

FSM025LPT 系列霍尔电流传感器

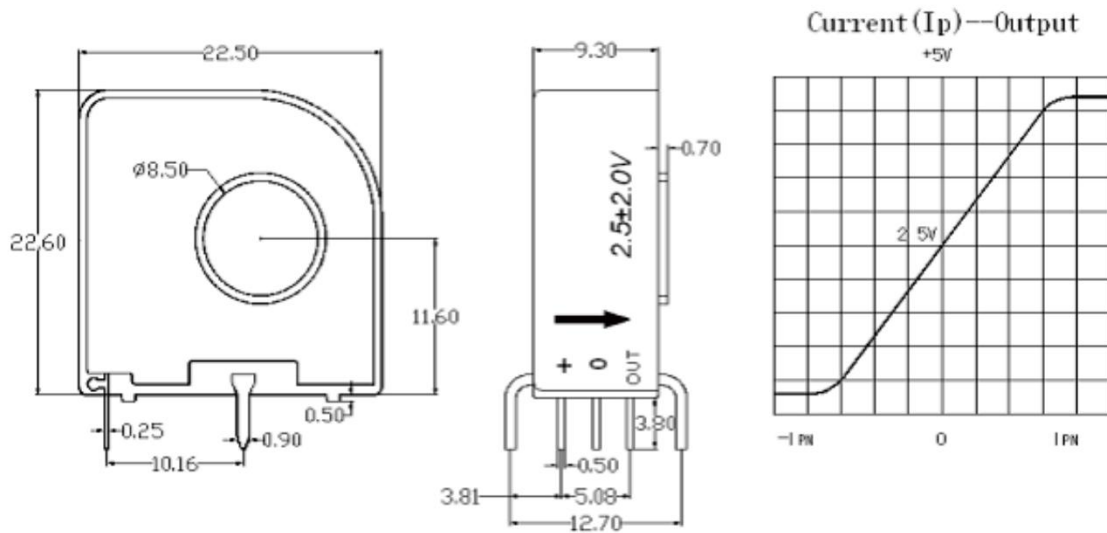
基于闭环磁平衡原理的一款霍尔电流传感器，能够测量直流，交流，脉冲以及 各种不规则电流等。传感器的输出能真实反映通电导体的真实波形。

A Hall current sensor based on the closed-loop magnetic balance principle can measure DC, AC, pulse and various irregular currents. The output of the sensor can truly reflect the real waveform of the energized conductor.



| 电参数/Electrical characteristics | | | | |
|--------------------------------|--|--|-----------------|----------------------|
| | 型号 Type | FSM020LPT | FSM025LPT | |
| I_{PN} | 原边额定输入电流 Primary nominal input current | 20 | 25 | A |
| I_P | 原边电流测量范围 Measuring range of primary current | 0~20 | 0~25 | A |
| R | 取样电阻 Sampling resistance | $50 \pm 0.1\%$ | $25 \pm 0.1\%$ | Ω |
| V_{OUT} | 副边额定输出电压 Nominal output voltage | 2.5 ± 2 | 2.5 ± 2 | V |
| K_N | 匝数比 Conversion ratio | 1000 | 625 | |
| 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 3KV RMS /50Hz/1 min between primary and secondary side circuits | | |
| ϵ_L | 线性度 Linearity | <0.1 | | %FS |
| V_0 | 零点偏移电压 Zero offset voltage | $I_P=0 \quad T_A=25^\circ\text{C}$ | $2.5 \pm 0.5\%$ | V |
| V_{OT} | 失调电压温漂 Thermal drift of V_0 | $I_P=0 \quad T_A=-25 \sim +85^\circ\text{C}$ | < ± 0.5 | mV/ $^\circ\text{C}$ |
| T_R | 响应时间 Response time | <1 | | us |
| di/dt | 跟随精度 Following accuracy | >50 | | A/us |
| f | 频带宽度 (-3dB) Frequency Bandwidth (-3dB) | DC~200 | | kHz |
| T_A | 工作环境温度 Ambient operating temperature | -40~+85 | | $^\circ\text{C}$ |
| T_S | 贮存环境温度 Ambient storage temperature | -40~+125 | | $^\circ\text{C}$ |
| | 标准 Standard | GI/FS0105 | | |

外形尺寸(mm)/Dimensions of drawing(mm)



外观管脚尺寸公差 Appearance pin size tolerance

- 总公差: $\pm 0.2\text{mm}$ /Total tolerance: $\pm 0.2\text{mm}$
- 固定管脚: $0.8 \times 0.9\text{mm}$ /Fixed pin: $0.8 \times 0.9\text{mm}$
- 功能管脚: 3pcs $0.25 \times 0.5\text{mm}$ /Functional pin : 3pcs $0.25 \times 0.5\text{mm}$
- 初级孔径: 直径 8.5mm /Primary aperture: 8.5mm diameter