

FSM3005 高精度闭环型霍尔电流传感器

FSM3005 高精度闭环型霍尔电流传感器的初、次级之间是绝缘的，无位置误差，能真正测量分辨2000:1，用于精密测量直流、交流和脉冲电流。

FSM3005 Current sensor is a closed loop device based on the measuring principle of the hall effect and null balance method, with a galvanic isolation between primary and secondary circuit, the size of primary not affect test precision, no matter the location of primary in the hole of current sensor. It can really measure resolution 2000:1 and it uses for precision measurement of DC, AC and pulse current.



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

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
直流电机驱动静态转换器
Static converters for DC motor drives
电池供电应用
Battery supplied applications
不间断电源 (UPS)
Uninterruptible Power Supplies
开关电源 (SMPS)
Switched Mode Power Supplies
电焊机电源应用
Power supplies for welding applications

使用说明 Directions for use

- 1、当待测电流从传感器输入脚流过，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)
- 2、母排完全充满初级穿孔时动态表现 (di/dt 和响应时间) 为最佳。
The dynamic performance (di/dt and the response time) is the best when the primary hole is fully filled with the bus bar.
- 3、可按用户需求定制不同额定输入电流和输出电压的传感器。
Custom design in the different rated input current and the output voltage are available.

电参数 Electrical data (Ta=25°C ± 5°C)

型号Type		FSM3005		
额定测量电流Rated input I_{PN}		$\pm 1000A$	$\pm 2000A$	$\pm 3000A$
测量范围Measure range I_P		$0\sim \pm 1500A$	$0\sim \pm 3000A$	$0\sim \pm 4500A$
额定输出电流Rated output current I_S		$200mA$	$400mA$	$600mA$
测量电阻范围 R_M	With $\pm 24V @I_{PN}$	max 80Ω	max 30Ω	max 13Ω
Measure resistor range	With $\pm 24V @I_P$	max 45Ω	max 13Ω	max 2Ω
转换比率Conversion ratio K_N			1: 5000	
电源电压Supply voltage V_{CC}			DC $\pm 15V \sim \pm 24V (\pm 5\%)$	
电流消耗Current consumption I_C			$35mA(@ \pm 24V)+I_S$	
绝缘耐压Galvanic isolation V_D			50Hz, 1min, 6KV	
线性度Linearity ϵ_L			<0.1%FS	
总体精度Overall accuracy X			$\pm 0.3\%$	
零点失调电流Offset current I_0			$\pm 0.2mA$	
零点失调电流温漂 I_{OT}			< $\pm 0.5mA$	
Offset current drift				
响应时间Response time T_R		@100A/ μs , 10%~90%	<1 μs	
di/dt跟随精度di/dt accurately followed		>100A/ μs		
频带宽度Frequency bandwidth-1db		DC~100KHz		
工作环境温度 T_A		-40~-+85℃		
Ambient operating temperature				
储存环境温度 T_S		-40~-+125℃		
Ambient storage temperature				
质量Mass m		≈2.5kg		
执行标准Standards		SJ20790-2000;JB/T 7490-2007		

结构参数 Mechanical dimension (for reference only)

