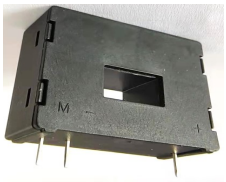
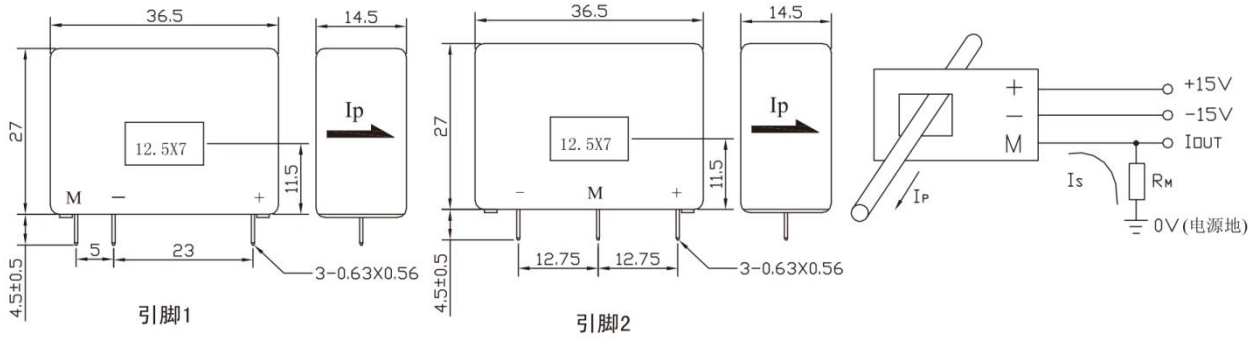
FSM100LA 系列霍尔电流传感器



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 Tpye	FSM050LA	FSM100LA	
I_{PN}	原边额定输入电流 Primary nominal input current	50	100	A
I_P	原边电流测量范围 Measuring range of primary current	0～±75	0～±150	A
I_{SN}	副边额定输出电流 Secondary nominal output current	50	50	mA
K_N	匝数比 Conversion ratio	1:1000	1:2000	
R_M	测量电阻(Vc=±15V) Measuring resistance(Vc=±15V)	I_P=±50A 时：50-160	I_P=±100A 时：0-110	Ω
	(Vc=±15V)	I_P=±75A 时：50-90	I_P =±150A 时：0-33	Ω
V_C	电源电压 Supply voltag	±12～±15(±5%)		V
I_C	电流消耗 Current consumption	Vc=±15V	10+Is	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 2.5KV RMS /50Hz/1 min between primary and secondary side circuits		
ε_L	线性度 Linearity	<0.2		%FS
X	精度 Accuracy	T_A=25℃ Vc=±15V	<±0.7	%
I_O	零点失调电流 Zero offset current	T_A=25℃	<±0.20	mA
I_{OM}	剩余电流 Residual current	I_P=0	<±0.15	mA
I_{OT}	失调电流温漂 Thermal driftof I0	I_P=0 T_A=-25～+85℃	<±0.5	mA
Tr	响应时间 Response time	<1		μs
f	频带宽度(-1dB) Frequency bandwidth(-1dB)	DC～100		kHz
T_A	工作环境温度 Ambient operating temperature	-25～+85		℃
T_S	贮存环境温度 Ambient storagetemperature	-40～+100		℃
R_S	副边线圈内阻(T_A=25℃) Secondary coil resistance(T_A=25℃)	35	120	Ω
	标准 Standard	GI/FS-0105		

外形尺寸(mm)和外部接线图/Dimensions of drawing(mm) and Connection



使用说明/Remarks

1、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 connection may lead to the damage of the sensor.ISN is positive when the IP flows in the direction of the arrow.

2、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 (di/dt and response time)are best with a primary bar in the center of the through-hole.

3、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。

When measuring currents less than 25A, multi-turn coils can be used in order to obtain 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.