

产品说明

Applications

NACF.400C-S4/SP3V 开环霍尔电流传感器适用于对交流、直流、脉冲电流的隔离精确测量, 测量时一次侧与二次侧间完全绝缘。

For the electronic measurement of currents: AC, DC, pulsed ..., with galvanic separation between the primary circuits and the secondary circuits.

产品优点 Advantages	产品应用领域 Applications	参照标准 Standards
体积小 Small size and space savings	变频器 Static converters 不间断电源Uninterruptible Power Supplies (UPS)	EN 50178: 1997 IEC60950-1:2001

主要电气参数 Main electrical data

(@ $\pm I_{PN}$, $R_L = 10\text{ k}\Omega$, $T_A = 25^\circ\text{C}$)

额定测量电流 I_{PN}	Primary nominal current	400A
测量范围 I_{PM}	Primary current measuring range	$\pm 900A$
电源电压 V_C	Supply voltage	DC $\pm 15(1 \pm 5\%)V$
电流消耗 I_C	Current consumption	$\leq \pm 30mA$
额定测量输出 V_{OUT}	Output voltage	$\pm 4V$
输出内阻 R_{OUT}	Output internal resistance	100 Ω
负载电阻 R_L	Load resistance	$\geq 10k\ \Omega$

精度 - 动态参数 Accuracy - Dynamic performance data

基本误差 $\delta_i(I_{PN}, T_A = 25^\circ\text{C})$	Accuracy(excluding offset)	$\leq \pm 1\%$ of I_{PN}
线性度 $\delta_L(0 \dots \pm I_{PN})$	Linearity error	$\leq \pm 1\%$ of I_{PN}
零点输出误差 $\delta_z(T_A = 25^\circ\text{C})$	Electrical offset voltage	$\leq \pm 30mV$
磁滞失调电压 $V_{OH}(I_p = 0, 1 \times I_{PN}$ 冲击后)	Hysteresis offset voltage @ $I_p = 0$, after an excursion of $1 \times I_{PN}$	$\leq \pm 35mV$
零点温度漂移 $\delta_{zT}(T_A = -40^\circ\text{C} \sim +85^\circ\text{C})$	Temperature coefficient of δ_{zT}	$\leq \pm 1mV/^\circ\text{C}$
满量程温度漂移 $\delta_{FSI}(T_A = -40^\circ\text{C} \sim +85^\circ\text{C})$	Temperature coefficient of V_{OUT}	$\leq \pm 0.1\%/^\circ\text{C}$
响应时间 $T_R(90\% \text{ of } I_{PN} \& di/dt > 50\text{ A}/\mu\text{s})$	Step response time to 90 % of I_{PN}	$\leq 7\mu\text{s}$
带宽 (-3dB) BW	Frequency bandwidth (-3dB)	DC ... 25kHz

一般数据 General data

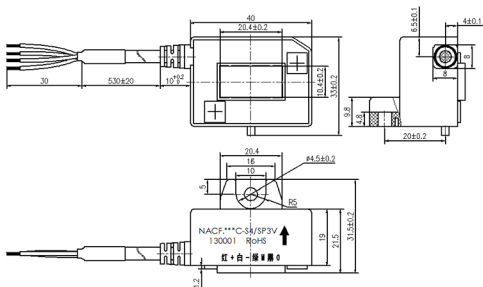
工作温度 T_a	Ambient operating temperature	$-40 \sim +105^\circ\text{C}$
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储存温度 T_s	Ambient storage temperature	-45~+125℃
重量 m	Mass	≤80g

绝缘耐压 Insulation coordination

耐压	Voltage for AC insulation test, 50Hz, 1min	3kV
绝缘电阻 R_{is}	Isolation resistance	≥1000MΩ
爬电距离	Creepage distance	7.08mm
电气间隙	Clearance	6.23mm

NACF.400C-S4/SP3V 电压传感器外形图 Dimensions NACF.400C-S4/SP3V Series (in mm)



电气连接 Connection

接线方式



机械特征 Mechanical characteristics

备注 Remark

未注公差

General tolerance

±0.5mm

- 当测量电流方向与传感器上标示的 方向一致时，传感器输出 V_{OUT} 为正。

<p>传感器安装 Transducer fastening</p>	<p>1 hole $\varnothing 4.5\text{mm}$ 1 M4 steel screws</p>	<p>2. 产品二次侧连接线优选屏蔽线,屏蔽层接近产品端连接线可接机壳,负电源或电源 0V</p>
<p>推荐力矩 Recommended fastening torque</p>	<p>0.75 N · m</p>	<p>3. 传感器安装螺钉孔的垂直度要求:要求在国家标准 8 级或以上 (或 0.06 以下)。</p>
<p>穿心孔 Primary through-hole</p>	<p>20.4 × 10.4mm</p>	<p>4. 传感器接插件要求:接插件必须选用厂家提供的配件,禁止使用其它同型号类似配件。</p>
<p>次边电气连接 Connection of secondary</p>	<p>电缆输出</p>	<p>传感器安装平面度要求: (a). 大平面安装平面度国家标准 11 级或以上 (或平面起伏小于 0.25mm); (b). 安装面若有小圆凸台设计时平面度要求达国家标准 12 级或以上 (或平面起伏小于 0.5mm)。</p>