霍尔电流传感器 Hall Effect Current Sensor

KP10-XXXA/XV

本产品是一种电流传感器，采用电磁感应原理研制而成的开环电流传感器。在原副边电气隔离的情况下，可以精确测量直流、交流和脉冲等形式的电流信号。功耗低，体积小，具备出色的频响特性。

This product is a current sensor, which is an open-loop current sensor developed by the principle of electromagnetic induction. In the case of galvanic isolation of the primary and secondary sides, current signals in the form of DC, AC and pulses can be accurately measured. Low power consumption, small size, excellent frequency response characteristics.

◆产品描述 /Product Description

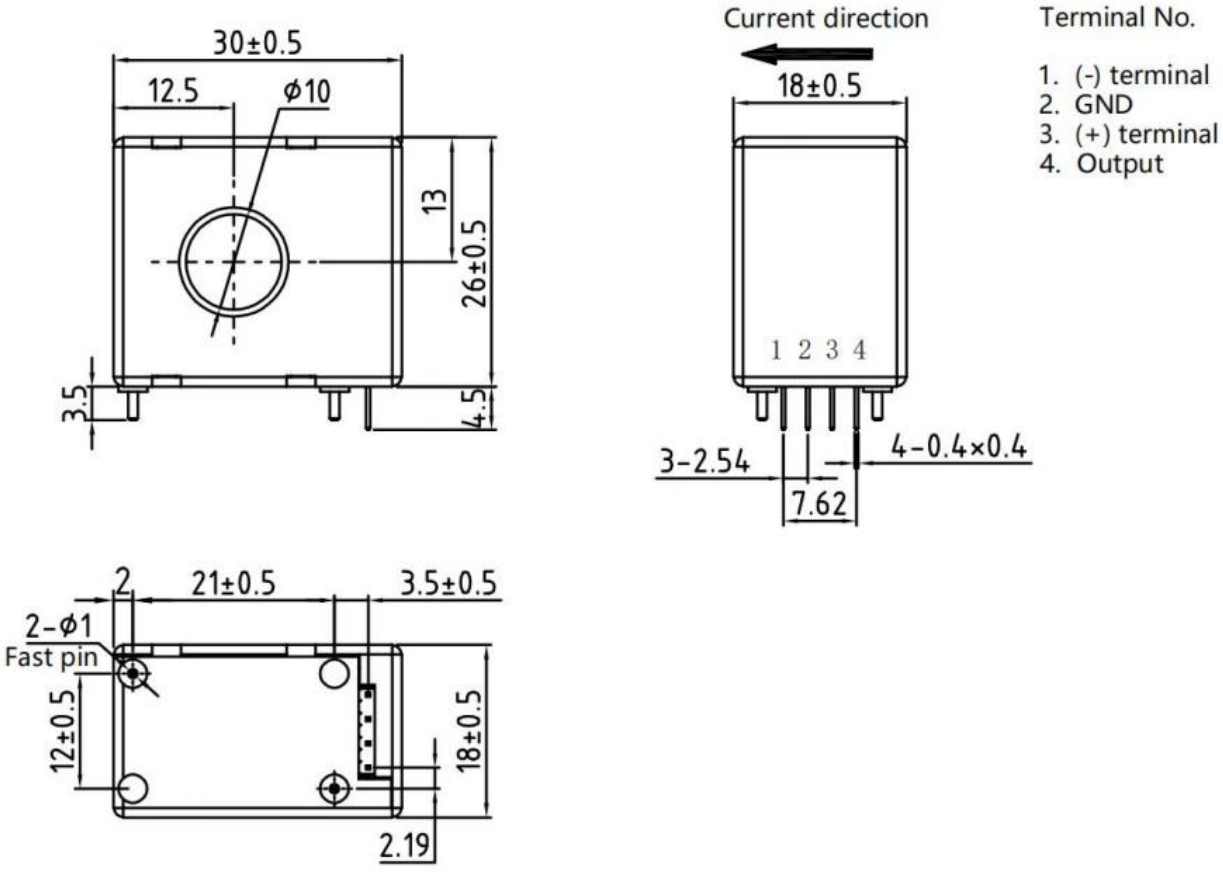
产　品　特　点	应　用
• 低噪声 Low noise • 良好的线性 Good linearity • 小型的 PCB 安装方式 Compact PCB mounting, • 低 磁 滞 Low hysteresis • 具有良好的过流能力 It has good overcurrent capability	• 逆变器 inverter • 直流供电设备 DC power supply equipment • 数控机床 CNC machine tools

◆电参数/Electrical characteristics

	型号 Type	KP10-50A	KP10-100A	KP10-150A	KP10-200A	
I_{pN}	原边额定输入电流 Primary nominal input current	50	100	150	200	A
I_p	原边电流测量范围 Measuring range ofprimary current	0~±100	0~±200	0~±300	0~±400	A

V_{sN}	副边额定输出电压 Nominal output voltage	4±1%	V
V_c	电源电压 Supply voltage	±12~±15(±5%)	V
I_c	电流消耗 Current consumption	Vc =±15V <20	mA
V_a	绝缘电压 Insulation voltage	在原边与副边电路之间 2.5KV 有效值/50Hz/1 分钟 2.5KV RMS /50Hz/1 min between primary and secondary side circuits	
e_L	线性度 Linearity	<1	%FS
V_o	零点失调电压 Offset voltage	TA=25℃ <±25	mV
V_{ow}	磁失调电压 Residual voltage	Ip→0 <±25	mV
V_{or}	失调电压温漂 Thermal drift of V0	Ip=0 TA=-25～+85℃ <±2	mV/℃
T_r	响应时间 Response time	≤3	μ s
f	频带宽度(-3dB) Frequency bandwidth(-3dB)	DC～50	kHz
T_A	工作环境温度 Ambient operating temperature	-10～+80	℃
T_s	贮存环境温度 Ambient storage temperature	-15～+85	℃
R_L	负载电阻 Load resistance	≥10K	Ω
	标准 Standard	GI/FS-0105	

◆外形尺寸（㎜）/Dimensions of drawing(mm)



使用说明/Remarks

1. 错误的接线可能导致传感器损坏。传感器通电后，当被测电流从传感器箭头方向穿过，即可在输出端测得同相电压值。

Incorrect wiring may cause damage to the sensor. After the sensor is powered on, when the measured current passes through the arrow direction of the sensor, the in-phase voltage value can be measured at the output end.

2. 传感器的输出幅度可根据用户需求进行适当的调节。

The output amplitude of the sensor can be adjusted according to the user's needs.

3. 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。

Sensors with different rated input current and output voltage can be customized according to user requirements.