

浙江宏发精密科技有限公司

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产品规格书

Product Specification

文件编号:

Document No.: HPT20210305

客户名称: Customer:			
产品名称: Product Name:	霍尔电流传感器 Hall current sensor		
产品型号: Product Part NO.:	HFCA-P01/XXX-S series		
日期: Release Date:	2022.01.11		
生产工厂: Production Plant:	浙江宏发精密科技有限公司 Zhejiang Hongfa Precision Technology Co., Ltd		
版本: Version:	Rev c		
宏发精科审批签字 Signature by HPT		客户确认 Customer Approval	
拟制 Prepared by	审核 Checked by	批准 Approved by	负责人: By:
			日期: Date:
特别说明: Special claim: 1. 此规格书请顾客在 2 周内确认, 如未在规定时间内答复, 则视为同意。 1.This specification is expected to be confirmed within 2 weeks.Without feedback after 2 weeks, Hongfa will consider it's approved by the customer automatically. 2.自提供规格书之日起 2 年内, 顾客没有下单订货, 本规格书失效。 3. This specification will be invalid if no order within 2 years.			



变更履历

Revision Record

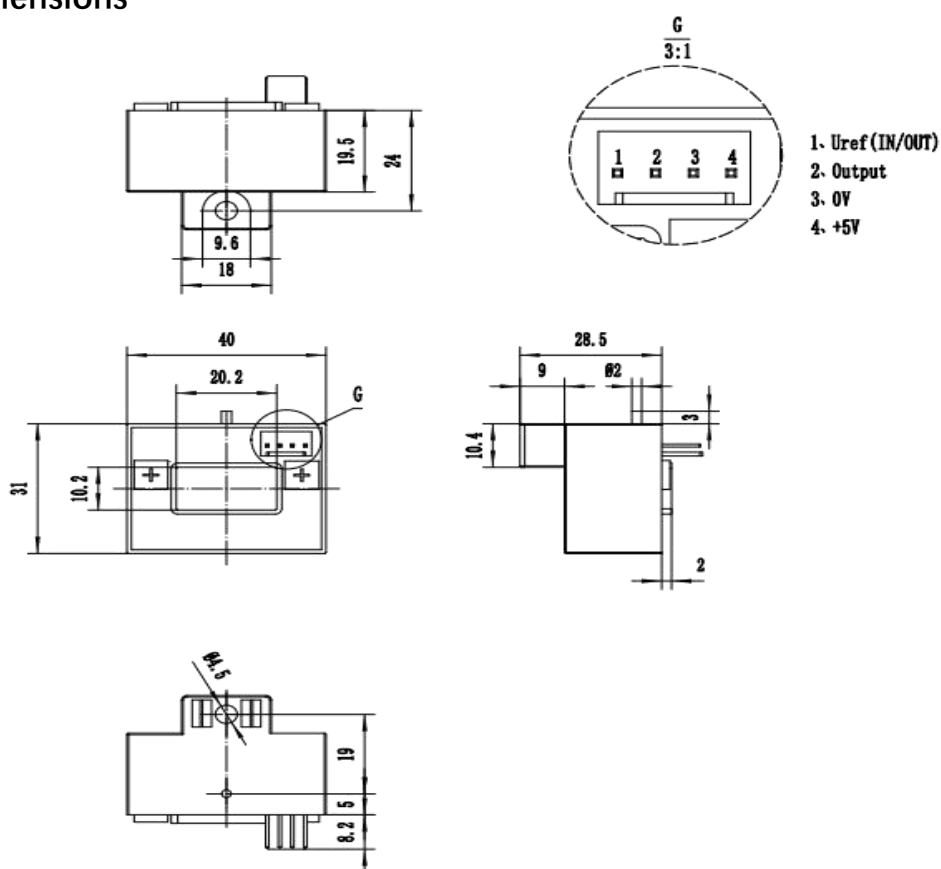
顾客 Customer		产品型号 Product Part No.		
版本号 Version No.	变更日期 Change Date	变更内容 Description	原因 Reason	负责人 By
B	2022/01/11	Change naming convention		
C	2023/05/17	Increase the test range of 400A current		



		规格书 Specification					在电隔离条件下测量直流、交流、脉冲及各种不规则波形的电流。 For the electronic measurement of currents: DC, AC, pulsed..., with galvanic separation between the primary circuit and the secondary circuit.		
特性 Features		优势 Advantages				应用 Applications			
采用霍尔效应的开环电流传感器 Open loop (compensated) current transducer using the Hall effect 绝缘塑料外壳符合 UL 94-V0 认证。 Insulating plastic case recognized according to UL 94-V0		低插入损耗 Low insertion losses 安装方便 Easy installation 低功耗 Low power consumption 抗外界干扰能力强 High immunity to external interference				不间断电源(UPS) Uninterruptible Power Supplies (UPS) 直流电机驱动的静态转换器 Static converters for DC motor drives 交流变速驱动器和驱动器 AC variable speed drives and servo motor drives 焊接电源 Power supplies for welding			
电气参数 Electrical data									
型 号 type		HFCA-P01/ 50	HFCA-P01/ 100	HFCA-P01/ 150	HFCA-P01/ 200	HFCA-P01/ 300	HFCA-P01/ 400	HFCA-P01/ 500	HFCA-P01/ 600
参 数 parameter	Symbol								
额定输入电流 Primary nominal current	I _{PN}	50A	100A	150A	200A	300A	400A	500A	600A
测量范围 Primary current, measuring range	I _{PM}	±150A	±300A	±450A	±600A	±900A	±1100A	±1100A	±1100A
输出电压 Rated output voltage	V _{OUT}	2.5V±0.625V (R _L =10kΩ) @I _{PN} , T=25℃							
零点失调电压 Electrical offset voltage	V _{OE}	2.5V±0.015V (R _L =10kΩ) @I _p =0, T=25℃							
参考电压 Reference voltage	V _{ref}	2.5V±0.025V							
精度 Error	X	≤±1% @ I _{PN}							
线性度 Linearity error	εL	≤±0.5% @ I _{PN} ≤±1% @ I _{PM}							
零点温漂 Temperature coefficient of V _{OE}	TCV _{OE}	≤±1 mV/K							
参考电压温漂 Temperature coefficient of V _{ref}	TCV _{ref}	≤±190ppm/K							
响应时间 Response time	Tr	5 μs max							
频带宽带 (-3dB) Frequency bandwidth (-3 dB)	BW	DC---200 kHz							
负载电阻 Load resistance	R _L	> 2kΩ							
供电电压(±5 %) Supply voltage (±5 %)	V _c	+5V							
消耗电流 @ +5 V Current consumption@ +5 V	I _c	< 25mA							
工作温度 Ambient operating temperature	T _A	-40℃ ~ + 105℃							
贮存温度 Ambient storage temperature	T _s	-40℃ ~ + 105℃							
重量 Mass	m	65g							
Notes: For a di/dt =100 A/μs									

**绝缘特性 Insulation coordination**

绝缘电阻 Insulation resistance	R_{INS}	DC 500V, > 1000 M Ω
介质耐压 Insulation strength	V_d	3.3kVa.c., 50/60Hz, 1min, 0.1mA
冲击电压 Impulse withstand voltage 1.2/50 μ s	V_{NI}	6kV

结构尺寸 Dimensions**Remarks**

1、推荐力矩 1.5 N·m

Recommended fastening torque 1.5 N·m

2、箭头所示方向为正电流方向，此时 V_{OUT} 输出为正

V_{OUT} is positive when I_p flows in the direction of the arrow

3、一次件温度不应超过 100℃

Temperature of the primary conductor should not exceed 100 °C

4、建议一次件母线固定在孔径中心，母线的位置直接影响到传感器的精度

The primary busbar fixed in the center of aperture is recommended. The position of busbar has impact on the accuracy of transducer