



# THE DATASHEET OF FS-DKT5



## FS\*\*\*DKT5 新能源电动汽车传感器



应用霍尔效应原理研制的开环电流传感器，能在原边与副边电隔离条件下 测量直流、交流、脉冲以及各种不规则波形的电流。

Based on the measuring principle of the Hall Effect, the current of DC, AC, pulsed or various irregular waveforms can be measured under the condition of a galvanic isolation between primary and secondary circuit.

### 电气特性/Electrical Characteristics

型号 Type	额定测量电流 I <sub>PN</sub> Rated input current		测量范围I <sub>PM</sub> Measuring current range	
	CH1	CH2	CH1	CH2
FS20DKT5/600	20	600	20	600
FS20DKT5/500	20	500	20	500
FS30DKT5/150	30	-350/150	30	-350/150
FS30DKT5/350	30	350	30	350
FS60DKT5/600	60	600	60	600
FS75DKT5/500	75	500	75	500

注：额定测量电流可根据客户需求定制

V <sub>CC</sub>	电源电压 Supply voltage	@DC	+5V ±5%	V
I <sub>CC</sub>	电流消耗 Current consumption	@I <sub>PN</sub>	<15	mA
R <sub>IS</sub>	绝缘阻抗 Galvanic isolation	@500V DC	>1000	MΩ
V <sub>OUT</sub>	额定输出电压 Rated output voltage	@R <sub>L</sub> =4.7K/25 °C	1/2V <sub>CC</sub> ±2	V
R <sub>OUT</sub>	输出电阻 Output internaresistance		9	Ω
R <sub>L</sub>	负载电阻 Load resistance		≥4.7	KΩ

### 动态特性/Dynamic Characteristics

X <sub>G</sub>	精度 Accuracy	@I <sub>PN</sub> , T=25°C	<±1	%
ε <sub>L</sub>	线性度 Linearity	@I <sub>PN</sub> , T=25°C	<±0.5	%
V <sub>OE</sub>	零点失调电压 V <sub>OE</sub> Zero offset voltage	@I <sub>p</sub> =0, T=25 °C	1/2V <sub>CC</sub> ±0.01	V
V <sub>OM</sub>	磁滞电压 Magnetic offset voltage	@I <sub>PN</sub> →0, T=25°C	≤±10	mV
TCV <sub>OE</sub>	偏移电压温漂 V <sub>OE</sub> Temperature variation of V <sub>OE</sub>	@-40°C~125°C	≤±0.5	mV/°C
TCV <sub>OUT</sub>	输出电压温漂 Temperature variation of V <sub>OUT</sub>	@-40°C~125°C	≤±0.5	mV/°C
di/dt	电流跟随速度 accurately followed		>100	A/us
T <sub>r</sub>	响应时间 Response time	@90%I <sub>PN</sub>	<5	us
BW	工作频宽 -3dB CL=1nF 25°C Bandwidth		DC~120	KHz

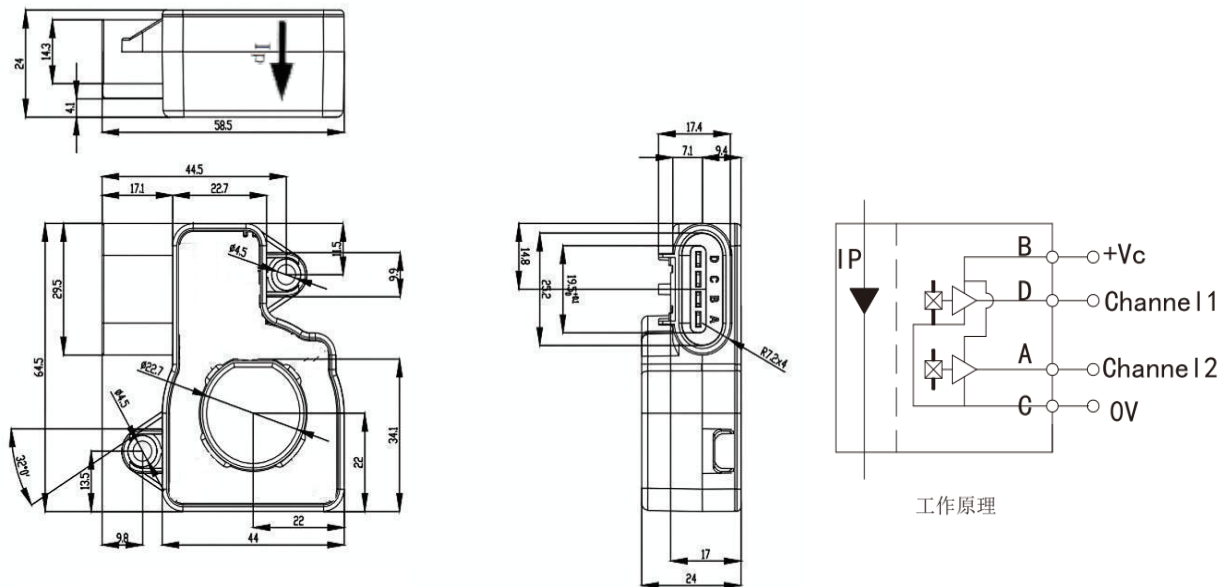
### 一般特性/General characteristics

T <sub>A</sub>	工作温度 Operating temperature		-40~+125	°C
T <sub>S</sub>	储存温度 Storage temperature		-45~+125	°C
m	产品重量 Mass (approx)		≈100	g

### 隔离特性/Insulation coordination

V <sub>d</sub>	绝缘电压 Galvanic isolation	@50HZ, 1min	3.0	KV
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结构图/Structure diagram



主要尺寸/Main dimensions

总公差 General tolerance  $\pm 0.3\text{mm}$

穿孔尺寸 Primary through-hole:  $\phi 22.5\text{mm}$

使用说明/Directions for use

- 按照结构图中的电流箭头标定的方向接入电流，注意电流的正反向。

Please install according to the direction of the arrow in the structure diagram, and pay attention to the positive and reverse direction of current.

- 按照结构图中标定的功能管脚定义来接线(注意：错误的接线可能导致传感器损坏)。

Please wire according to the definition of the functional pin illustrated in the structure diagram (Note: the inaccurate way of installation may cause damage to the sensor).

- 初级导体的温度不应超过 $100^{\circ}\text{C}$ 。

Temperature of the primary conductor should not exceed  $100^{\circ}\text{C}$ .

- 上述的规格为标准规格，我司可根据客户要求定制产品。

This is a standard mode. We can provide the products according to your specifications.

电气特性图/ Electrical characteristic diagram

脉冲电流响应特性 Pulse current response characteristic



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