

Current Sensor

Applications

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



Advantages	Applications	Standards
Excellent accuracy	AC variable speed drives	GB/T 25119-2010 EN50178 EN50155
Very good linearity	Servo motor drives	
Low temperature drift	Battery supplied applications	
Wide frequency bandwidth	converter /inverter	
Optimized response time	UPS/SVG	

Main electrical data (@ $\pm I_{PN}$, $T_A = 25^\circ\text{C}$)		
I_{PN}	Primary nominal current	2000A
I_{PM}	Primary current measuring range	$\pm 3000\text{A}$
V_C	Supply voltage	$\text{DC } \pm (15 \sim 24) \times (1 \pm 5\%) \text{V}$
$I_C(@\pm 24\text{V})$	Current consumption	$\leq \pm 33\text{mA} + I_{SN}$
I_{SN}	Output current	400mA
	Conversion ratio	1:5000
R_M	Load resistance	$@ \pm 15\text{V}, \pm 2000\text{A}: 0\Omega \sim 7\Omega$ $@ \pm 15\text{V}, \pm 2200\text{A}: 0\Omega \sim 4\Omega$ $@ \pm 24\text{V}, \pm 2000\text{A}: 13\Omega \sim 28\Omega$ $@ \pm 24\text{V}, \pm 2800\text{A}: 13\Omega$

Accuracy - Dynamic performance data		
$\delta_i(@I_{PN}, T_A=25^\circ\text{C})$	Overall Accuracy	$< \pm 0.3\%$
$\delta_L(@I_{PN}, T_A=25^\circ\text{C})$	Linearity error	$< \pm 0.1\%$
$I_O(@I_P=0, T_A=25^\circ\text{C})$	Offset current	$\leq \pm 0.5\text{mA}$
I_{OT}	Temperature coefficient of δ_{zt}	$\leq \pm 0.5\text{mA} (-25^\circ\text{C} \sim +85^\circ\text{C})$ $\leq \pm 1.5\text{mA} (-40^\circ\text{C} \sim -25^\circ\text{C})$

$T_R(90\% \text{ of } I_{PN} \& di/dt > 50 \text{ A}/\mu\text{S})$	Step response time to 90 % of I_{PN}	$\leq 1\mu\text{S}$
BW	Frequency bandwidth(-1dB)	DC..100kHz

General data

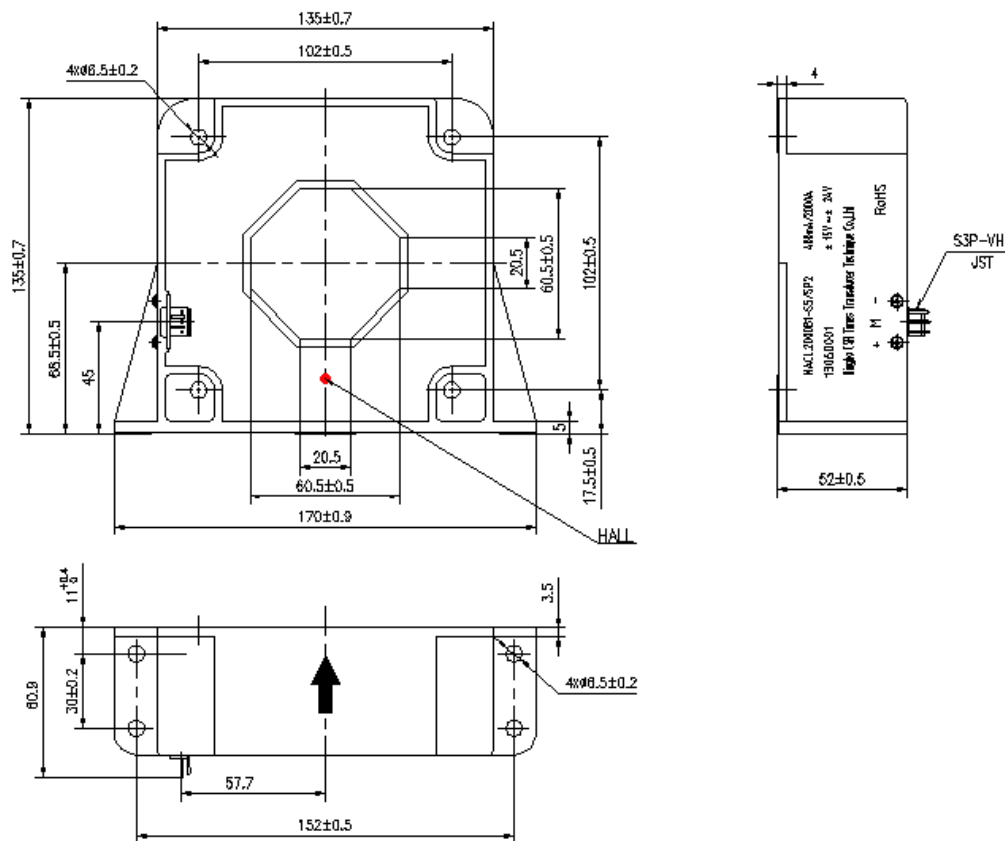
T_a	Ambient operating temperature	-40~+85°C
T_s	Ambient storage temperature	-45~+90°C
m	Mass	$\leq 1500\text{g}$

Insulation coordination

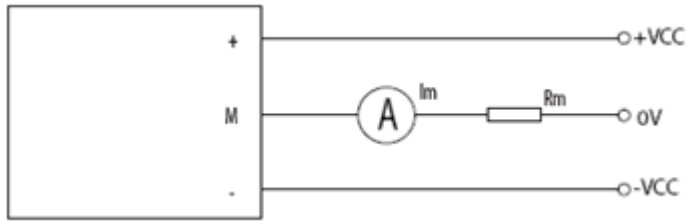
Voltage for AC insulation test, 50Hz,1min	6kV
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NACL.2000B1-S5/SP2

Dimensions NACL.2000B1-S5/SP2 Series (in mm)



Connection



Connector: JST S3P-VH

Mechanical characteristics	Remark
1. Sensors installed aperture: 4 x ϕ 6.5 mm	1. When measuring the current direction of arrow mark on direction and sensor, the sensor output ISN is positive.
2. It is recommended to use: M6 bolt	2. 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. The installation of fixed torque: 4.5 N · m	3. Power sensor mounting screw hole of the vertical degree requirements: requirements in the national standard grade 8 or above (or below 0.06).
4. The original hole: ϕ 60.5mm	4. Sensor mounting surface flatness requirements: a) Planeness national standard installation grade 11 or above (or surface fluctuation is less than 0.25 mm); b) 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. Electrical connections: JST S3P-VH	5. Did not note the tolerance + / - 0.5 mm;