

## 产品说明

## Applications

NACL-1000B-S5/SP6N 磁平衡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 Applications	参照标准 Standards
高精度 Excellent accuracy	交流变频器 AC variable speed drives	GB/T 25119-2010 EN50178 EN50155
线性度好 Very good linearity	私服电机驱动 Servo motor drives	
低温漂 Low temperature drift	电池供电 Battery supplied applications	
宽频带 Wide frequency bandwidth	变流器/逆变器 converter /inverter	
快速响应 Optimized response time	UPS/SVG	

## 主要电气参数 Main electrical data

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

额定测量电流 $I_{PN}$	Primary nominal current	1000A
测量范围 $I_{PM}$	Primary current measuring range	$\pm 2100A$
电源电压 $V_C$	Supply voltage	$DC \pm (15 \sim 24) \times (1 \pm 10\%)V$
电流消耗 $I_C(@\pm 24V)$	Current consumption	$\leq \pm 35mA + I_{SN}$
额定测量输出 $I_{SN}$	Output current	200mA
匝比	Conversion ratio	1:5000
负载电阻 $R_M$	Load resistance	
	70°C	85°C
	@ $\pm 15V$ , $\pm 1000A$ : $0\Omega \sim 23\Omega$	$0\Omega \sim 19\Omega$
	@ $\pm 15V$ , $\pm 1300A$ : $0\Omega \sim 7\Omega$	
	@ $\pm 24V$ , $\pm 1000A$ : $0\Omega \sim 63\Omega$	$10\Omega \sim 61\Omega$
	@ $\pm 24V$ , $\pm 2100A$ : $0\Omega \sim 6\Omega$	

## 精度 - 动态参数 Accuracy - Dynamic performance data

基本误差 $\delta_i$ (@ $I_{PN}$ , $T_A = 25^\circ\text{C}$ )	Overall Accuracy	$\leq \pm 0.4\%$
线性度 $\delta_L$ (@ $I_{PN}$ , $T_A = 25^\circ\text{C}$ )	Linearity error	$\leq \pm 0.1\%$
零点输出电流 $I_0$ (@ $I_P = 0$ , $T_A = 25^\circ\text{C}$ )	Offset current	$\leq \pm 0.4mA$
零点温度漂移 $I_{OT}$	Temperature coefficient of $\delta_{ZT}$	$\leq \pm 0.8mA (-40^\circ\text{C} \sim +85^\circ\text{C})$

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 $I_{PN}$	$\leq 1\mu\text{S}$
di/dt 精确度	di/dt Accurately followed	$> 50\text{A}/\mu\text{s}$
频率带宽 BW	Frequency bandwidth(-1dB)	DC..100kHz

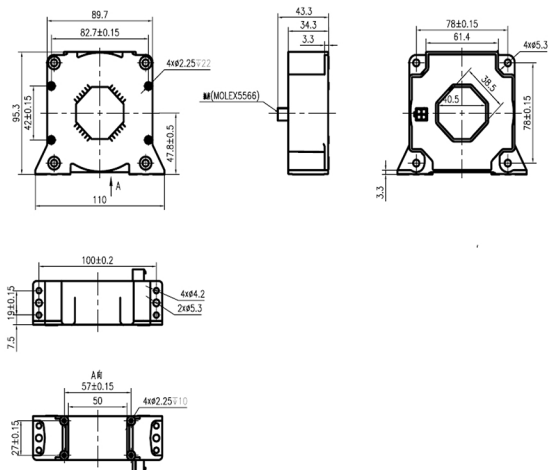
### 一般数据 General data

工作温度 $T_a$	Ambient operating temperature	$-40\sim+85^\circ\text{C}$
储存温度 $T_s$	Ambient storage temperature	$-45\sim+90^\circ\text{C}$
重量 m	Mass	$\leq 850\text{g}$

### 绝缘耐压 Insulation coordination

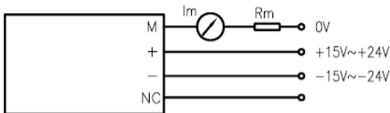
耐压	Voltage for AC insulation test, 50Hz,1min	6kV
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### NACL1000B-S5/SP6N 电流传感器外形图 Dimensions NACL1000B-S5/SP6N Series (in mm)



连接端子 (Connector): Molex Mini-Fit Jr 5566 Gold-plated pins

电气连接 Connection



### 机械特征 Mechanical characteristics

### 备注 Remark

#### 1. 传感器安装孔径: $4 \times \phi 5.3\text{mm}$

Sensors installed aperture:  $4 \times \phi 5.3\text{mm}$

#### 2. 推荐使用: M5 螺栓固定

It is recommended to use: M5 bolt

#### 3. 安装固定力矩: $3.5\text{N} \cdot \text{m}$

The installation of fixed torque:  $3.5\text{N} \cdot \text{m}$

#### 4. 原边通孔: $\phi 40.5\text{mm}$

The original hole:  $\phi 40.5\text{mm}$

#### 5. 次边电气连接: Molex 5566 Gold-plated pins

Electrical connections: Molex 5566 Gold-plated pins

- 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  $I_{SN}$  为正。When measuring the current direction of arrow mark on direction and sensor, the sensor output  $I_{SN}$  is positive.
- 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  $0\text{V}$ 。Product secondary side connecting line optimization shielding wire, cable shielding layer close to the product end can connect chassis, negative power or power  $0\text{V}$ .
- 电量传感器安装螺钉孔的垂直度要求: 要求在国家标准 8 级以上(或  $0.06$  以下)。Power sensor mounting screw hole of the vertical degree requirements: requirements in the national standard grade 8 or above (or below  $0.06$ ).
- 电量传感器安装面平面度要求: Sensor mounting surface flatness requirements:
  - 大平面安装平面度国家标准 11 级以上(或平面起伏小于  $0.25\text{mm}$ )。Planeness national standard installation grade 11 or above (or surface fluctuation is less than  $0.25\text{mm}$ );
  - 安装面加有小圆凸台设计时平面度要求达国家标准 12 级以上(或平面起伏小于  $0.5\text{mm}$ )。When mounting surface with a small round convex platform design flatness requirement of national standard grade 12 or more (or less than  $0.5\text{mm}$ ) in plane ups and downs;
- 未注公差  $\pm 0.5\text{mm}$ 。Did not note the tolerance  $+/- 0.5\text{mm}$ ;