

## TKC-LB 系列开环型霍尔电流传感器 TKC-LB Series Open Loop Mode Hall Effect Current Sensor



TKC-LB 系列开环型霍尔电流传感器的初、次级之间是绝缘的，用于控制、测量直流、交流和脉冲电流。

TKC-LB series current sensor is an open loop device based on the measuring principle of the hall effect, 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, RL=2kΩ, CL=10000PF)**

| 型号 Type<br>参数 Parameter           | TKC50LB              | TKC75LB | TKC100LB | TKC150LB | TKC200LB | TKC300LB | 单位 Unit |
|-----------------------------------|----------------------|---------|----------|----------|----------|----------|---------|
| 额定输入电流 (Ipn)<br>Rated input (Ipn) | ±50                  | ±75     | ±100     | ±150     | ±200     | ±300     | A       |
| 测量电流范围 (Ip)<br>Measure range (Ip) | ±150                 | ±150    | ±200     | ±300     | ±400     | ±450     | A       |
| 额定输出电压<br>Rated output            | @Ip=Ipn ±4±1%        |         |          |          |          |          | V       |
| 电源电压<br>Supply voltage            | ±15 ±5%              |         |          |          |          |          | V       |
| 功耗电流<br>Power consumption         | +18, -10             |         |          |          |          |          | mA      |
| 失调电压<br>Offset voltage            | ±30                  | ±25     |          |          |          |          | mV      |
| 磁失调电压<br>Magnetic offset voltage  | ≤±25                 | ≤±20    |          |          |          |          | mV      |
| 失调电压温漂<br>Offset voltage drift    | ≤±1.5                | ≤±1.0   |          |          |          |          | mV/°C   |
| 输出电压温漂<br>Output drift            | ≤±1.5                | ≤±1.0   |          |          |          |          | mV/°C   |
| 线性度<br>Linearity                  | @Ip=0-±Ipn ≤1        |         |          |          |          |          | %FS     |
| 带宽<br>Bandwidth                   | @ -3db DC...50       |         |          |          |          |          | KHz     |
| 跟随精度<br>di/dt                     | 50                   |         |          |          |          |          | A/uS    |
| 响应时间<br>Response time             | @50A/μ S, 10%-90% ≤3 |         |          |          |          |          | μ S     |
| 绝缘电压<br>Galvanic isolation        | @ 50HZ, AC, 1min 2.5 |         |          |          |          |          | KV      |

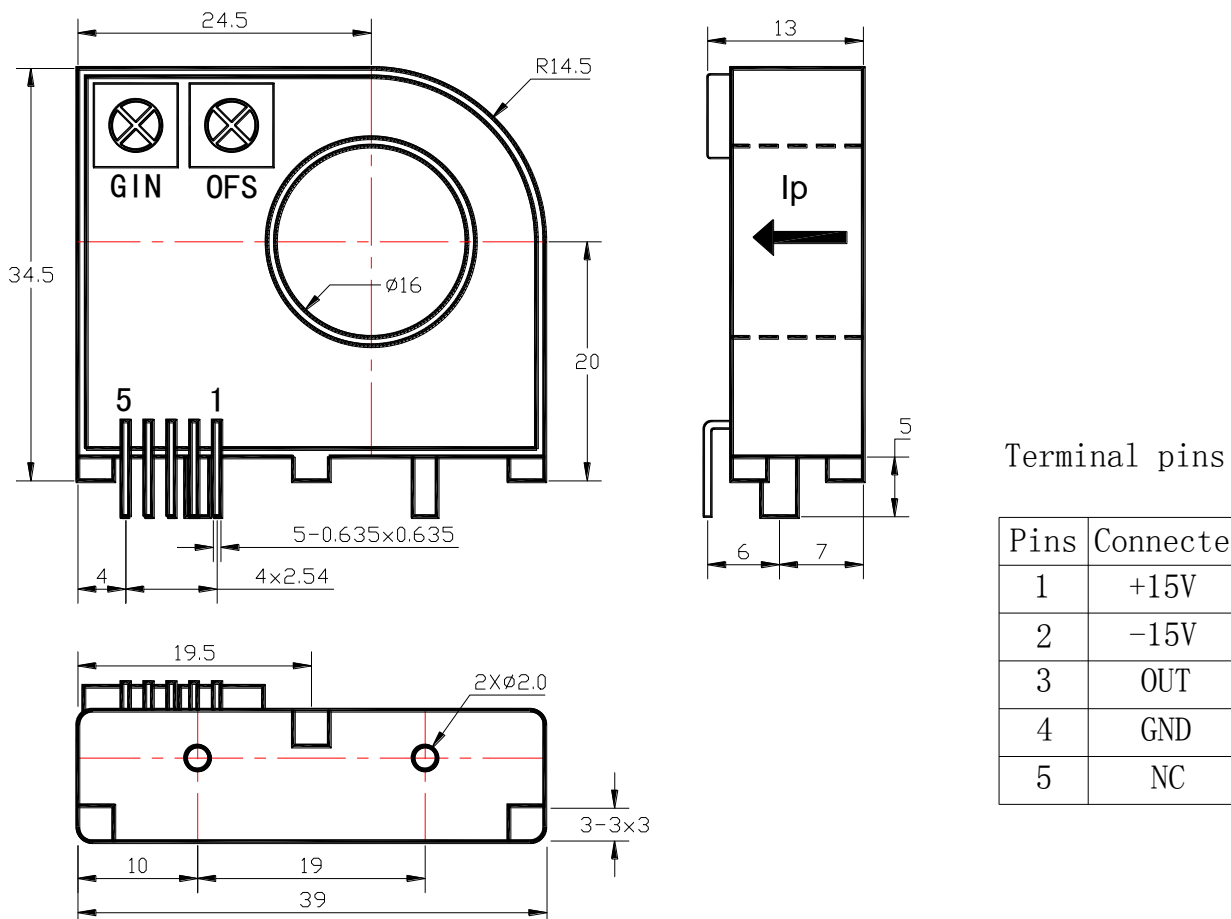
# TKC-LB 系列开环型霍尔电流传感器

## TKC-LB Series Open Loop Mode Hall Effect Current Sensor

### 应用 Applications

- 变频调速系统  
Variable speed drives
- 电焊机  
Welding machine
- 通讯电源  
Battery supplied applications
- 不间断电源 UPS  
Uninterruptible Power Supplies (UPS)
- 电化学  
Electrochemical

### 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

1. 产品箭头的方向为  $I_p$  方向。  
It will be in a forward direction when the  $I_p$  flows according to the direction of the arrowhead.
2. 初级导体温度不应超过  $120^\circ\text{C}$ 。

## TKC-LB 系列开环型霍尔电流传感器 TKC-LB Series Open Loop Mode Hall Effect Current Sensor

The primary conductor should be  $\leq 120^{\circ}\text{C}$ .

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. 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)
5. 传感器的输出幅度可根据用户需要进行适当调节。  
Customs can adjust Output amplitude of the sensor by needs.
6. 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

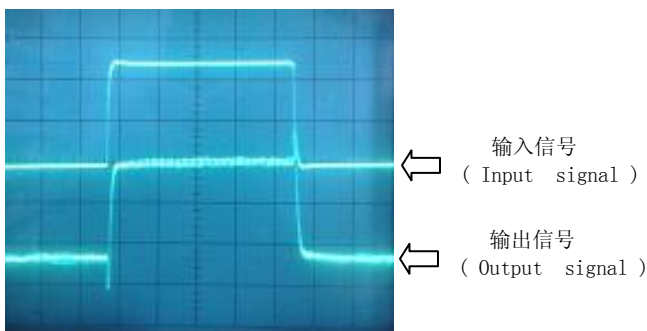
### 总体参数 General data

|                            | 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~+125   | $^{\circ}\text{C}$ | TS        |
| 毛重(约) Mass (approx)        | 23         | 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

