

FSM050NPTR 闭环系列霍尔电流传感器



FSM050NPTR 系列电流传感器提供直流、交流或脉冲电流的精确电子测量。该系列电流传感器的额定电流输入范围为 ± 6 至 $\pm 50\text{A}$ ，测量范围可达 $\pm 150\text{A}$ 。它的精度为 0.5%，尺寸非常小，非常可靠。可进行外观定制。

The FSM050NPTR series of current sensors provides accurate electronic measurement of DC, AC or pulsed currents. The current sensors are available in a rated current input range of ± 6 to $\pm 50\text{A}$ and a measurement range of $\pm 150\text{A}$. It has an accuracy of 0.5% and is very reliable due to its very small size. Appearance can be customized.

◆产品描述 /Product Description

产品特点	应用
● 高精度 High Accuracy ● 低温度漂移 Low Temperature variation ● 强抗干扰 High immunity to external interface	● 交流变频器 AC variable speed drives ● 直流电机中的静态转换器 DC motor driver ● 开关电源 (SMPS) Switched Mode Power Supplies ● 不间断电源 (UPS) Uninterruptible Power Supplies

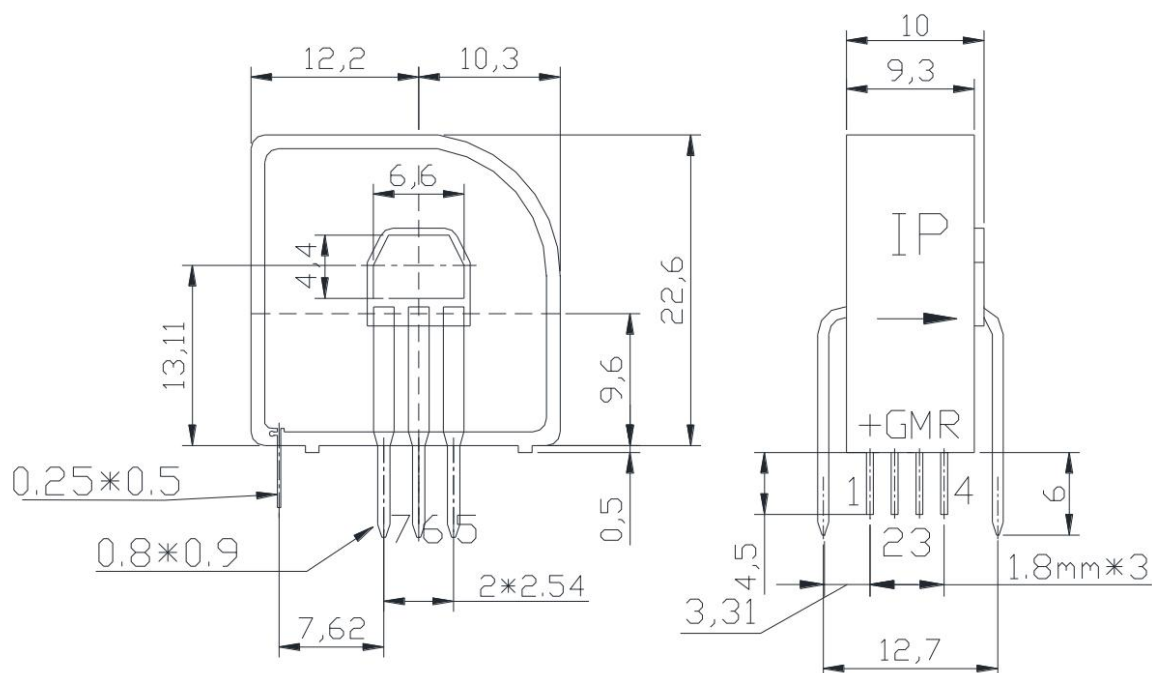
◆产品描述 /Product Description

电参数/Electrical characteristics						
	型号 Type	FSM006NPTR	FSM015NPTR	FSM025NPTR	FSM050NPTR	
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	$0 \sim \pm 18$	$0 \sim \pm 45$	$0 \sim \pm 75$	$0 \sim \pm 150$	A
R_M	取样电阻 Sampling resistance	$25 \pm 0.1\%$	$10 \pm 0.1\%$	$6 \pm 0.1\%$	$3 \pm 0.1\%$	Ω
V_{SN}	副边额定输出电压 Nominal output voltage	$0.625 \pm 0.5\%$	$0.625 \pm 0.5\%$	$0.625 \pm 0.5\%$	$0.625 \pm 0.5\%$	V
K_N	匝数比 Turns ratio	1:960	1:960	1:960	1:960	

V _c	电源电压 Supply voltage	+5 (±5%)	V
I _c	静态功耗 Static power consumption	I _p =0 <15	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
V _o	零点电压输出 Offset Output voltage	2.5±0.5%	V
V _o	参考电压输出 Reference voltage output	2.5±0.5%	V
R _M	Vref 内部电阻	200	Ω
V _o	Vref 内部范围	2.0~2.8	V
X	精度 precision	T _A =25℃ ±0.5	%
ε _L	线性度 Linearity	T=25℃ ±0.1	%
V _o	零点失调电压 Offset voltage	I _p =0 T _A =25℃ 20±1%	mV
V _{OT}	失调电压温漂 Thermal drift of V _o	I _p =0 T _A =-25~+85℃ <±0.5	mV/℃
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~150	kHz
T _A	工作环境温度 Ambient operating temperature	-40~+85	℃
T _S	贮存环境温度 Ambient storage temperature	-40~+125	℃

m	产品重量 Mass (approx)	≈10	g
	标准 Standard	GI/FS0105	

外形尺寸(mm)/Dimensions of drawing(mm)



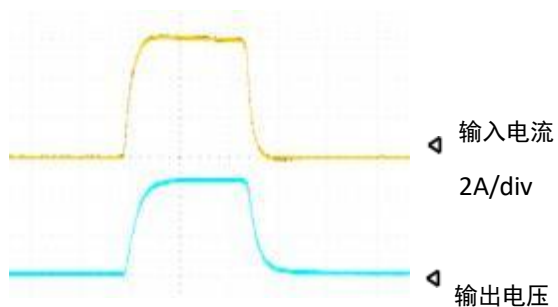
主要尺寸/Main dimensions

总公差 General tolerance:±0.5mm

电气特性图/ Electrical characteristic diagram

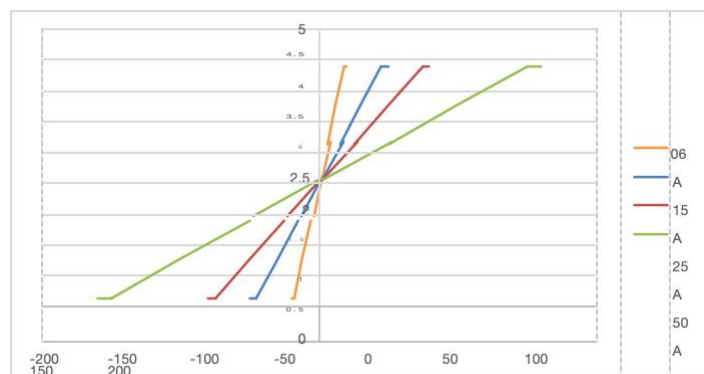
脉冲电流响应特性

Pulse current response characteristic



输入-输出特性

Input- output characteristic



联系电话: 021-50901305

使用说明/Remarks

1. 按照结构图中的电流箭头标定的方向接入电流，注意电流的正反向。/Please install according to the direction of the arrow in the structure diagram, and pay attention to the positive and reverse direction of current.
2. 按照结构图中标定的功能管脚定义来接线（注意：错误的接线可能导致传感器损坏）。/Please wire according to the definition of the functional pin illustrated in the structure diagram (Note: the inaccurate way of installation may cause damage to the sensor).
3. 初级导体的温度不应超过 100℃。/Temperature of the primary conductor should not exceed 100℃.
4. 上述的规格为标准规格，我司可根据客户要求定制产品。/This is a standard mode. We can provide the products according to your specifications.