FSM3000LTF 系列高精度霍尔闭环电流传感器

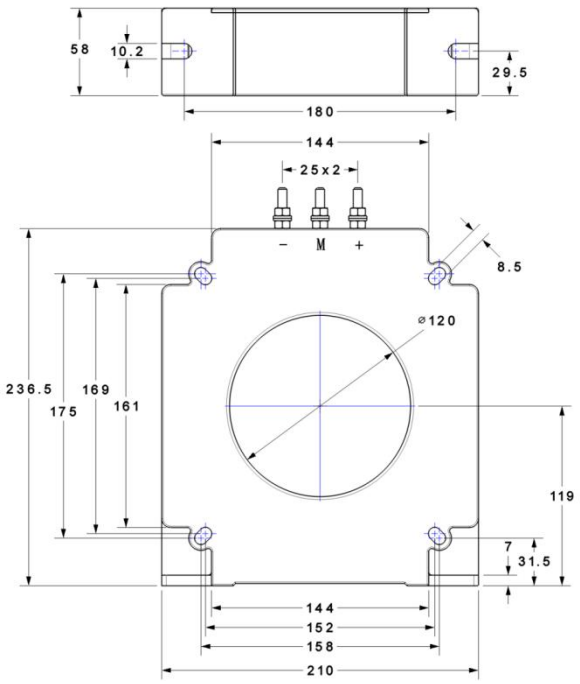
应用霍尔效应闭环原理的电流传感器，能在电隔离条件下测量直流、交流、脉冲以及各种不规则波形的电流。
The current sensor using the Hall effect closed-loop principle can measure DC, AC, pulse and various irregular wave forms of current under the condition of electrical isolation.

电参数/Electrical characteristics

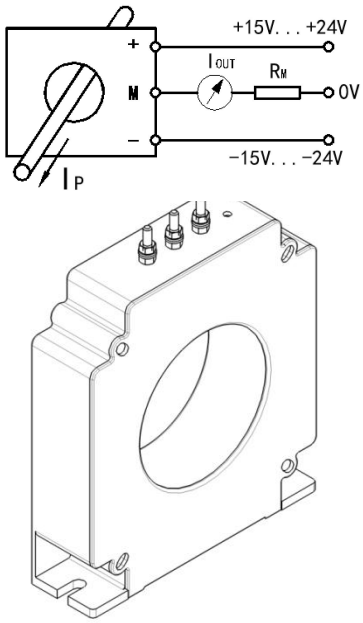
	型号 Type	FSM1000LTF	FSM2000LTF	FSM3000LTF	
I_{PN}	原边额定输入电流 Primary nominal input current	1000	2000	3000	A
I_P	原边电流测量范围 Measuring range of primary current	0～±1500	0～±3000	0～±4500	A
I_{OUT}	副边额定输出电流 Nominal output current	200	400	600	mA
K_N	匝数比 Conversion ratio	1:5000			
R_M	测量电阻 (V_C=±15V) Measuring resistance	I_P=±1000 0-52	I_P=±2000 0-16	I_P=±3000 0-5	Ω
	(V_C=±15V)	I_P=±1500 0-28	I_P=±3000 0-5	I_P=±4500 ---	Ω
	(V_C=±24V)	I_P=±1000 0-97	I_P=±2000 0-39	I_P=±3000 0-20	Ω
	(V_C=±24V)	I_P=±1500 0-58	I_P=±3000 0-20	I_P=±4500 0-7	Ω
V_C	电源电压 Supply voltage	±15～±24(±5%)			V
I_C	电流消耗 Current consumption	V_C=±24V	28+I_{OUT}		mA
V_d	绝缘电压 Isolation voltage	在原边与副边电路之间 6kV 有效值/50Hz/1 分钟			
X	精度 Accuracy	T_A=25°C	±0.3		%
ε_L	线性度 Linearity	<0.1			%FS
I_O	零点失调电流 Offset current	T_A=25°C	<±0.2		mA

I_{OT}	失调电流温漂 Offset current temperature drift	I_P=0 T_A=−45～+85℃	<±0.01	mA/℃
Tr	响应时间 Response time	90%I_{PN}	<1	μs
di/dt	跟随精度 Follow accuracy		>100	A/μs
f	频带宽度(-1dB) Frequency bandwidth(-1dB)		DC～100	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	℃
R_S	副边线圈内阻(T_A=25℃) Internal resistance of secondary coil		18	Ω
m	重量（约） Weight(approx)		3400	g
	标准 Standard		GI/FS-0105	

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.