

- 额定电流值 …… 200A ~ 1150A
- 三相电流传感器位于同一个外壳内
(适合47mm/48mm间距的IGBT模块)
- 动作温度范围: -40°C~+125°C
- 使用高性能可编程霍尔IC
- 5V单电源
- 比率输出 (灵敏度和偏移)



<用途>
xEV变频器 (HEV·EV·PHEV·等)

电气特性

Ta=25°C

型 号	HP-AR200V2PP5	HP-AR400V2PP5	HP-AR600V2PP5	HP-AR800V2PP5	HP-ARE115V2PP5
额 定 电 流 [If]	±200A	±400A	±600A	±800A	±1150A
输 出 电 压 [Vout]	$V_{out}=(V_{cc}/5) \cdot (V_0+G \cdot I_p)$ (注3)				
灵 敏 度 [G] (注4)	10mV/A	5mV/A	3.33mV/A	2.5mV/A	1.74mV/A
负 载 电 阻 [RL]	$\geq 2.5k\Omega$				
灵 敏 度 误 差	I=±If ±1%				±1.5%
偏 移 电 压 [V0]	I=0 $V_{ref} \pm 18mV$ ($V_{ref}=V_{cc}/2$)				
线 性 度	±1% 以下				
应 答 速 度	5μs 以下 (at di/dt=100A/μs) @LPF(fc=133kHz) 连接时				
过 度 特 性	10% 以下 (at di/dt=100A/μs) @LPF(fc=133kHz) 连接时				15% 以下 (at di/dt=100A/μs) @LPF(fc=133kHz) 连接时
磁 滞 宽 度	±22mV	±15mV	±12mV	±10mV	±9mV
灵 敏 度 温 度 特 性	±3%				
偏 移 电 压 温 度 特 性	±30mV				
控 制 电 源 [Vcc]	+5V±5%				
比 率 误 差 [+5V±5%]	灵 敏 度	±0.5%			
	偏 移 电 压	±0.4%			
消 耗 电 流	40mA 以下				
使 用 温 度 范 围	-40°C~+125°C				
保 存 温 度 范 围	-40°C~+125°C				
耐 电 压	AC2500V 50/60Hz 1分钟				
绝 缘 电 阻	DC500V 500MΩ 以上				

注1) 偏移电压值是指去除磁心磁滞后的值。

注2) 输出规格: 最大输出电流 ≤ 2mA、负载电容 ≤ 100pF

注3) Vcc: 控制电源、V0: 偏移电压、G: 灵敏度、Ip: 一次电流

注4) 灵敏度: G=2000mV/If

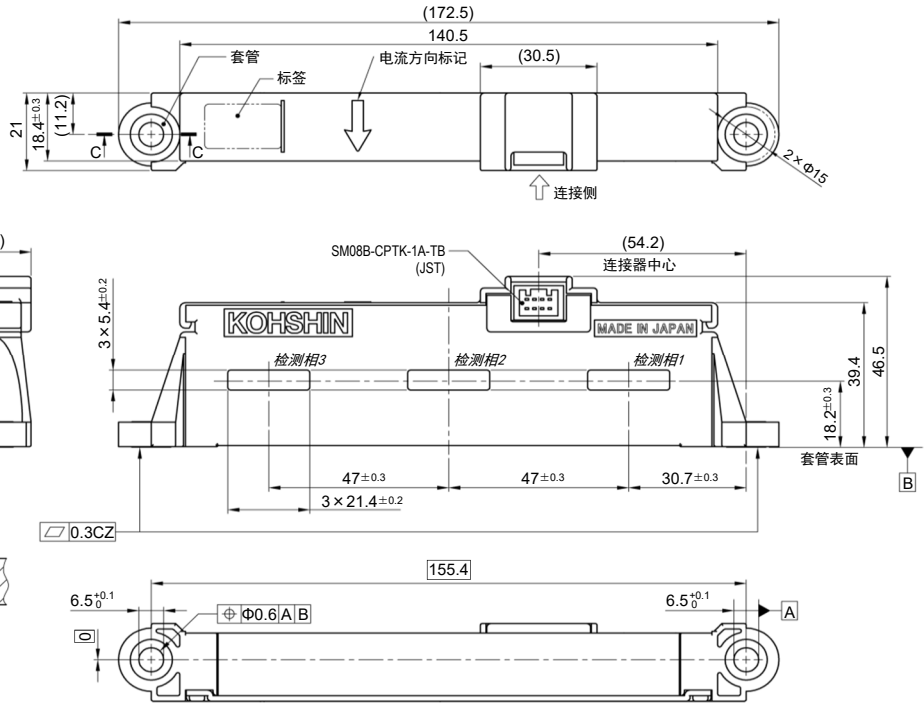
外形尺寸图

(mm)

端子编号

- 1 ···· 输出1
- 2 ···· 输出2
- 3 ···· 输出3
- 4 ···· Vcc (+5V)
- 5 ···· GND1
- 6 ···· GND2
- 7 ···· GND3
- 8 ···· NC

重量: 265g



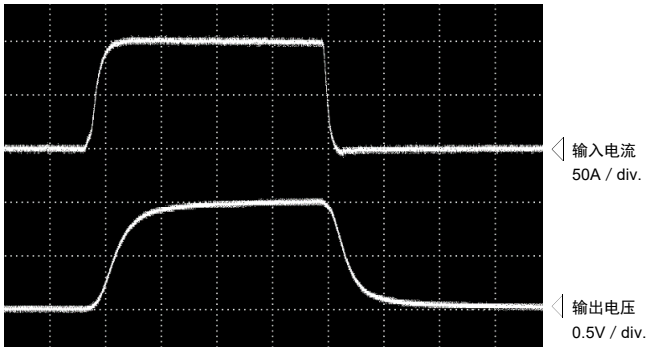
一般公差: ±0.5

特性图

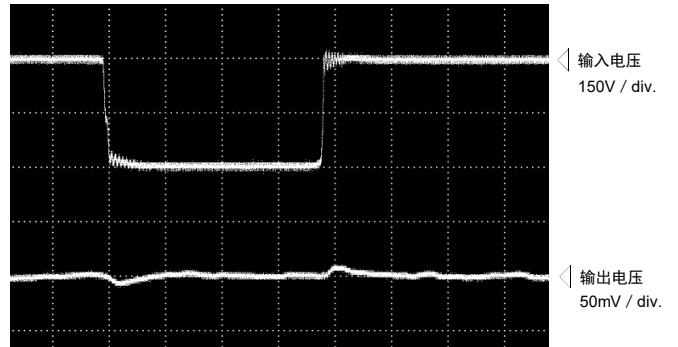
HP-AR200V2PP5

时间轴: 5μs/div.

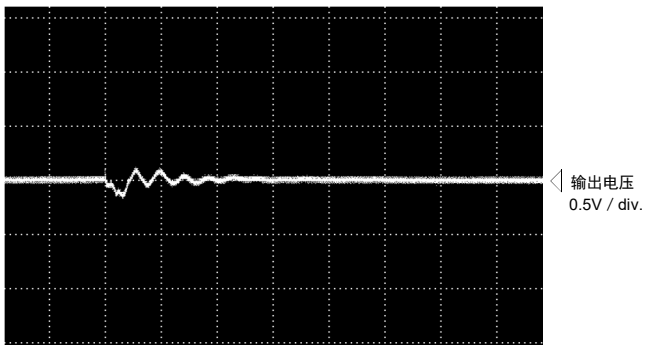
脉冲电流应答特性



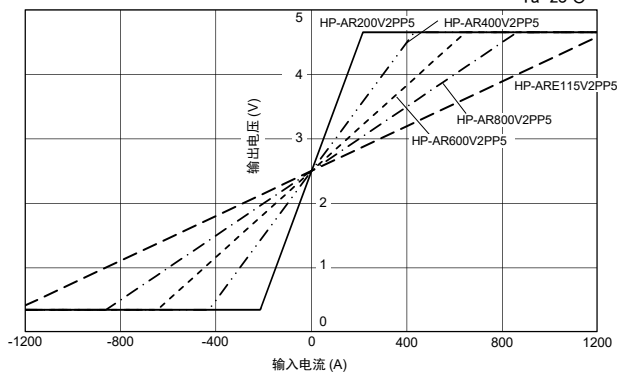
干扰特性(dv/dt影响)



干扰特性(脉冲噪音的影响)



输入-输出特性



注: “◁”表示0V或0A.

KOHSHIN

Current Sensor

Type: HP-AR***V2PP5

Instruction manual

Usage notes

Please make sure to observe the following in order to use this product correctly and safely.

Read this instruction manual carefully before use and use this product correctly.

(1) Matters concerning use environment and use conditions

Do not use this product in the following places. It may result in malfunction or a reduction in lifetime.

- Places where the ambient temperature exceeds the operating ambient temperature (-40 to +125 degrees Celsius)
- Places where the humidity exceeds the humidity range (up to 95% RH), or where condensation occurs
- Places with significant amounts of dust, corrosive gas, salt, or oily smoke
- Places subject to vibration and impact conditions exceeding the specified levels
- Places exposed to rain or water droplets
- Places exposed to direct sunlight
- Place where metal fragments or conductive foreign substances scatter
- Places with a strong electromagnetic field or a high level of exogenous noise

(2) Matters concerning installation and connection

Before installation and connection, make sure to read the product specifications and instruction manual.

- Before wiring, check the connection drawing carefully. If the control power supply is applied incorrectly, the internal circuit will be destroyed.
- Install this product as far as possible from the surrounding electromagnetic noise or magnetic noise source.
- The output wiring should be as short as possible to prevent the influence of external noise, and do not place the wiring in the vicinity of, or do not bind with a power line or high-voltage line.
- Use the connector specified in the outline drawing.
- Pay attention not to apply excessive stress to connectors during connector insertion/removal (<60 N).
- For installation of the product, use M5 Hexagon bolts with a flange (tightening torque 5N·m ±20%).

(3) Purpose of use of the product

This product is designed and manufactured as a general vehicle-mounted current sensor.

- It is left to the discretion and responsibility of the customer whether to use this product for equipment in other applications (such as nuclear plant components, transportation equipment other than general vehicles, medical equipment and various safety devices) that require especially high quality/reliability.

(4) Usage notes

Before use, make sure to read the product specifications and instruction manual.

- Use this product within the control power supply voltage range stated in the specifications. Use at voltages outside the range may cause errors and malfunction.
- Connect the load resistor with the specified resistance value. Attachment of a resistor less than the specified value may cause malfunction.
- Note that offset voltage may increase when static electricity or surge voltage is applied.
- The output may be distorted due to the switching voltage (dv/dt noise) or electromagnetic wave noise, resulting in incorrect output. Also, as the product may be more susceptible to external noise depending on the wire routing, thoroughly check in advance during the actual use condition.
- If the frequency of the input current is high, the core may generate heat due to iron loss and the sensor may be destroyed. Since the extent of heat generation is influenced by the frequency component and the current value, thoroughly check in advance during the actual use condition.
- Do not disassemble, modify and then use this product. It may result in malfunction.

(5) Storage precautions

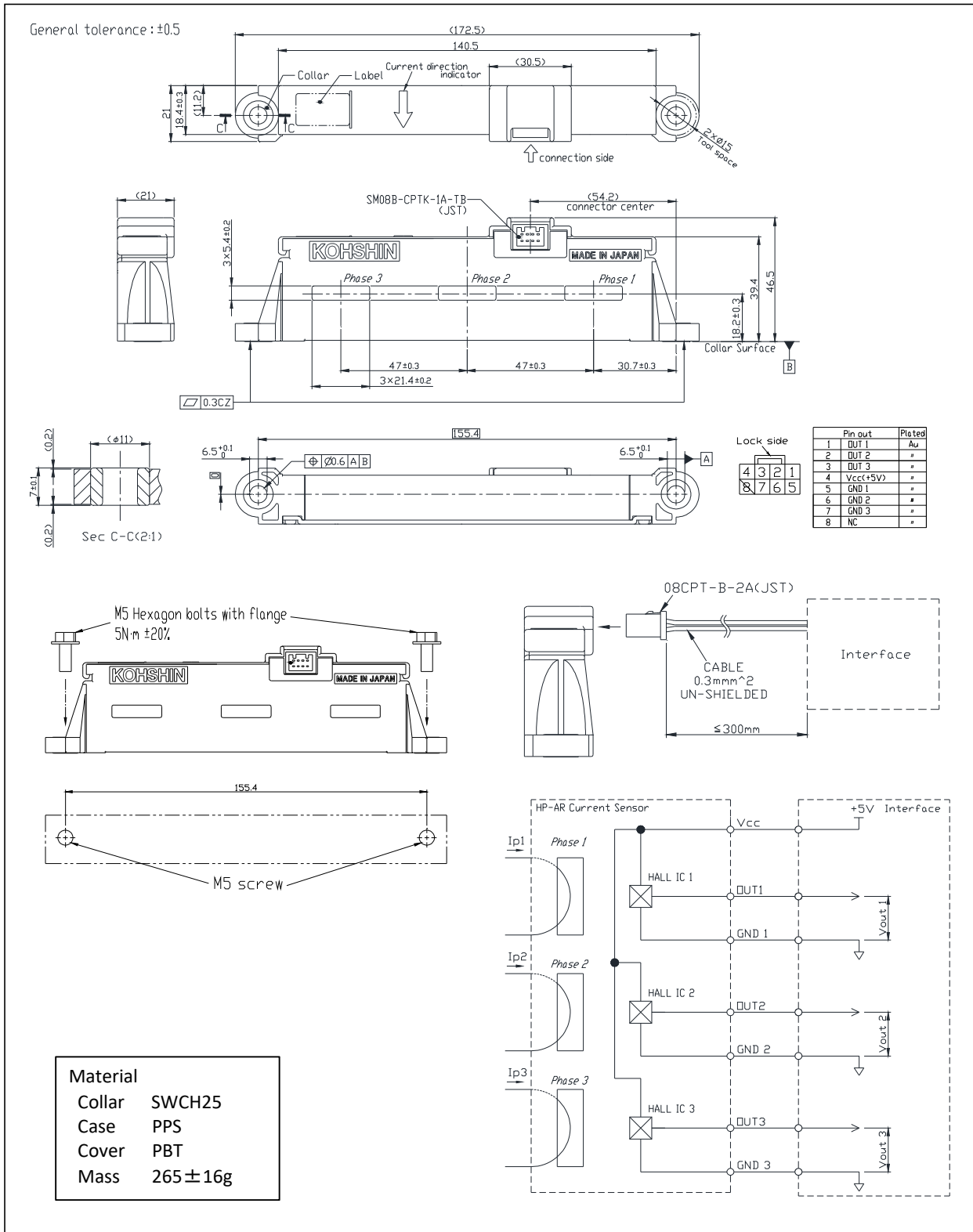
When storing the product, avoid the following places. Failure to do so may result in malfunction or a reduction in lifetime.

- Places of high temperature and high humidity
- Places where condensation occurs
- Places with significant amounts of dust, corrosive gas, salt, or oily smoke
- Places exposed to rain, water droplets, direct sunlight
- Places subject to high levels of vibration and impact
- Place where metal fragments or conductive foreign substances scatter

(6) Matters concerning disposal

Treat this product as general industrial waste.

Outline dimensional drawing



Contact Information

Importer

Distributor

KOHSHIN ELECTRIC CORPORATION
 1608-10 Mobira, Kasaoka-shi,
 Okayama, 714-0062, Japan
 Honsya Works, Marketing Dept.
 TEL +81-865-66-4877
<http://www.kohshin-ele.com/>