# NT1000D-S(NACL.1000B-S5)电流传感器  Current Transducer

| 产品说明 | Applications |
| --- | --- |

该磁平衡式霍尔电流传感器适用于对交流、直流和脉动电流的隔离精确测量，测量时一次侧与二次侧之间完全绝缘。

For the electronic measurement of currents: AC, DC IMPL.,etc.,with galvanic isolation between the primary (high power) and the secondary (electronic) 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 | EN50178 |
| 线性度好 Very good linearity | 私服电机驱动 Servo motor drives | EN50155 |
| 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 | | |
| --- | --- | --- |
| 额定测量电流 $I_{PN}$（A） | Primary nominal current rms | 1000 |
| 测量范围 $I_P$（A） | Primary current measuring range | 0～±2100 |
| 匝比 | Conversion ratio | 1:5000 |
| 电源电压 $V_C$（V） | Supply voltage | DC±(15~24)×(1±5%)V |
| 额定测量输出 $I_{SN}$(mA) | Secondary nominal current rms | 200mA |
| 测量电阻 $R_M$（Ω） | Measuring resistance | |

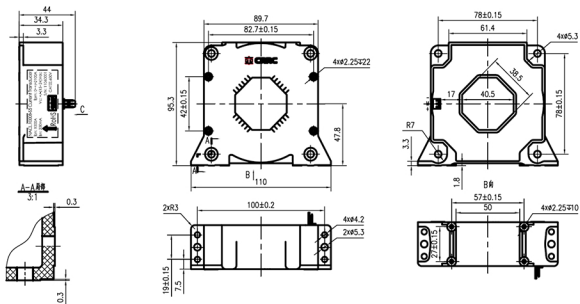| | | 70℃ | 85℃ |
| --- | --- | --- | --- |
| | @±15V, ±1000A: | 0Ω～23Ω | 0Ω～19Ω |
| | @±15V, ±1300A: | 0Ω～7Ω | |
| | @±24V, ±1000A: | 0Ω～63Ω | |
| | @±24V, ±2100A: | 0Ω～6Ω | 10Ω～61Ω |
| 二次侧电流消耗 $I_C$(@±24V) | Current consumption | ≤35mA+ Secondary output current $I_{SN}$ | |
| 隔离耐压 | Isolation test: Between the primary circuit to the secondary circuit | 3.8kVrms/50Hz/1min | |

| 精度 - 动态参数  Accuracy - Dynamic performance data | |
| --- | --- |
| 基本误差 δi<br>(@$I_{PN}$, $T_A$=25℃) | Overall Accuracy | ≤±0.4% |
| 线性度误差 δL<br>(@$I_{PN}$, $T_A$=25℃) | Linearity error | <0.1% |
| 零点输出电流 $I_O$<br>(@$I_P$=0, $T_A$=25℃) | Offset current | ≤±0.4mA |
| 零点温漂 $I_{OT}$ | Thermal drift | ≤±0.8mA (-40℃~+85℃) |
| 响应时间 $t_r$ | Response time to 90% of $I_{PN}$ step | ≤1us |
| 跟随精度度 | di/dt Accurately followed | >100A/us |

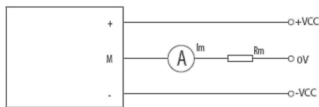| 频率带宽 BW | Frequency  bandwidth(-1dB) | DC..100kHz |
|---|---|---|

## 一般数据  General data

| | | |
|---|---|---|
| 工作温度 Ta | Ambient operating temperature | -40℃~+85℃ |
| 储存温度 Ts | Ambient storage temperature | -45℃~+90℃ |
| 电气间隙 | Clearance distance dCl mm | 16.8 |
| 爬电距离 | Creepage distance dCp mm | 18.3 |
| 相对漏电起痕指数 | CTI | ＞175 |
| 重量 | Mass | ≤850g |

## 外形图  Dimensions (in mm)



## 电气连接  Connection

Connection of secondary：MOLEX 6410



| 机械特征  Mechanical characteristics | | 备注  Remark |
|---|---|---|
| 未注公差 General tolerance | ±1 mm | 1. 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 Iss 为正。When measuring the current direction of arrow mark on |

| | |
|---|---|
| 传感器安装方式一(推荐)<br>Transducer fastening<br>（Recommended） | 4 hole and 4 notch ⌀5.3mm<br>4 M5 steel screws |
| 传感器安装方式二(推荐)<br>Transducer fastening<br>（Recommended） | 2 hole and 2 notches ⌀ 5.3mm<br>2 M5 steel scrws |
| 推荐力矩<br>Recommended fastening<br>torque | 3.5 N·m |
| 母排尺寸(推荐)<br>Bus bar（Recommended） | 40.5×13mm |
| 次边电气连接<br>Connection of secondary | Molex 6410 |

direction and sensor, the sensor output ISN is positive.

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。Product secondary side connecting line optimization shielding wire, cable shielding layer close to the product end can connect chassis, negative power or power 0 v.

3. 电量传感器安装螺钉孔的垂直度要求：要求在国家标准 8 级或以上（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).

4. 电量传感器安装面平面度要求：Sensor mounting surface flatness requirements:
(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）：Planeness national standard installation grade 11 or above (or surface fluctuation is less than 0.25 mm);
(b).安装面面有小圆台面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）：When mounting surface with a small round convex platform design flatness requirement of national standard grade 12 or more (or less than 0.5 mm) in plane ups and downs;

5. 未注公差±1mm：Did not note the tolerance + / - 1 mm;