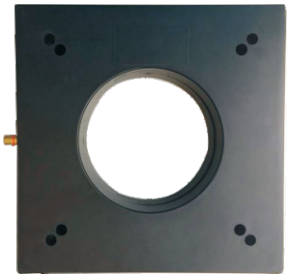
FSM4005 高精度闭环型霍尔电流传感器

FSM4005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3000：1，用于精密测量直流、交流和脉冲电流。

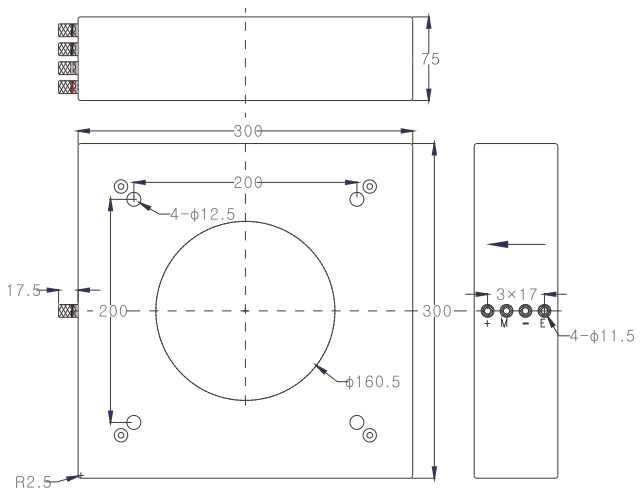
FSM4005 Current sensor is a closed loop device based on the measuring principle of the hall effect and null balance method, with a galvanic isolation between primary and secondary circuit, the size of primary not affect test precision, no matter the location of primary in the hole of current sensor. It can really measure resolution 3000:1 and it uses for precision measurement of DC,AC and pulse current.

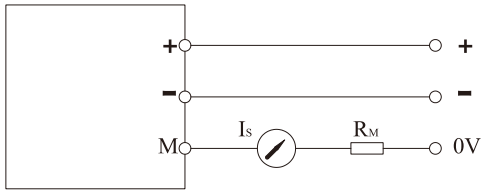


电参数Electrical data(Ta=25℃ ± 5℃)

型号Type		FSM4005			
额定测量电流Rated input I_{PN}		± 1000A	± 2000A	± 3000A	± 4000A
测量范围Measure range I_P		0~ ± 2000A	0~ ± 4000A	0~ ± 5000A	0~ ± 6000A
额定输出电流Rated output current I_S		± 200mA ± 0.4%	± 400mA ± 0.4%	± 600mA ± 0.4%	± 666mA ± 0.4%
测量电阻范围R_M	With ± 24V @I_{PN}	max 80Ω	max 30Ω	max 17Ω	max 15Ω
Measure resister range	With ± 24V @I_P	max 36Ω	max 11Ω	max 5Ω	max 5Ω
转换比率Conversion ratio K_N		1：5000	1：5000	1：5000	1：6000
电源电压Supply voltage V_{CC}		DC ± 24V (± 5%)			
电流消耗Current consumption I_C		35mA(@ ± 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 accuraty X		± 0.4%			
零点失调电流Offset current I_O		± 0.3mA			
零点失调电流温漂I_{OT} Offset current drift		< ± 0.5mA			
响应时间Response time T_R		@50A/μs,10%-90%	<1μs		
di/dt跟随精度di/dt accurately followed		>50A/μs			
频带宽度Frequency bandwidth-1db		DC~100KHz			
工作环境温度T_A Ambient operating temperature		-40~+85℃			
储存环境温度T_S Ambient storage temperature		-40~+125℃			
质量Mass m		≈4.5kg			
执行标准Standards		SJ20790-2000;JB/T 7490-2007			

结构参数Mechanical dimension(for reference only)





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.