

FSM300E 系列霍尔电流传感器

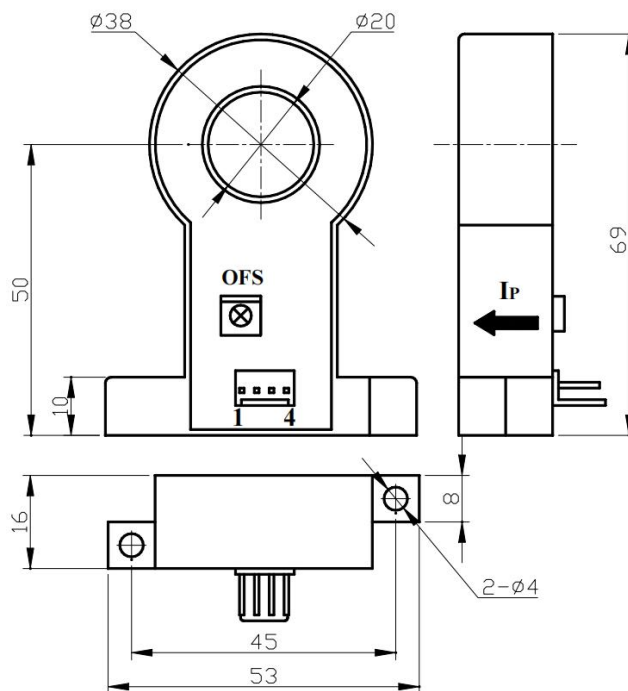


应用霍尔效应闭环原理的电流传感器，能在电隔离条件下测量直流、交流、脉冲以及各种不规则波形的电流。

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	FSM030E	FSM100E	FSM200E	FSM300E	
IPN	原边额定输入电流 Primary nominal input current	30	100	200	300	A
IP	原边电流测量范围 Measuring range of primary current	0~±45	0~±150	0~±300	0~±350	A
ION	副边额定输出电流 Rated output current of secondary side	30	100	100	150	mA
KN	匝数比/Turns ratio	1:1000	1:1000	1:2000	1:2000	
RM	测量电阻(额定输入电流时) Built-in measuring resistance	0-200	0-200	0-80	0-50	Ω
VC	电源电压 Supply voltage	(±12~±15V) (±8%)				V
IC	电流消耗 Current consumption	VC=±15V 10+Is				mA
Vd	绝缘电压 Insulation voltage	在原边与副边电路之间 3kV 有效值/50Hz/1 分钟 3kV RMS /50Hz/1 min between primary and secondary side circuits				
ε	线性度 Linearity	<0.1				%FS
X	精度 Precision	TA =25°C ±0.5				%
IO	零点失调电流 Zero offset current	TA =25°C <±0.20				mA
OM	磁失调电流 Magnetic offset current	Ip→0 <±0.30				mA
OT	失调电流温漂 Offset current temperature drift	Ip=0 TA=-25~+85°C <±0.5				mA
Tr	响应时间 Response time	<1				μs
f	频带宽度(-3dB) Frequency bandwidth(-3dB)	DC~100				kHz
TA	工作环境温度 Ambient operating temperature	-40~+85				°C
TS	贮存环境温度 Ambient storage temperature	-40~+100				°C
RS	副边线圈内阻(TA=25°C) Internal resistance of secondary coil	12.5	12.5	27.5	27.5	Ω
m	质量 Quality (approx.)	43				g
	标准 Standard	GI/FS-0105				

外形尺寸 (mm) / Dimensions of drawing(mm)



引脚说明: 1, +15V 2, -15V 3, I_{OUT} 4, NC OFS, 零点调节

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 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 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)。
the best dynamic characteristics (di/dt and response time) when the input current bar is completely full of the primary side perforation.
- 测量电阻是指工作电源在 $\pm 15V$, 测量直流电流时。若测量交流电流时, 测量电阻降低到 70%。
the measurement resistance refers to the working power supply at $\pm 15V$, measuring DC current. If the AC current is measured, the measurement resistance is reduced to 70%.
- 工作电源在 $\pm 12V$, 测量直流电流时, 测量电阻降低到 75%。若测量交流电流时, 测量电阻再降低到 70%。
the working power supply is $\pm 12V$, the measurement resistance is reduced to 75% when the DC current is measured. If the AC current is measured, the measurement resistance is reduced to 70%.