

FSM100LRCG 型高精度电流传感器



应用磁通门原理的电流传感器，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。具有超高的精度及线性度，超高的灵敏度及分辨率，极低的失调电流及温度漂移。广泛应用于仪器仪表，医疗设备，计量及校准，实验室，高精度电源，新能源汽车等。

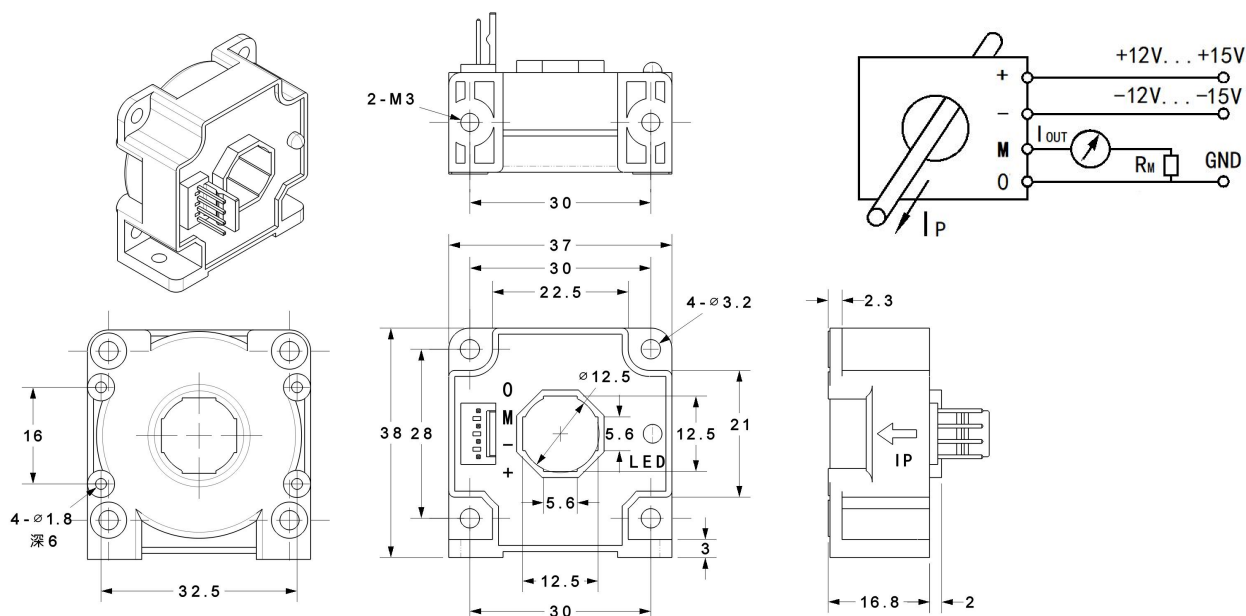
The current sensor using fluxgate principle can measure DC, AC, pulse and various irregular waveforms of current under the condition of electrical isolation. With high accuracy and linearity, high sensitivity and resolution, very low imbalance current and temperature drift. Widely used in instrumentation, medical equipment, measurement and calibration, laboratory, high-precision power supply, new energy vehicles and so on.

电参数/Electrical characteristics				
	型号 Type	FSM100LRCG		
I_{PN}	原边额定输入电流 Primary nominal input current	100		A
I_P	原边电流测量范围 Measuring range of primary	$0 \sim \pm 240$ ($\pm 15V$, $R_M=0-32 \Omega$)		A
I_{OUT}	副边额定输出电流 Nominal output current	100		mA
K_N	匝数比 Conversion ratio	1:1000		
R_M	测量电阻 (额定输入电流时) Measuring resistance	$V_c=\pm 12V$ 0-79	$V_c=\pm 15V$ 0-109	Ω
V_c	电源电压 Supply voltage	$\pm 12 \sim \pm 15$ ($\pm 5\%$)		V
I_c	电流消耗 Current consumption	$\pm 15+I_{OUT}$		mA
V_d	绝缘电压 Isolation voltage	在原边与副边电路之间 3kV 有效值/50Hz/1 分钟		
X	精度 Accuracy	<0.05		%
ε_L	线性度 Linearity	<0.02		%FS
I_0	零点失调电流 Offset current	$<\pm 10$		μA
I_{OT}	失调电流温漂 ($T_A=-40 \sim +85^\circ C$) Offset current temperature drift	$<\pm 10$		μA
di/dt	跟随精度 Follow accuracy	>100		A/ μs

T_r	响应时间 Response time	<1	μs
f	频带宽度(-3dB) Frequency bandwidth(-3dB)	DC~100	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~+100	°C
R_s	副边线圈内阻 ($T_A=25^{\circ}C$) Internal resistance of secondary coil	15	Ω
m	质量 (约) Quality(approx)	38	g

外形尺寸(mm)/Dimensions of drawing(mm)

外部接线图 External wiring diagram



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压值。

Incorrect wiring may cause damage to the sensor. After the sensor is powered on, when the measured current passes through the arrow direction of the sensor, the in-phase voltage value can be measured at the output end.

2、传感器的输出幅度可根据用户需求进行适当的调节。

The output amplitude of the sensor can be adjusted according to the user's needs.

3、可按用户需求定制不同额定输入电流和输出电压的传感器。

Sensors with different rated input current and output voltage can be customized according to user requirements.

