FSM200EIG 精度电流传感器

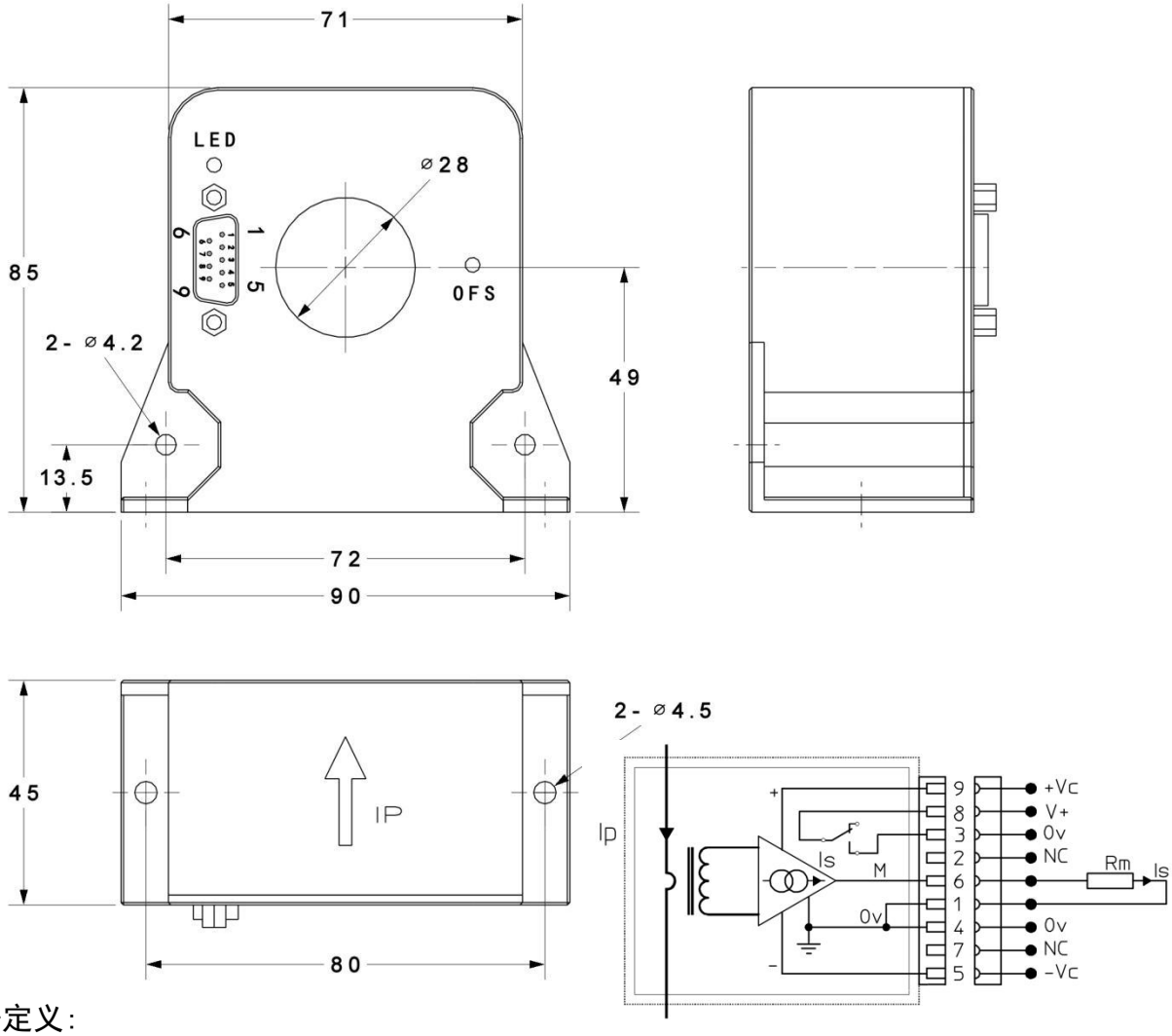
应用磁通门原理的电流传感器，能在电隔离条件下测量直流、交流、脉冲以及各种不规则波形的电流。具有超高的精度及线性度，超高的灵敏度及分辨率，极低的失调电流及温度漂移。广泛应用于仪器仪表，医疗设备，计量及校准，实验室，高精度电源，新能源汽车等。

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 instruments.Table, medical equipment, measurement and calibration, laboratory, high-precision power supply, new energy vehicles, etc.

电参数/Electrical characteristics				
	型号 Type	FSM200EIG		
I_{PN}	原边额定输入电流 Primary nominal input	200		A
I_P	原边电流测量范围 Measuring range of primary current primary current	0～±300		A
I_{SN}	副边额定输出电流 Nominal output current	200		mA
K_N	匝数比 Conversion ratio	1:1000		-
R_M	测量电阻(T_A=25℃) Measuring resistance	V_C=±12V I_P=±200	0-12	Ω
		V_C=±15V I_P=±200	0-25	Ω
V_C	电源电压 Supply voltage	±12～±15(±5%)		V
I_C	电流消耗 Current consumption	V_C=±15V	30+Is	mA
X	精度 Accuracy	T_A=25℃	±0.01	%
ε_L	线性度 Linearity	<0.005		%
TT	时间稳定性 Time stability	0.2		ppm/month
TV	供电抗干扰 Power supply interference	1		ppm/V
I_O	零点失调电流 Offset current	T_A =25℃	<±0.1	uA

I_{OT}	失调电流温漂 Offset current temperature drift	I_P=0 T_A=-25～+70℃	<±10	uA
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(-3dB) Frequency bandwidth(-3dB)		DC～300	kHz
-	输出有效 Output Valid		LED 亮+低电平信号（Max 2mA）	-
一般参数 General parameter				
T_A	工作环境温度 Ambient operating temperature		-25～+70	℃
T_S	贮存环境温度 Ambient storage temperature		-25～+85	℃
-	外壳材料 Shell material		金属（表面黑色绝缘氧化）	-
m	质量（约） Quality(approx)		400	g
安全特性 Security feature				
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	-
V_W	瞬态隔离耐压 Transient isolation withstand voltage		在原边与副边电路之间 5kV 有效值/50Hz/50μs	-
CTI	相比漏电起痕指数 Compared to the creepage index		600	V

外形尺寸/Dimensions of drawing(mm)



端子定义:

引脚	1、3 、4	2、7	5	6	8	9
定义	0V	NC	-Vc	Is	有效指示端	+Vc

指示灯和指示信号说明：Indicator light and indication signal description:

在正常工作情况下，有效指示灯处于常亮状态。如果指示灯熄灭，说明电流传感器处于非零磁通状态，如母线电流超过量程等。此时，传感器内部进入扫描状态，输出电流不再与输入电流信号等比例，一旦母线电流回落到量程之内，传感器即恢复正常工作。有效指示信号与指示灯是同一信号驱动的，它为 OD 门输出形式，有效时输出对应为低电平。

Under normal operating conditions, the effective indicator is steady on. If the indicator light is off, it indicates that the current sensor is in a non-zero flux state, such as the bus current exceeds the range. At this time, the sensor enters the scanning state, the output current is no longer proportional to the input current signal, once the bus current falls back to the range, the sensor will resume normal work. The effective indicator signal and the indicator light are driven by the same signal, which is the OD gate output form, and the output corresponds to a low level when it is effective.

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.