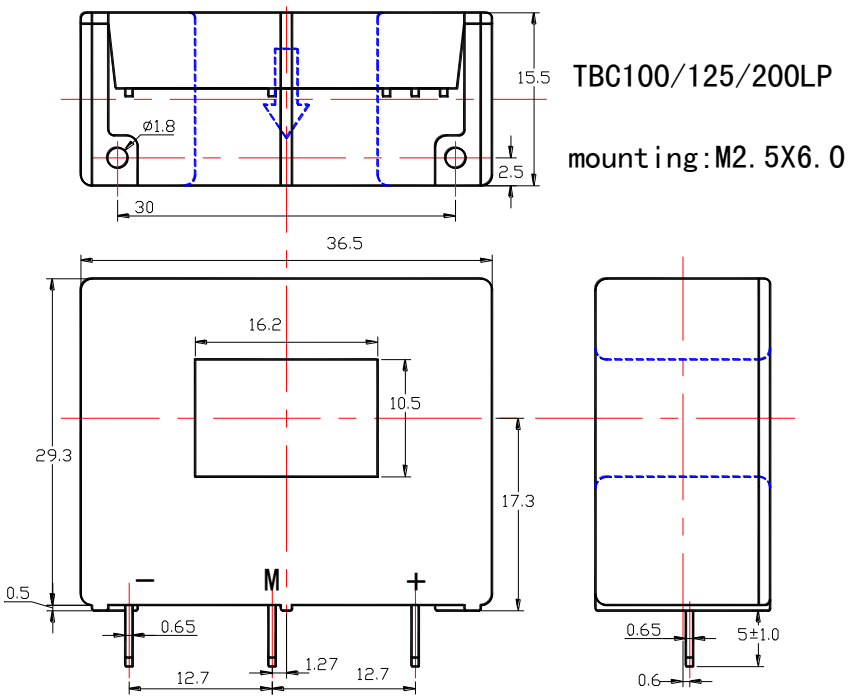
电参数 Electrical data(Ta=25℃±5℃)

型号 Type / 参数 Parameter	TBC100LP	TBC125LP	TBC200LP	单位 Unit
额定输入电流(Ipn) Rated input (Ipn)	100	125	200	A
测量电流范围(Ip) Measure range(Ip)	300(±18V，68Ω)	375(±18V，15Ω)	600(±18V，10Ω)	A
匝 比 (Np/Ns) Turns ratio(Np/Ns)	1:2000	1:1000	1:2000	
次级线圈内阻 Secondary coil resister	45	30	45	Ω
额定输出电流(Isn) Rated output (Isn)	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+IpX(Np/Ns)			mA
失调电流 offset current	@Ip=0	≤±0.2		mA
失调电流温漂 Offset current drift	@ -40～+85℃	≤±0.5		mA
线性度 Linearity	@Ip=0-±Ipn	≤0.1		%FS
带宽 Bandwidth	@ -3dB	0～200		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 ±1mm.

使用说明 Directions for use

1. 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.
2. 初级导体温度不应超过 120℃。
The primary conductor should be≤120℃.

3. 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.

4. 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.

5. 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)

6. 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

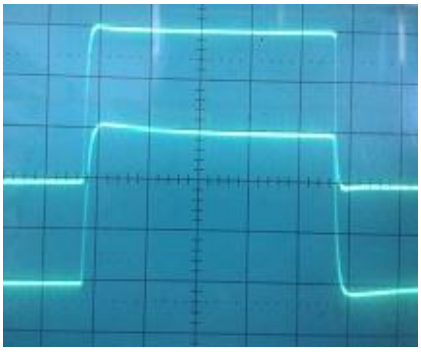
总体参数 General date

	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)	25	g	M

特性图 Characteristics chart

脉冲电流信号响应特性

Pulse current signal response characteristic

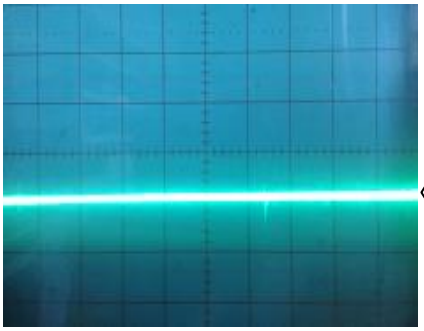


输入信号
(Input signal)

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)