

数字漏电流传感 器

Digital DC Leakage Current Sensor

KLD33KZ1D12S 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 $\phi 60\text{mm}$ 。RS485 输出。

This product is a digital sensor using fluxgate technology for detecting the leakage current of DC system. The measurement method is perforated, no insertion loss, and the aperture is $\phi 60\text{mm}$. RS485 output.

产品特点 Product characteristics	应用 Application
12V 单电源供电 12V single power supply - 电流测量范围可达$\pm 20\text{mA}$ - Current measurement range up to $\pm 20\text{mA}$ - 工作温度范围: $-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$ - Working temperature range: $-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$ Mosbus-RTU 协议, RS485 输出 9600bps	- 微电流检测 - Microcurrent detection - 直流电源系统漏电流在线监测 Dc power system leakage current on-line monitoring

Mosbus-RTU protocol, RS485 output 9600bps

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	18	400ms
过电压 Overvoltage	V_c	V	13.3	1min
负向耐压 Negative pressure resistance	V_c	V	-13.3	1min
爬电距离 Creepage distance	dcp	mm	25	
电气间隙 Electrical clearance	dci	mm	20	
绝缘电压 Insulation voltage	V_d	kV	3	@50HZ, AC, RMS, 2mA, 1min

电气参数 Electric data ($T_a = 25^\circ\text{C} \pm 5^\circ\text{C}$, $V_c = 12\text{V}$)

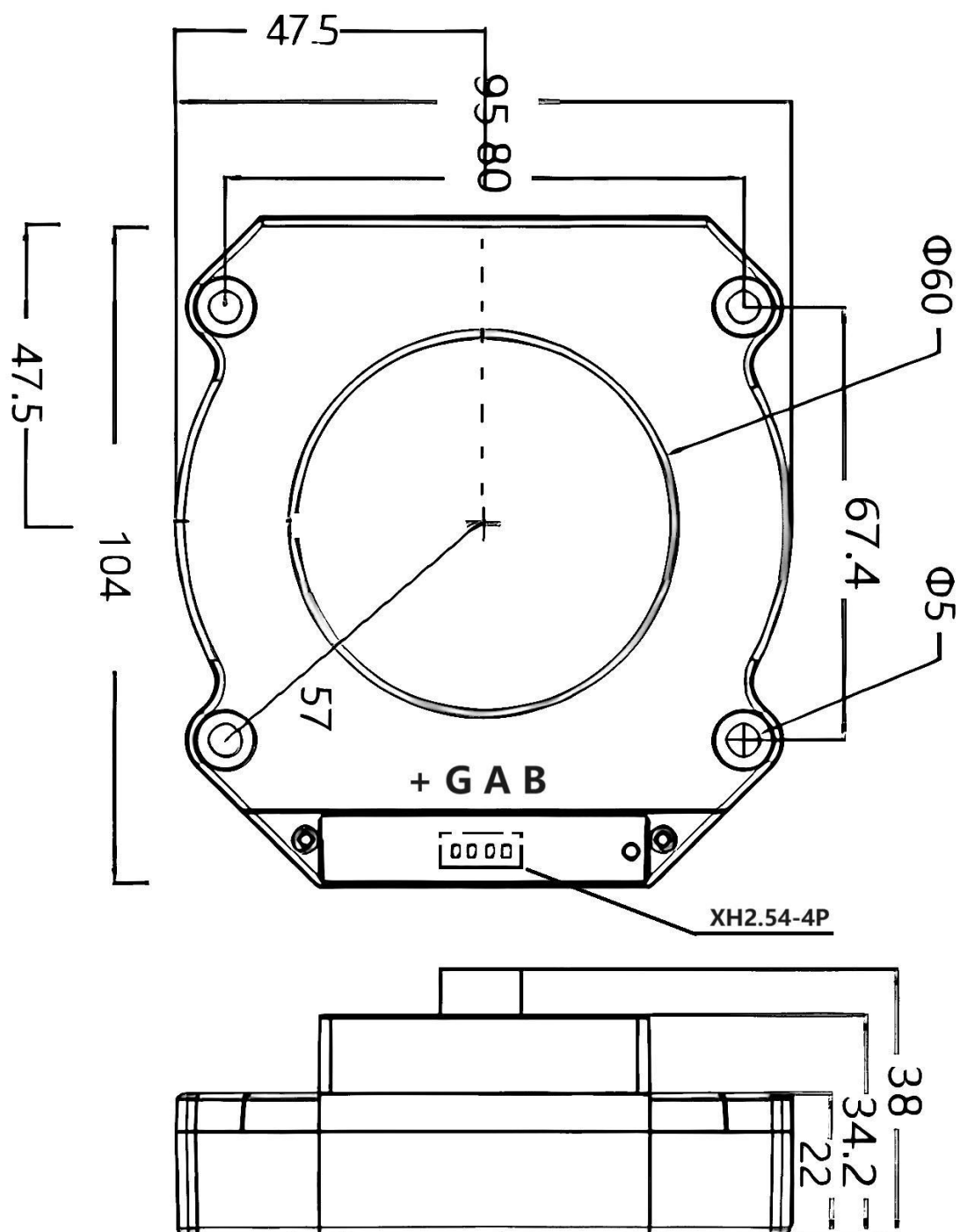
Electrical parameter

参数 Parameter	符号 Symbol	单位 Unit	最小值 Minimum value	典型值 Typical value	最大值 Maximum value	测试条件 Text condition
额定输入电流 Nominal input current	I_{pn}	mA	-10	—	10	—
测量电流范围 Measuring current range	I_{pm}	mA	-20	—	20	—
供电电源电压 Supply voltage	V_c	V	10.8	12	13.2	—
电源消耗电流 Power supply consumption current	I_c	mA	—	26	35	—
准确度误差 Accuracy error	X	%FS	-1	—	1	@ I_{pn}
线性度误差 Linearity error	ε	%FS	-1	—	1	@ I_{pn}
失调电流 Offset current	I_{oe}	uA	-100	—	100	@ $I_p = 0$
温漂 Temperature drift	TC	ppm	—	300	—	@ $I_p = 0$, $T_A = -25 \sim 85^\circ\text{C}$

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	$^\circ\text{C}$	-25	—	85	—
存储温度 Storage temperature	T_S	$^\circ\text{C}$	-25	—	85	—
质量 Quality	m	g	—	170	—	—
外壳材质 Shell material	UL94 V-0					

Environmental and mechanical characteristics

结构参数 Dimensions



备注：所

有尺寸单位 mm，通用公差 $\pm 1\text{mm}$

Remark: All dimensions in mm, general tolerance $\pm 1\text{mm}$

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。
2. 可按用户需求定制不同额定输入电流和输出电压的传感器。
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，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.