NACL.500B2-S5/SP2 电流传感器 Current Transducer

版本：A

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.

CE RoHS COMPLIANT

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	EN50178
温度系数小 Low temperature of offset	通信电源 Battery supplied applications	EN50155
体积小 Small size	不间断电源 UPS Uninterruptible Power Supplies	

主要电气参数 Main electrical data (At Ta=+25℃)			
额定测量电流 I_{PN}	Primary nominal current rms	500A	
测量范围 I_P (@±24V)	Primary current measuring range	0～±1300A	
电源电压 V_C	Supply voltage	±15V～±24V×(1±5%)	
匝比 K	Turns ratio	1:5000	
额定测量输出 I_{SN} ($@I_p=±I_{pn}$)	Secondary nominal current rms	100mA	
负载电阻 R_L（℃）	Load resister	70℃	85℃
(@±15V, ±500A)		0Ω ～60Ω	0Ω ～57Ω
(@±15V, ±800A)		0Ω ～13Ω	0Ω ～10Ω
(@±24V, ±500A)		0Ω ～148Ω	0Ω ～145Ω
(@±24V, ±1000A)		0Ω ～41Ω	0Ω ～37Ω
(@±24V, ±1300A)		0Ω ～14Ω	0Ω ～11Ω
二次侧电流消耗 I_C	Current consumption	17mA(@±15V) + I_{SN}	
		21mA(@±24V) + I_{SN}	

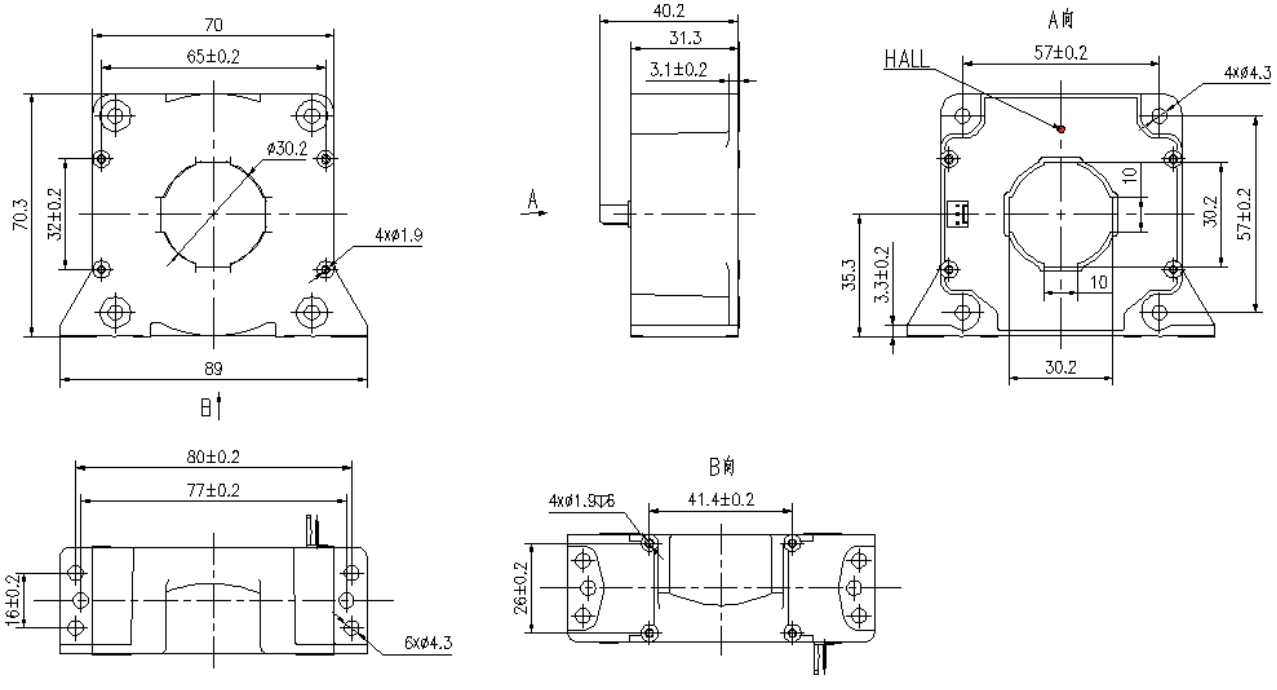
精度 - 动态参数 Accuracy - Dynamic performance data		
基本误差δ_i	Overall Accuracy	≤±0.6%

(@Ta=+25℃, I_p=I_{PN})		
线性度误差δ $_L$ (@Ta=+25℃, I_p=I_{PN})	Linearity error	≤0.1%
零点输出误差δ $_z$ (Ta=+25℃)	offset current	≤±0.4mA
零点温度漂移δ $_{zt}$ (Ta=-40℃～+85℃)	Thermal drift	±0.40mA（-40℃~+70℃） ±0.80mA（-40℃~+85℃)
响应时间 t_r (@di/dt=100A/us ,90% I_{PN})	Step response time	≤1μ s
带宽 BW（-3dB）	Frequency bandwidth（-1dB）	DC～100 kHz

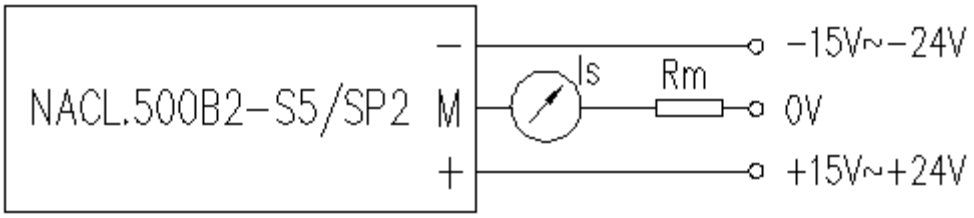
一般数据 General data		
工作温度 Ta	Ambient operating temperature	-40℃~+85℃
储存温度 Ts	Ambient storage temperature	-45℃~+90℃
重量	Mass	≤270g
线圈内阻@ 85C(Ohm)	Secondary coil resistance@ 85C ım)	71Ω

绝缘参数 Insulation data		
绝缘电压 U_d (@50Hz,1min)	Rms voltage for AC insulation test	6 KV
绝缘电阻 R_{IS} (@2500V)	Isolation resistance	≥500 MΩ

NACL.500B2-S5/SP2 电流传感器外形图 Dimensions NACL.500B2-S5/SP2 Series (in mm)



电气连接 Connection



机械特征 Mechanical characteristics	
未注公差 General tolerance	±1 mm
传感器安装方式一(推荐) Transducer fastening （Recommended）	4 hole ø4.2mm 4 M4 steel screws
传感器安装方式二(推荐) Transducer fastening （Recommended）	2 hole ø 5.2mm 2 M5 steel screws
推荐力矩 Recommended fastening torque	2.5 N • m
母排尺寸(推荐) Bus bar（Recommended）	Ø35mm
次边电气连接 Connection of secondary	Molex 6410

备注 Remark

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 I_{SN} 为正。When measuring the current direction of arrow mark on 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).安装面加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)；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;