



# THE DATASHEET OF FSV025A



## FSV025A 型霍尔电压传感器



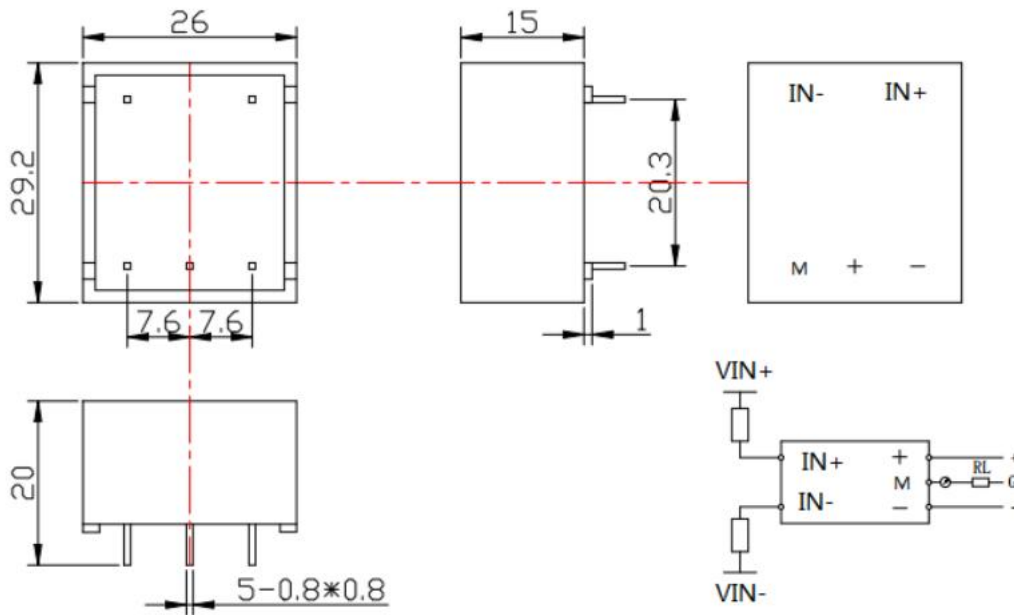
应用霍尔效应开环原理的电流传感器，能在电隔离条件下测量直流、交流、脉冲以及各种不规则波形的电流。

Open loop current sensor based on the principle of Hall-effect It can be used for measuring AC,DC,pulsed and mixed current

电参数/Electrical characteristics					
	型号 Type	FSV025A			
$I_{PN}$	原边额定输入电流 Primary nominal input current	10		mA	
$I_p$	原边电流测量范围 Measuring range of primary current	0~±15		mA	
$I_{sN}$	副边额定输出电流 Secondary nominal output current	25		mA	
$K_N$	匝数比 Conversion ratio	2500:1000			
$R_M$	测量电阻( $V_c=\pm 12V$ ) Measuring resistance( $V_C=\pm 12V$ )	$I_p=\pm 10mA$ 时:	30~350	$I_p=\pm 15mA$ 时: 30~235	$\Omega$
		$I_p=\pm 10mA$ 时:	100~460	$I_p=\pm 15mA$ 时: 100~315	$\Omega$
$V_e$	电源电压 Supply voltage	$\pm 12 \sim \pm 15 (\pm 5\%)$		V	
$I_c$	电流消耗 Current consumption	$V_c=\pm 15V$	10+ $I_s$	mA	
$V_a$	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			
$\delta_L$	线性度 Linearity	<0.1		%FS	
X	精度 Accuracy	$T_A=25^\circ C$ $V_c=\pm 15V$	$\pm 0.5$	%FS	
$I_o$	失调电流 Zero offset current	$T_A=25^\circ C$	< $\pm 0.15$	mA	
$I_{oT}$	失调电流温漂 Thermal drift of $I_o$	$I_p=0$ $T_A=-25 \sim +85^\circ C$	< $\pm 0.35$	mA	
$T_r$	响应时间 Response time	90% of VPN	$\leq 40$	$\mu s$	
$T_A$	工作环境温度 Ambient operating temperature	-25~+85		$^\circ C$	
$T_s$	贮存环境温度 Ambient storage temperature	-40~+100		$^\circ C$	

$R_p$	原边线圈内阻 Primary coil resistance	$T_A=25^{\circ}\text{C}$	190	$\Omega$
$R_s$	副边线圈内阻 Secondary coil resistance	$T_A=85^{\circ}\text{C}$	55	$\Omega$
	标准 Standard	GI/FS-0105		

外形尺寸(mm)/Dimensions of drawing(mm)



备注：所有尺寸单位 mm，通用公差±1mm。

使用说明/Remarks

1、测量电压时， $R_i$  电阻串联在传感器原边回路上，为使传感器达到最佳精度，尽量选择  $R_i$  的大小使输入电流为 10mA 左右。

When measuring the voltage,  $R_i$  resistance is connected in series on the original side circuit of the sensor, in order to achieve the best accuracy of the sensor, try to choose the size of  $R_i$  so that the input current is about 10mA.

2、工作范围：考虑到初级线圈内阻(与  $R_i$  相比,为保持温差尽可能低)和隔离,此传感器适用于测量 10~500V 电压。为确保测量电阻的稳定性,  $R_i$  的功率为额定功率的 4 倍以上(一般在 10W 以上)。

Working range: Considering the internal resistance of the primary coil (compared with  $R_i$ , to keep the temperature difference as low as possible) and isolation, this sensor is suitable for measuring 10~500V voltage. To ensure the stability of the measurement resistance, the power of the  $R_i$  is more than 4 times the rated power (generally more than 10W).

3、当传感器焊接到线路板上时,需用低温烙铁,焊接时间尽量短,否则将有可能造成管脚内部连线开路。

When the sensor is welded to the circuit board, it is necessary to use a low-temperature soldering iron, and the welding time is as short as possible, otherwise it may cause an open circuit inside the pin.

4、电路板上安装传感器的插孔位置必须与管脚尺寸完全吻合,不可人为挤压管脚,否则也由可能造成管脚内部连线开路。

The jack position of the sensor installed on the circuit board must be completely consistent with the size of the pin, and the pin cannot be artificially squeezed, otherwise it may also cause the opening of the internal wire of the pin.

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