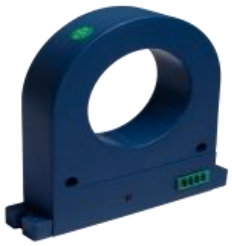
数字漏电流传感器 Digital DC Leakage Current Sensor



KLD55ZTD12S-10mA/RS485

本产品是采用磁通门技术，用于检测直流系统漏电流的数字传感器。测量方式为穿孔式，无插入损耗，孔径为φ80mm ， RS485 总线输出。

This product is a digital sensor using fluxgate technology for detecting the leakage current of DC system. Measurement mode is perforated, no insertion loss, aperture is φ80mm, RS485 bus output.

产品特点 **Product characteristics**	应用 **Application**
● 12V 单电源供电 12V single power supply ● 额定电流测量范围±10mA Rated current measuring range ±10mA ● 工作温度范围 ：-40℃∽+85℃ Working temperature range: -40 ° C ∽+85 ° C ● 输出信号：RS485 9600bps Modbus-RTU 协议 Output signal: RS485 9600bps Modbus-RTU protocol ● 原副边隔离测量 Primary secondary side isolation measurement ● 连接器类型：EDGV-3.81*4P Connector type: EDGV-3.81*4P	● 电池管理系统(SOC, SOH, SOF 等)的漏电流测量 Leakage current measurement for battery management systems (SOC,SOH,SOF, etc.)

绝对最大额定值 Absolute maximum ratings

参数 Parameter	符号 Symbol	单位 Unit	值 Value	测试条件 Test condition
冲击电压 Impulse voltage	V_C	V	15	400ms
过电压 Overvoltage	V_C	V	14	1min
负向耐压 Negative pressure resistance	V_C	V	-14	1min
爬电距离 Creepage distance	dcp	mm	50	
电气间隙 Electrical clearance	dci	mm	53	
绝缘电压 Insulation voltage	V_d	kV	3	@50HZ, AC, RMS, 2mA, 1min

环境和机械特性 Environmental and mechanical characteristics

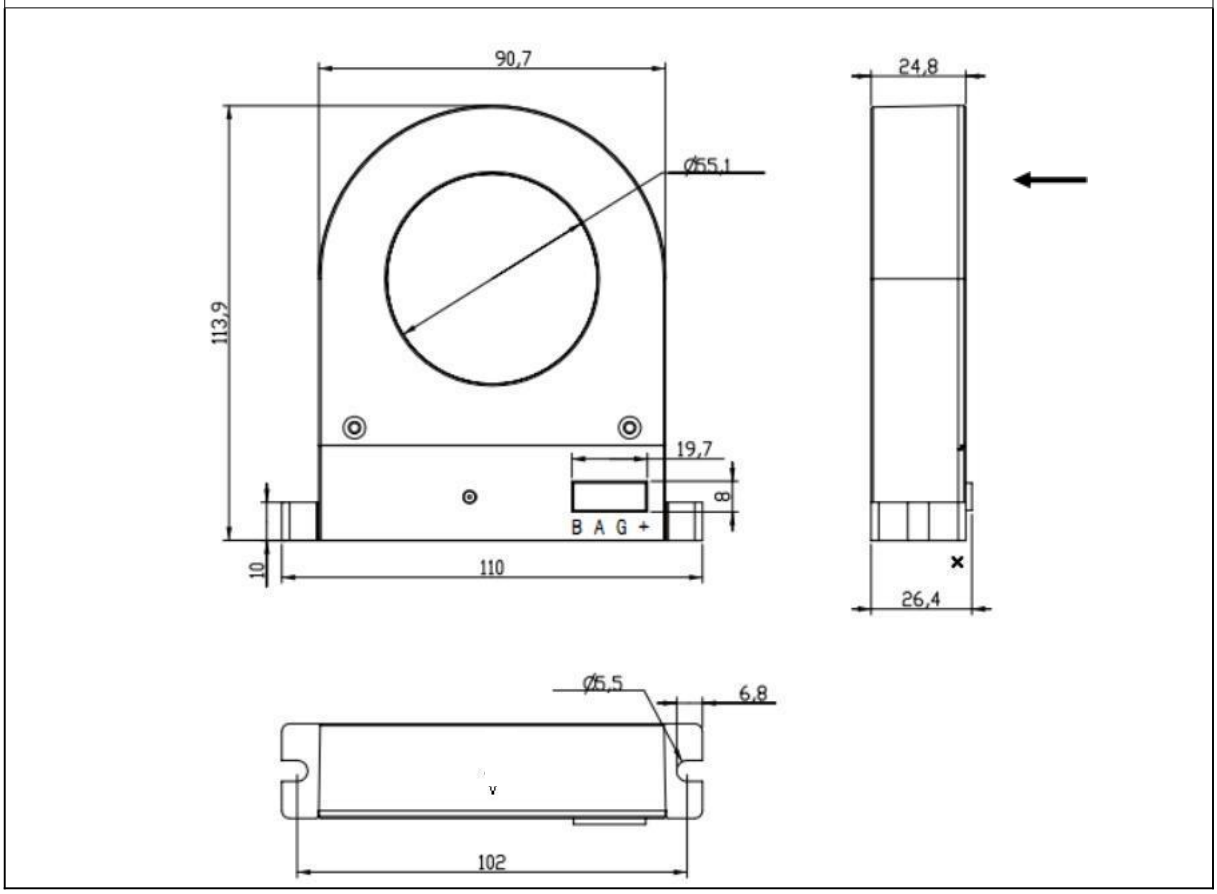
参数 Parameter	**标志 Symbol**	**单位 Unit**	**最小值 Minimum value**	**典型值 Typical value**	**最大值 Maximum value**	**备注 Remark**
工作温度 Working temperature	T_A	℃	-40		85	
存储温度 Storage temperature	TS	℃	-40		85	
质量 Quality	m	g		160		
外壳材质 Shell material	UL94 V-0					

电气参数 Electricadata(Ta =25℃ ±5℃， Vc =12V)

Electrical parameter

参数 Parameter	**标志 Symbol**	**单位 Unit**	**最小值 Minimum value**	**典型值 Typical value**	**最大值 Maximum value**	**测试条件 Test condition**
额定输入电流 Nominal input current	I_{pn}	mA	-10	_	10	_
供电电源电压 Supply voltage	V_C	V	8	12	13.5	_
电源消耗电流 Power supply consumption current	I_C	mA	_	25	30	
线性度误差 Linearity error	ε	%FS	-1	_	1	
准确度误差 Accuracy error	X	%FS	-2	±1	2	
温漂 Temperature drift	TC	ppm/℃		500		

结构参数 Dimensions(in mm)



备注：所有尺寸单位 mm，通用公差±1mm
Remark: All dimensions in mm, general tolerance ±1mm

使用说明 Remarks

1.当待测电流从传感器穿过，即可通过 RS485 获取当前被测电流数据。
2.可按用户需求定制不同额定输入电流和输出形式的传感器。
3.错误的接线可能导致传感器损坏。
4.本产品为弱电流传感器，内置精密磁性材料作为磁感应部件，容易受到振动和外界强磁场的干扰。建议用户使 用时，轻拿轻放，禁止摔碰。同时评估使用环境的干扰磁场强度。

1. When the current to be measured passes through the sensor, you can obtain the current measured through the RS485 port.
2. Sensors with different rated input current and output voltage can be customized according to user needs.
3. Incorrect cable connections may damage the sensor.
4. This product is a weak current sensor with built-in precision magnetic material as a magnetic induction component, which is easy to be disturbed by vibration and external strong magnetic field. It is recommended that users use it gently, and do not fall. At the same time, the interference magnetic field strength of the use environment is assessed.

安装注意事项 Installation influence

为保障传感器输出精度，在设计传感器装配环境时请参考以下示例：

To ensure the sensor output accuracy, please refer to the following example when designing the sensor assembly environment:

a(mm)*		
推荐距离 Recommended distance	精度接近极限 Accuracy approaching limit	不推荐 Not recommend
> 120	60-120	<60

*备注 ：由于应用现场环境复杂示例不能涵盖所有应用条件。 请在应用前测试通过最大电流时对传感器精度的影响量。

Note: Due to the complex application environment, the example cannot cover all application conditions. Test the amount of impact on sensor accuracy when passing the maximum current before application.