

FSM025ES5 系列霍尔电流传感器

应用霍尔效应原理开发的电流传感器，能在电隔离条件下测量直流、交流、脉冲以及各种不规则波形的电流。有极性无负值的一款单电源工作模式的霍尔电流传感器。

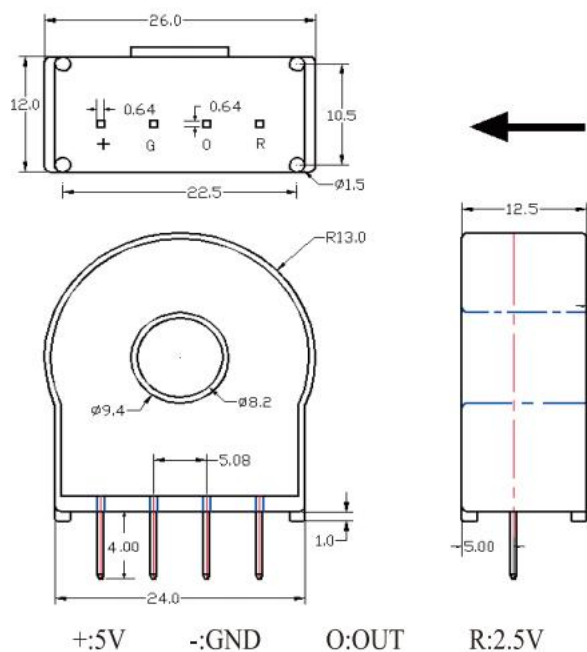
The current sensor developed by Hall effect principle can measure DC, AC, pulse and various irregular wave forms of current under the condition of electrical isolation. A Hall current sensor with polarity and no negative values in single power mode.



电参数/Electrical characteristics

	型号 Type	FSM010ES5	FSM025ES5	FSM050ES5	FSM075ES5	
I_{PN}	原边额定输入电流 Rated input current on primary side	10	25	50	75	A
I_P	原边电流测量范围 Primary current measurement range	0~20	0~50	0~100	0~150	A
R_M	取样电阻 Sampling resistance	$50 \pm 0.1\%$	$50 \pm 0.1\%$	$25 \pm 0.1\%$	$16.5 \pm 0.1\%$	Ω
V_{SN}	副边额定输出电压 Rated output voltage of secondary side	$0.625 \pm 0.5\%$	$0.625 \pm 0.5\%$	$0.625 \pm 0.5\%$	$0.625 \pm 0.5\%$	V
K_N	匝数比 Turns ratio	800 ± 2	2000 ± 2	2000 ± 2	2000 ± 2	
V_C	电源电压 Supply voltage	$+5 (\pm 5\%)$				V
V_d	绝缘电压 Insulation voltage	在原边与副边电路之间3KV有效值/50Hz/1分钟				
ε_v	精度 Precision	$< \pm 0.2$				%FS
ε_L	线性度 linearity	< 0.1				%FS
V_o	零点偏移电压 Zero offset voltage	$I_P=0 \quad T_A=25^\circ\text{C} \quad 2.5 \pm 0.5\%$				V
V_{OT}	失调电压温漂 Offset voltage temperature drift	$I_P=0 \quad T_A=-25 \sim +85^\circ\text{C} \quad < \pm 0.5$				mV/°C
T_R	响应时间 Response time	< 1				us
di/dt	跟随精度 Following accuracy	> 100				A/us
f	频带宽度(-1dB) Band width (-1dB)	DC~200				kHz
T_A	工作环境温度 Operating ambient temperature	$-40 \sim +85$				°C
T_S	贮存环境温度 Storage ambient temperature	$-40 \sim +125$				°C
	标准 Standard	GI/FS0105				

外形尺寸(mm)/Dimensions of drawing(mm)

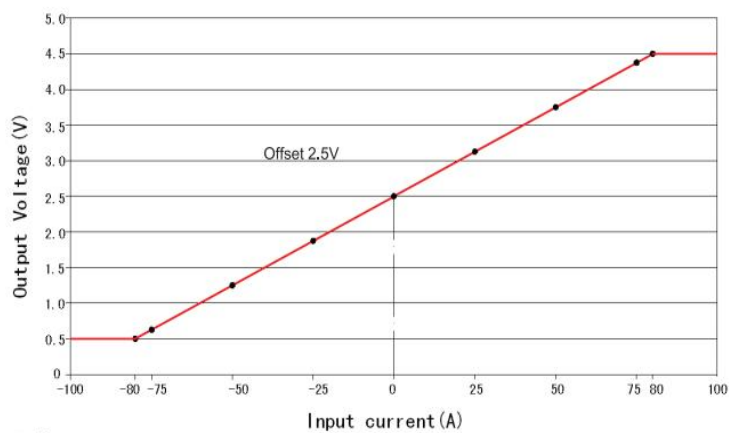


输入输出特性/ Input-output characteristic:

下面是FSM025ES5的输入输出的关系曲线

The following is the relationship between the input and output of the FSM025ES5

输入电流(A)	-80	-75	-50	-25	0	25	50	75	80
Input current									
输出电压(V)	0.500	0.625	1.250	1.875	2.500	3.125	3.750	4.375	4.500
Output voltage									



使用说明/Instructions

1. 错误的接线可能导致传感器损坏，请按照标定的正确电流方向进行安装测试。
Incorrect wiring may cause damage to the sensor. Install the sensor according to the correct current direction.
2. 初级的导体完全充满初级孔径时动态表现 (di/dt 和相应时间) 为最佳效果；
The primary conductor performs best dynamically (di/dt and corresponding time) when fully filled with the primary aperture
3. 初级导体的温度不应超过 100°C 。
The temperature of the primary conductor should not exceed 100°C .
4. 可根据客户的要求定制产品。
Products can be made according to customers' requirements.