

产品说明

Applications

NACL50P-S6/SP1 系列高精度闭环型霍尔电流传感器的初、次级之间是绝缘的, 具有超强抗干扰能力; 用于测量直流、交流和脉动电流。

NACL50P-S6/SP1 series high-precision current sensor is a closed loop device based on the measuring principle of the hall effect, with a galvanic isolation between primary and secondary circuit. It has strong anti-jamming ability and it provides accurate electronic measurement of DC, AC or pulsed currents.

产品优点 Advantages	产品应用领域 Applications	参照标准 Standards
高精度 Excellent accuracy	变频调速系统 Variable speed drives	UL 94-V0
温度系数小 Low temperature of offset	通信电源 Battery supplied applications	EN 60947-1:2004
体积小 Small size	不间断电源 UPS Uninterruptible Power Supplies	EN50178:1998

主要电气参数 Main electrical data

(At $T_a=+25^{\circ}\text{C}$)

额定测量电流 I_{PN}	Primary nominal current rms	50A
测量范围 I_p (@ $V_c=\pm 15\text{V}$)	Primary current measuring range	0~ $\pm 100\text{A}$
电源电压 V_c	Supply voltage	$\pm 12\text{V}\sim\pm 15\text{V}\times(1\pm 5\%)$
匝比 K	Turns ratio	1:2000
额定测量输出 I_{SN}	Secondary nominal current rms	25mA
负载电阻 R_L	Load resistor	25 $^{\circ}\text{C}$
(@ $\pm 12\text{V}$, $\pm 50\text{A}$)		0 $\Omega\sim 210\Omega$
(@ $\pm 12\text{V}$, $\pm 100\text{A}$)		0 $\Omega\sim 30\Omega$
(@ $\pm 15\text{V}$, $\pm 50\text{A}$)		300 $\Omega\sim 330\Omega$
(@ $\pm 15\text{V}$, $\pm 100\text{A}$)		30 $\Omega\sim 90\Omega$
二次侧电流消耗 I_c	Static Current consumption	$\leq 10\text{mA}$ + 输出测量电流 I_{SN}

精度 - 动态参数 Accuracy - Dynamic performance data

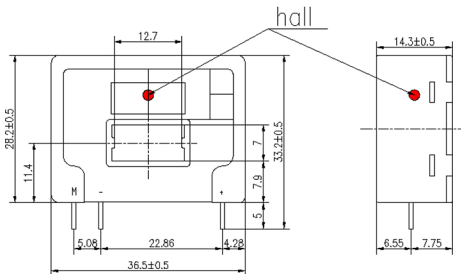
基本误差 δ_1 (@ $T_a=+25^{\circ}\text{C}$, $I_p=I_{PN}$)	Overall Accuracy	$\leq \pm 0.65\%$
线性度误差 δ_L (@ $T_a=+25^{\circ}\text{C}$, $I_p=I_{PN}$)	Linearity error	$\leq 0.2\%$
零点输出误差 δ_2 ($T_a=+25^{\circ}\text{C}$)	Electrical offset voltage	$\leq \pm 0.1\text{mA}$
零点温度漂移 δ_{2t} ($T_a=-25^{\circ}\text{C}\sim+85^{\circ}\text{C}$)	Temperature coefficient of δ_{2t}	$\leq \pm 0.25\text{mA}$ (@ $0^{\circ}\text{C}\sim+70^{\circ}\text{C}$) $\leq \pm 0.3\text{mA}$ (@ $-25^{\circ}\text{C}\sim+85^{\circ}\text{C}$)
响应时间 t_r (@ $di/dt=100\text{A}/\mu\text{s}$, $90\% I_{PN}$)	Step response time	$\leq 1\ \mu\text{s}$

带宽 BW (-3dB)	Frequency bandwidth (-1dB)	DC~100 kHz
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一般数据 General data		
工作温度 Ta	Ambient operating temperature	-25℃~+85℃
储存温度 Ts	Ambient storage temperature	-40℃~+90℃
重量	Mass	≤20g

绝缘参数 Insulation data		
绝缘电压 U _d (@50Hz, 1min)	Rms voltage for AC insulation test	2.5KV
绝缘电阻 R _{is} (@2500V)	Isolation resistance	≥500 MΩ

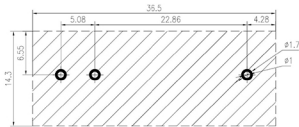
NACL 50P-S6/SP1 电流传感器外形图 Dimensions NACL 50P-S6/SP1 Series (in mm)



电气连接 Connection



1. 传感器安装方式：电路板焊接安装
2. 次边连接端子尺寸：0.63×0.56mm
3. 原边安装方孔：7×12.7mm
4. 推荐封装（单位 mm）：



产品的箭头方向为 I_p 的方向。

It will be in a forward direction when the I_p flows according to the direction of the arrowhead.