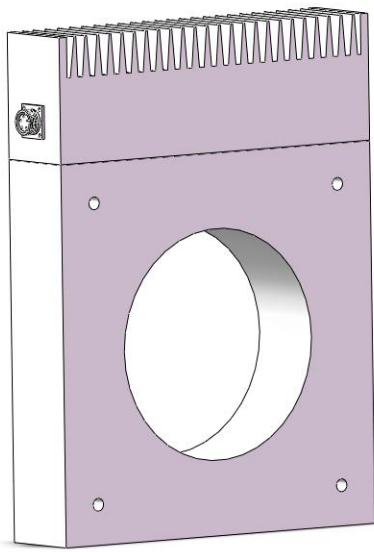


AHKB-6005FS 系列闭环霍尔电流传感器

AHKB-6005FS Series closed loop current sensor

AHKB-6005FS 系列闭环霍尔电流传感器是基于霍尔效应原理和磁平衡原理研发的装置，可实现高精度隔离测量，无插入损耗，具有精度高、温漂小、稳定可靠等特点，广泛应用于电动汽车、太阳能、风能、轨道交通、船舶、大型医疗器械等新能源行业，用于精密测量直流、交流和脉冲电流。

AHKB-6005FS Series closed loop current sensor is based on the Hall-effect principle and the principle of balanced development of magnetic devices, can achieve high accuracy isolated measurement, no insertion loss, high accuracy, low drift, stable and reliable, widely used solar energy, wind energy, rail transportation, ship, large medical equipment industries, for precision measurement of DC, AC and pulse currents.



应用领域 Applications

- 交流变频调速驱动器和伺服电机驱动器 AC variable speed drives and servo motor drives
- 静态转换为直流电机驱动器 Static converters for DC motor drives
- 电池供电应用 Battery supplied applications
- 不间断电源 Uninterruptible Power Supplies(UPS)
- 开关电源 Switched Mode Power Supplies(SMPS)
- 电焊机电源应用 Power supplies for welding application

产品特点 Products Features

- 精度高 Excellent accuracy
- 良好的线性度 Very good linearity
- 最佳的响应时间 Optimized response time
- 无插入损耗 No insertion losses
- 抗干扰能力强 High immunity to external interference
- 低温度漂移 Low temperature drift
- 频带宽 Wide frequency bandwidth

电气参数 Electrical data(Ta=25°C±5°C)

型号 Type		AHKB-6005FS	
额定测量电流 I _{PN} Rated input		AC12000A	DC ±16800A
测量范围 I _P Measure range	With±48V	AC 0~9000A	DC 0~±12800A
	With±60V	AC 0~12000A	DC 0~±16800A
额定输出电流 I _S Rated output current		±1A(AC)	±1.4A(DC)
测量电阻范围 R _M Measure resister range	With±48V @I _{PN}	2Ω	
	With±60V @I _{PN}	2Ω	
转换比率 K _N Conversion ratio		1: 12000	
电源电压 V _{CC} Supply voltage		±48V DC (± 5%)	
		± 60V DC (± 5%)	
电流消耗 I _C Current consumption	With±48V	56mA+I _S	
	With±60V	70mA+I _S	

精度-动态参数 Accuracy - Dynamic performance data

总体精度 $X@I_{PN}$ Overall accuracy	0.08%
非线性度 ϵ_L Nonlinearity	<0.05%FS
零点失调电流 I_0 Offset current	$\pm 0.01\text{mA}$
零点失调电流温漂 I_{OT} Offset current drift	$\leq \pm 0.01\text{mA}$
响应时间 T_R Response time	<3 μS @100A/ μs , 10%-90%
di/dt 跟随精度 di/dt accurately followed	>50A/ μS
频带宽度 BW Frequency bandwidth(-1db)	DC~20KHz

一般参数 General data

工作环境温度 T_A Ambient operating temperature	-20~+70°C
储存环境温度 T_S Ambient storage temperature	-40~+85°C
副边线圈电阻 R_S Secondary coil resistance	30 Ω @ $T_A = 70^\circ\text{C}$
	32 Ω @ $T_A = 85^\circ\text{C}$
质量 m Mass	$\approx 24\text{kg}$
执行标准 Standards	EN 50178: 1997

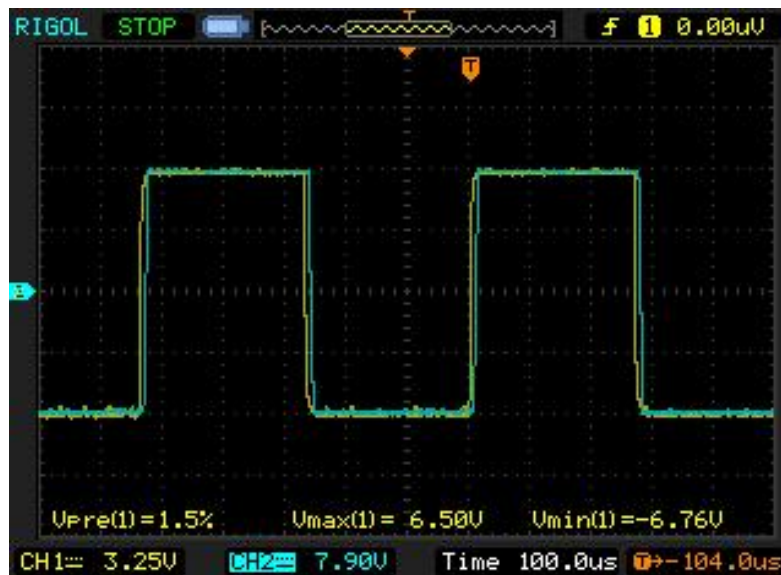
隔离特性 Isolation characteristics

绝缘耐压 Galvanic isolation V_D	50Hz, 1min, 6KV
爬电距离 dCp Creepage distance	1min 85 mm
间隙距离 dCI Clearance distance	1min 80 mm

响应时间 Response time

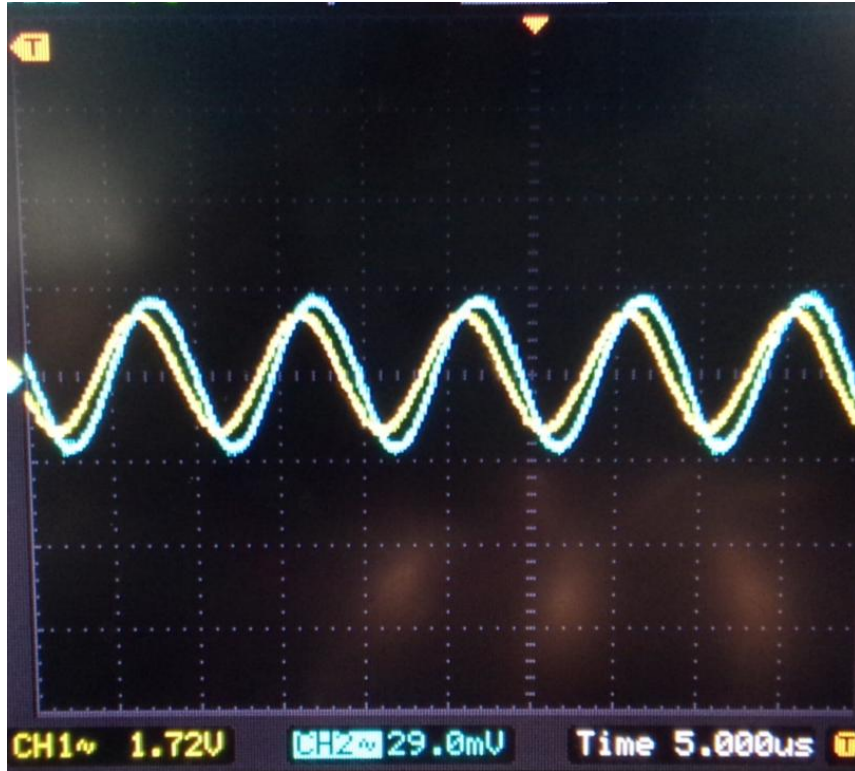


di/dt 跟随精度 accurately followed

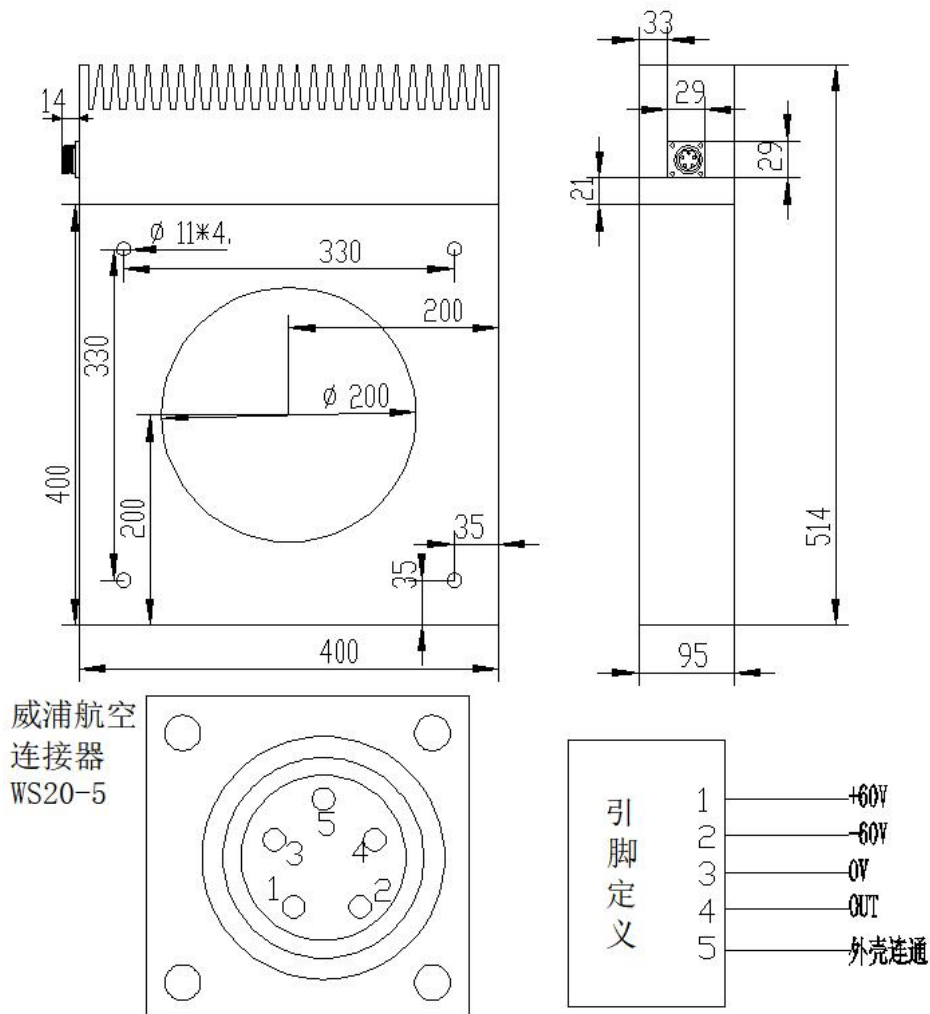


频带宽度 Frequency bandwidth(-3db)

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2. 该说明书会定期更新，请随时关注本公司网站，恕不提前通知。



产品尺寸图 Dimensions



机械特性 Mechanical characteristics

• 一般公差 General tolerance	±3.0mm
• 安装螺丝孔 Fastening 4 holes	φ8.2 mm
• 紧固螺丝 Fastening steel screw	M8
• 安装扭力 fastening torque	5.5Nm
• 原边过流孔 Primary through-hole	φ240 mm
• 次边端子 Connection of secondary	M6 studs
• 连接推荐扭矩 Connection recommended torque	0.75Nm (± 10 %)

注意事项 Remarks

- 当待测电流从传感器原边过流孔流过，即可在输出端测得电流大小。(注意：错误的接线可能导致传感器损坏)

When the current will be measured goes through a sensor, the current will be measured at the output end.
(Note: The false wiring may result in the damage of the sensor).

- 当导体完全充满原边过流孔时动态表现（di/dt 和响应时间）为最佳。

Dynamic performances (di/dt and response time) are best with a single bar completely filling the primary hole.

- 原边过流孔内导体温度不应超过100℃。

Temperature of the primary conductor should not exceed 100℃.

- 这是一个标准元件，如需不同规格（供电电压、匝比、单向测量.....）请与我们联系。

This is a standard model. For different versions (supply voltages, turns ratios, unidirectional measurements...), please contact us.