



THE DATASHEET OF FSM-NPT



FSM050NPT 系列霍尔电流传感器

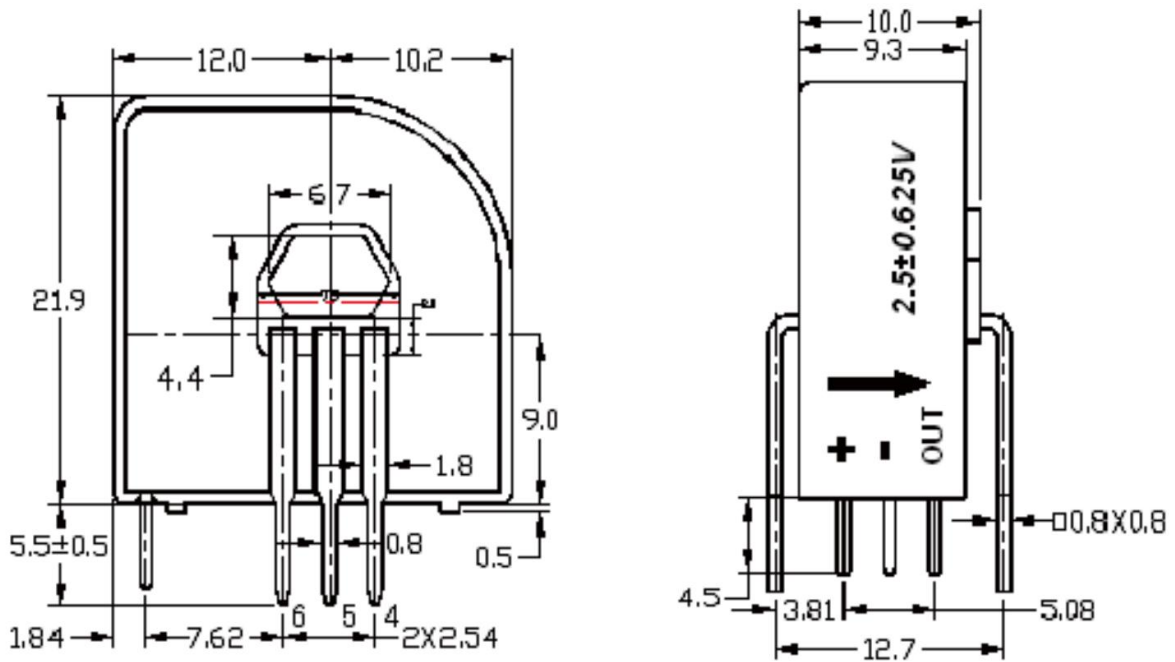


应用霍尔效应开环原理的电流传感器，能在电隔离条件下测量直流、交流、脉冲以及各种不规则波形的电流。

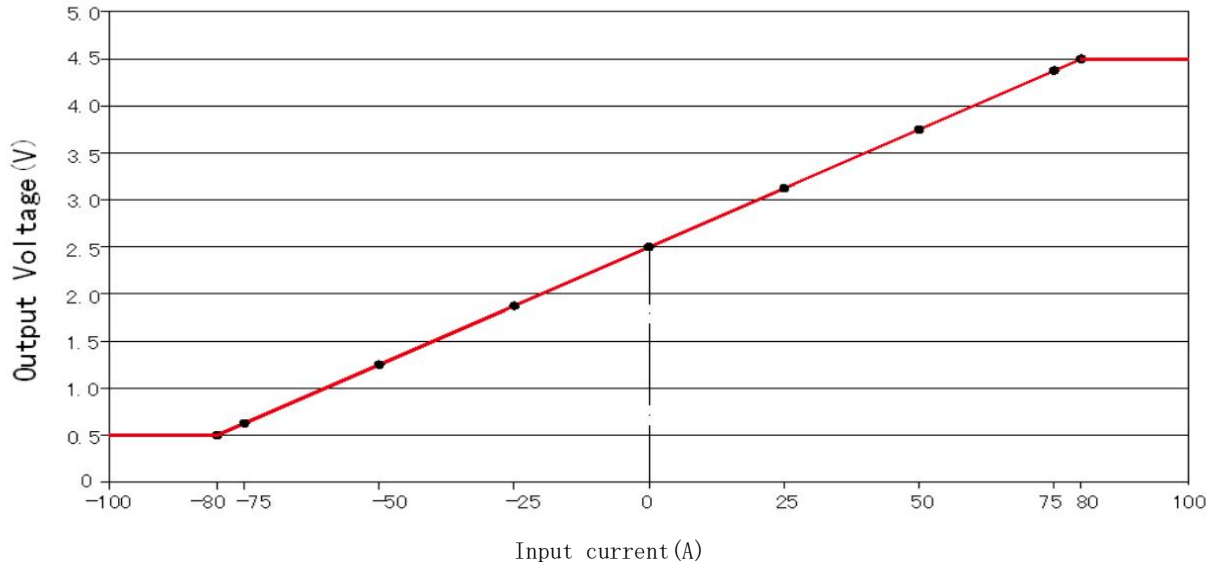
Open loop current sensor based on the principle of Hall-effect It can be used for measuring AC,DC, pulsed and mixed current.

电参数/Electrical characteristics						
	型号 Type	FSM006NPT	FSM015NPT	FSM025NPT	FSM050NPT	
I_{PN}	原边额定输入电流 Primary nominal input current	6	15	25	50	A
I_P	原边电流测量范围 Measuring range of primary current	0~±19.2	0~±48	0~±84	0~±150	A
R_M	取样电阻 Sampling resistance	100±0.5%	50±0.5%	50±0.5%	25±0.5%	Ω
V_{SN}	副边额定输出电压 Nominal output voltage	0.625±0.5%	0.625±0.5%	0.625±0.5%	0.625±0.5%	V
K_N	匝数比 Turns ratio	1:960	1:1200	1:2000	1:2000	
V_C	电源电压 Supply voltage	+5 (±5%)				V
I_C	静态功耗 Static power consumption	$I_P=0$	<10			mA
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 3KV RMS /50Hz/1 min between primary and secondary side circuits				
ϵ_L	线性度 Linearity	<0.1				%FS
X	精度 precision	$T_A=25^\circ\text{C}$	±0.5			%
V_0	零点失调电压 Offset voltage	$I_{PN}=0$ $T_A=25^\circ\text{C}$	20±1%			mV
V_{OT}	失调电压温漂 Thermal drift of V_0	$I_P=0$ $T_A=-25\sim+85^\circ\text{C}$	<±0.5			mV/°C
T_R	响应时间 Response time	<1				μs
di/dt	跟随精度 Following accuracy	>50				A/μs
f	频带宽度(-1dB) Frequency Bandwidth (-3dB)	DC~200				kHz
T_A	工作环境温度 Ambient operating temperature	-40~+85				°C
T_S	贮存环境温度 Ambient storage temperature	-40~+125				°C
	标准 Standard	GI/FS0105				

外形尺寸(mm)/Dimensions of drawing(mm)



初级线匝 Primary turn	初级额定电流(A) Primary rated current (A)	输出电压(V) Output voltage (V)	初级阻值 (mΩ) Primary resistance (mΩ)	初级电感 (μH) Primary inductance (μH)	输入PIN连接 Enter PIN connection
1	±6(±15, ±25, ±50)	2.5±0.625	0.18	0.013	
2	±3(±7.5, ±12.5, ±25)	2.5±0.625	0.81	0.05	
3	±2(±5, ±8.3, ±16.6)	2.5±0.625	1.62	0.12	



该产品有两种接入方式 The product has two access methods

- 1-电缆线穿孔输入 Cable punch input
- 2-PCB 输入方式 PCB input mode

可以根据需要来选择适合的电流输入方式 The suitable current input mode can be selected according to the needs

1、对于电缆线电流输入方式，电缆线要穿过霍尔电流传感器的孔；以 FSM006NPT 为例，如果 电缆线穿孔是 1 匝时，额定电流是 6A，如果电缆线穿孔绕 2 匝或者 3 匝时，额定的电流就 为 3A 或者是 2A;如果按照此种输入方式进行时，请不要同时使用 PCB 输入方式；

For the cable current input mode, the cable should pass through the hole of the Hall current sensor; Taking FSM006NPT as an example, if the cable perforation is 1 turn, the rated current is 6A, if the cable perforation is 2 or 3 turns, the rated current is 3A or 2A; If this type of input is used, do not use PCB input at the same time;

2、对于 PCB 输入方式，根据输入 PIN 的连接方式来判定输入的匝数与额定的输入电流参数。输入 PIN 的连接方式有三种：分别是 1T, 2T, 3T;对应的输入额定电流为：6A, 3A, 2A; 使用此方式时不要同时使用穿孔输入方式；

For PCB input, the number of turns and rated input current parameters are determined according to the connection mode of the input PIN. There are three ways to enter the PIN: 1T,2T,3T; The corresponding input rated current is: 6A,3A,2A; When using this method, do not use the punch input method at the same time;

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