

TKC-TG3 系列三相开环型霍尔电流传感器 TKC-TG3 Series Three-phase Open Loop Mode Hall Effect Current Sensor



TKC-TG3 系列电流传感器的初、次级之间是绝缘的，用于三相直流、交流和脉冲电流的测量。

The TG3 series current sensor is an open loop device based on the principle of the hall effect, with a galvanic isolation between primary and secondary circuit. It provides accurate electronic measurement of three phase DC, AC or pulsed currents.

电参数 Electrical data (Ta=25°C ± 5°C, R_L=2.0KΩ, C_L=10000PF)

参数 Parameter	型号 Type	TKC50TG3	TKC100TG3	TKC150TG3	TKC200TG3	单位 Unit
额定输入电流 (I _{pn}) Rated input (I _{pn})		± 50	± 100	± 150	± 200	A
测量电流范围 (I _p) Measure range (I _p)		± 150	± 300	± 450	± 600	A
额定输出电压 Rated output	@I _p =± I _{pn}	± 4 ± 1.5%				V
电源电压 Supply voltage		± 15 ± 5%				V
功耗电流 Power consumption		≤ 60				mA
零点失调电压 Offset voltage	@I _p =0	≤ 30				mV
磁失调电压 Magnetic offset	@I _p =± I _{pn} -0	≤ ± 30				mV
失调电压温漂 Offset drift	@ -40~+85°C	≤ ± 2.0				mV/°C
幅度电压温漂 Amplitude drift	@ -40~+85°C	0.08				%/°C
线性度 Linearity	@I _p =0-± I _{pn}	≤ 1				%FS
响应时间 Response time	@50A/μ S, 10%-90%	≤ 5				μ S
绝缘电压 Galvanic isolation	@ 50HZ/60Hz, AC, 1min	2.5				KV
绝缘阻抗 Isolation resistance	@ DC 500V	500				MΩ

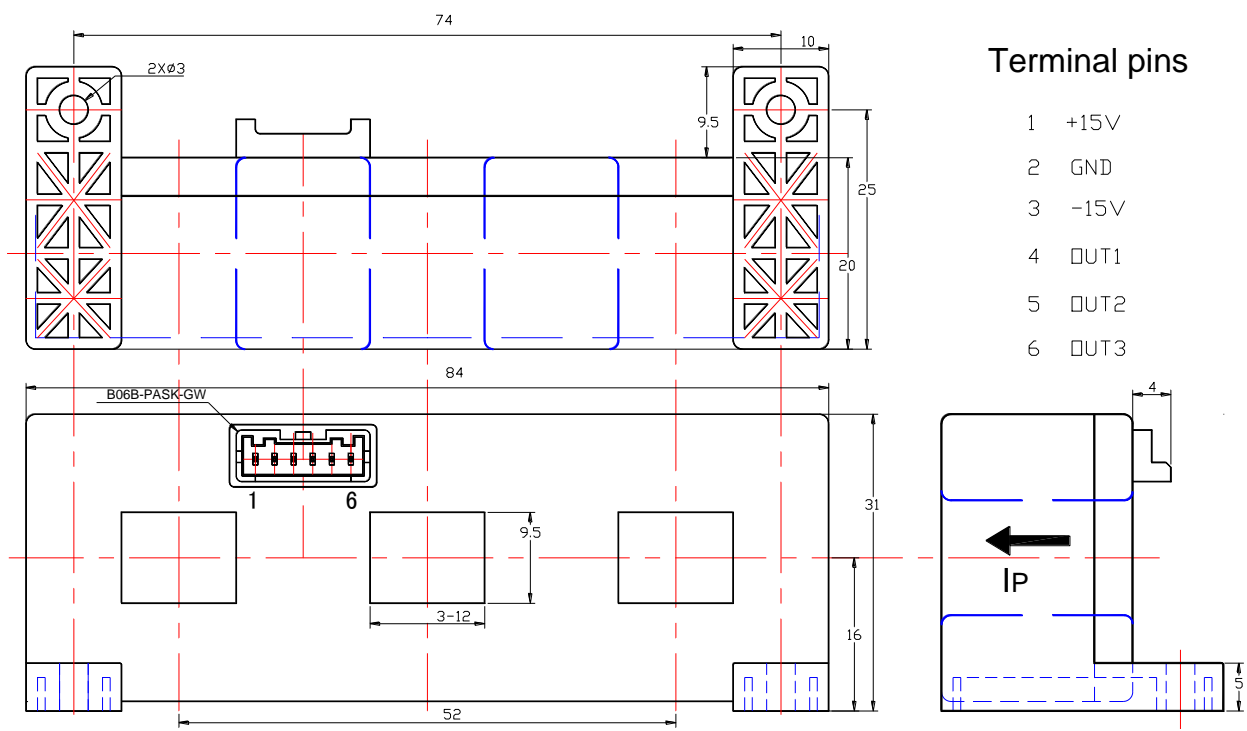
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TKC-TG3 Series Three-phase Open Loop Mode Hall Effect Current Sensor

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)



Terminal pins

- 1 +15V
- 2 GND
- 3 -15V
- 4 OUT1
- 5 OUT2
- 6 OUT3

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°C 。
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.

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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 date

	数值 Value	单位 Unit	符号 Symbol
工作温度 Operating temperature	-40~+85	°C	TA
储存温度 Storage temperature	-40~+125	°C	TS
毛重(约) Mass (approx)	99	g	M

特性图 Characteristics chart

脉冲电流信号响应特性

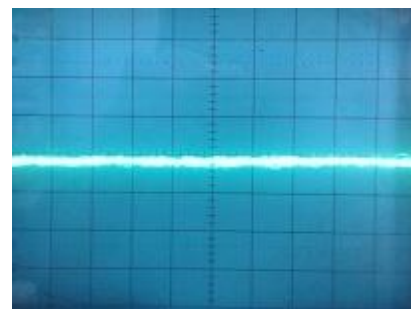
Pulse current signal response characteristic



← 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)

输入电流-输出电压特性

Input current-Output Voltage characteristic

