

FSM1005LFS 系列霍尔电流传感器

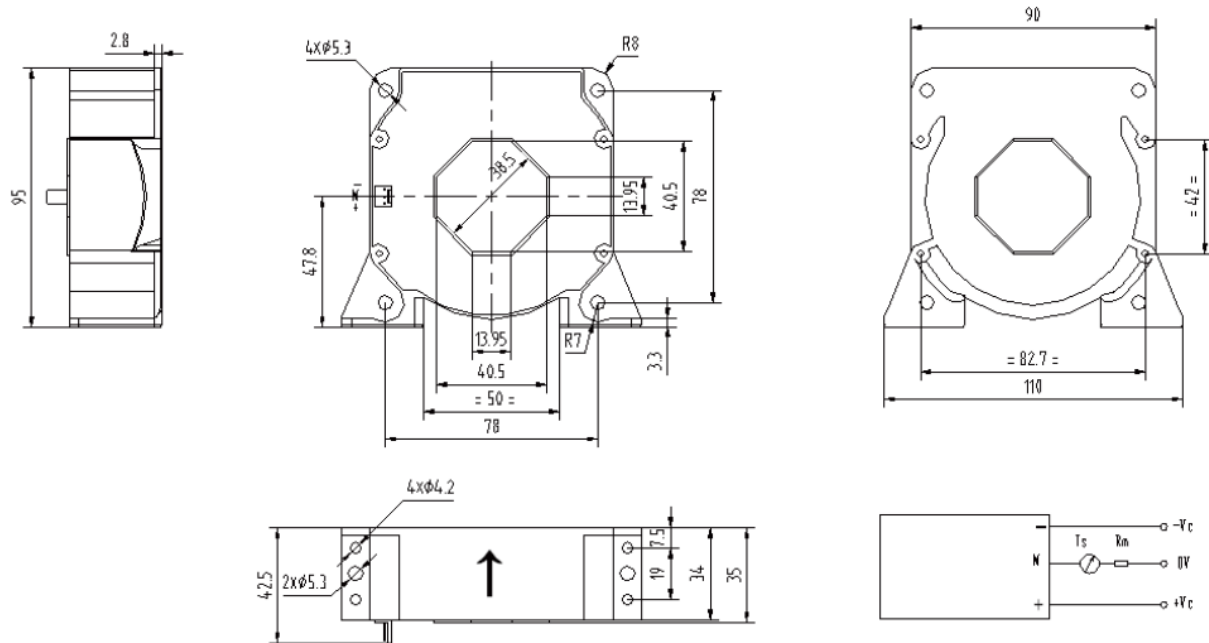


基于闭环磁平衡原理的一款霍尔电流传感器，能够测量直流，交流，脉冲以及各种不规则电流。该款传感器是电流输出模式的，可以根据客户的需求外接电阻转换为电压信号。

A Hall current sensor based on the closed-loop magnetic balance principle can measure DC, AC, pulse and various irregular currents. The sensor is in current output mode and can be converted into voltage signal by external resistance according to customer demand.

FSM1005LFS			
电参数/Electrical characteristics			
额定电流IPN(A) Rated current		1000A	
测量范围IP(A) Measuring range		0~±1500A	
测量电阻RM(Ω) Measuring resistance	±15V	@2000Amax 5.0	@2000Amax5.0
		@2500Amax 1.0	@2500Amax 2.0
	±24V	@2000Amax 25	@2000Amax 25
		@3800Amax1.0	@4000Amax 5.0
线匝比 Turn ratio	1:5000		
额定输出电流ISN(mA) Rated output current	200±0.2%		
次级线圈内阻(Ω) Internal resistance of secondary coil	40 Ω		
电源电压Vc(±5%) Supply voltage	±15V~±24V		
隔离电压 Isolation voltage	50Hz, 1min, 3.8kV		
电流损耗Ic(mA) Current loss	28+Is		
精度XG @IPN,T=25°C Precision	±0.2%		
零点失调电流Io @IP=0,T=25°C Zero offset current	≤±0.2mA		
零点电流温漂 @-40°C~+85°C Zero current temperature drift	≤±0.5mA		
线性度 εr Linearity	<0.1%FS		
di/dt跟随精度 di/dt Following accuracy	>100A/μs		
响应时间 tr Response time	<1μs		
带宽(-3db) Bandwidth	DC~150kHz		
工作温度 Operating temperature	-40~+85°C		
储存温度 Storage temperature	-40~+125°C		

外形尺寸(mm)/Dimensions of drawing(mm)



主要公差/Main tolerances:

- 总公差/Total common error: $\pm 0.5\text{mm}$
- 安装/Install:

垂直位置/Vertical position	4 holes $\phi 4.2\text{mm}$ 和 2 holes $\phi 5.3\text{mm}$
水平位置/Horizontal position	4 holes $\phi 5.3\text{mm}$
- 初级孔径/Primary aperture: $40.5\text{mm} \times 38.5\text{mm}$

使用方法:

1. 在IP 按箭头方向流动时, IS是正向;
IS is positive when IP flows in the arrow direction.
2. 初级导体温度不应超过 100°C ;
Primary conductor temperature should not exceed 100°C ;
3. 母排完全充满初级穿孔时动态表现 (di/dt 和响应时间)为最佳;
The dynamic performance (di/dt and response time) is the best when the busbar is fully filled with primary perforations;
4. 为了达到最佳的磁耦合, 初级线匝应绕在传感器顶部;
In order to achieve the best magnetic coupling, the primary turns should be wound around the top of the sensor;
5. 可以根据客户的要求来定制产品。
Products can be customized according to customer requirements.