

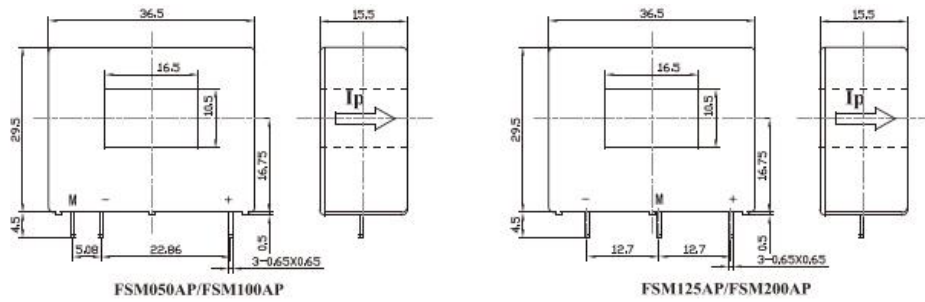
FSM200AP系列霍尔电流传感器



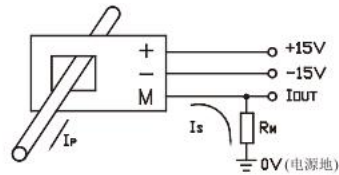
应用霍尔效应闭环原理的电流传感器，能在电隔离条件下测量直流、交流、脉冲以及各种不规则波形的电流。
Closed loop current sensor based on the principle of Hall-effect. It can be used for measuring AC, DC, pulsed and mixed current.

电参数/Electrical characteristics						
	型号 Type	FSM050AP	FSM100AP	FSM125AP	FSM200AP	
I_{PN}	原边额定输入电流 Primary nominal input current	50	100	125	200	A
I_P	原边电流测量范围 Measuring range of primary current	$0 \sim \pm 150$	$0 \sim \pm 300$	$0 \sim \pm 375$	$0 \sim \pm 600$	A
I_{SN}	副边额定输出电流 Secondary nominal output current	$50 \pm 0.5\%$	$50 \pm 0.5\%$	$125 \pm 0.5\%$	$100 \pm 0.5\%$	mA
K_N	匝数比 Conversion ratio	1:1000	1:2000	1:1000	1:2000	
R_M	测量电阻 ($V_C = \pm 18V/I_P$) Measuring resistance ($V_C = \pm 18V/I_P$)	$0 \sim 100$	$0 \sim 68$	$0 \sim 15$	$0 \sim 12$	Ω
V_C	电源电压 Supply voltage	$\pm 12 \sim \pm 18 (\pm 5\%)$				V
I_C	电流消耗 Current consumption	$V_C = \pm 18V$ $10 + I_S$				mA
V_d	绝缘电压 Insulation voltage	在原边与副边电路之间 $2.5kV$ 有效值/50Hz/1分钟				
ε_L	线性度 Linearity	< 0.1				%FS
X	精度 Accuracy	± 0.5				%
I_O	零点失调电流 Zero offset current	$T_A = 25^\circ C$ $< \pm 0.20$				mA
I_{OT}	失调电流温漂 Thermal drift of I_O	$I_P = 0$ $T_A = -25 \sim +85^\circ C$ $\leq \pm 0.005$				mA/C
T_r	响应时间 Response time	< 1				μs
f	频带宽度 (-3dB) Frequency bandwidth (-3dB)	DC ~ 200				kHz
T_A	工作环境温度 Ambient operating temperature	$-25 \sim +85$				$^\circ C$
T_S	贮存环境温度 Ambient storage temperature	$-40 \sim +100$				$^\circ C$
R_S	副边线圈内阻 ($T_A = 25^\circ C$) Secondary coil resistance ($T_A = 25^\circ C$)	30	45	30	45	Ω
	标准 Standard	GI/FS-0105				

外形尺寸 (mm)/Dimensions of drawing (mm)



外部接线图/Connection



使用说明/Remarks

- 错误的接线可能导致传感器损坏。传感器通电后，当被测电流从传感器箭头方向穿过，即可在输出端测得同相电流值。
Incorrect wiring may cause sensor damage. After the sensor is powered on, when the measured current passes through the arrow direction of the sensor, the in-phase current value can be measured at the output end.
- 当输入电流排完全充满原边穿孔时动态特性最佳 (di/dt 和响应时间)。
Dynamic performance is optimal (di/dt and response time) when the input current bar is fully filled with the primary perforation.
- 当测量小于 25A 的电流时，可以用多匝线圈，以便得到最好的精度，但考虑到散热问题，传感器的长期工作电流应小于额定输入电流 IPN。
When measuring currents less than 25A, multi-turn coils can be used in order to get the best accuracy, but considering the heat dissipation problem, the long-term working current of the sensor should be less than the rated input current IPN.