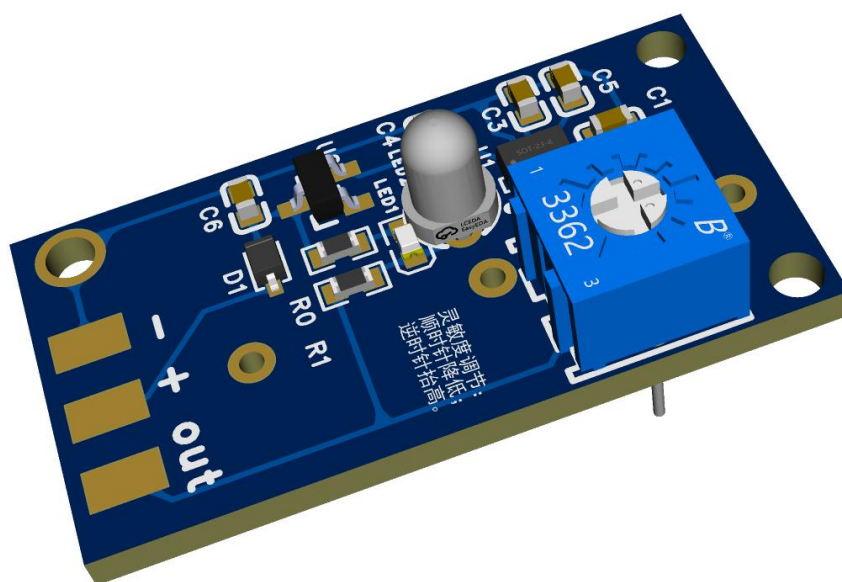


AX01G-KXHX

Liquid Level Sensor Instructions



版本/Version: V1.0

日期/Date: 2025/05/30

■ 修订记录 / Revision History

NO.	日期/Data	修订记录/Revision record	版本/Version
1.	2025.05.30	初版/first edition	V1.0

注：我司会根据客人使用反馈对传感器进行适度优化，无法对已经用开客人一一说明，如对外观或功能有特殊要求，请提前向我司报备。
Note: We may make appropriate optimizations to the sensor based on customer feedback during usage. However, we are unable to notify each existing customer individually. If you have specific requirements regarding appearance or functionality, please inform us in advance.

■ 电气参数特性/ Electrical Specification (Ta=25°C)

特性/Specification	符号/Symbol	条件	最小值/Min	典型值	最大值/Max	单位
工作电压/Working voltage	Vdd		5.0V	---	50.0V	V
电流损耗/Current loss	IDD	VDD=5V/有水/Water state	---	3.5	---	mA
		VDD=5V/无水/Anhydrous state	---	0.7	---	mA
		VDD=50V/有水/Water state	---	5	---	mA
		VDD=50V/无水/Anhydrous state	---	0.7	---	mA
上电初始化时间/Power on initialization time	Tini	---	---	120	---	ms
响应时间/Response time	rt		---	24	---	ms
信号输出/signal output	Vout1	有水/Water state	---	0.15	---	v
	Vout2	无水/Anhydrous state	---	4.5	---	v

■ 选型,命名解读/ Model Selection and Naming Guide

AX01	G/T/Q	K/ Without K	H/L/xHx/xLx	Txx
01 代表单点式检测	G:代表弹簧套管式, 适用于软管管壁检测; T:代表贴壁式, 适用于平面非金属容器壁; Q:检测感应面可自定义, 兼容弹簧/曲面/平面	K:灵敏度可调款式 不带 K:灵敏度不可调款	H:支持高压供电, DC 支持宽压 5.0V-50V L:不支持高压供电, DC 3.0V-5V xHx: 主要针对弹簧套管式款, L/H 还是代表供电电压, 前面的 x 代表被检测导管外径, 后面的 X 代表被检测导管内径。	Txx: 一般针对弹簧款, 代表弹簧的长度
01: single-point detection	G: spring sleeve type, suitable for hose wall detection; T: wall-mounted type, suitable for flat non-metal container walls; Q: detection sensing surface customizable, compatible with spring/curved/flat surfaces	K: adjustable sensitivity model Without K: non-adjustable sensitivity model	H: supports high-voltage power, DC 5.0V-50V L: no high-voltage support, DC 3.0V-5V xHx: for spring sleeve type; L/H means power voltage; First x = outer diameter of tube last x = inner diameter of tube	Txx: the spring length (generally for spring type)

■ 灵敏度调节方法/Sensitivity adjustment method:

顺时针旋转，传感器灵敏度降低，逆时针旋转，传感器灵敏度升高。

Clockwise rotation reduces sensor sensitivity, while counterclockwise rotation increases sensor sensitivity.

注明：此功能针对可调版本/This feature is designed for adjustable versions

1. 偏灵法：从最灵敏处稍微往不灵敏处回拨；

Toward Sensitive Method: Slightly adjust from the most sensitive point toward the less sensitive side.

2. 居中法：测最灵敏和不灵敏的点，然后后拨居中；

Centering Method: Measure the most sensitive and least sensitive points, then adjust to the midpoint.

3. 偏不灵法：从最不灵敏处稍微往最灵敏回拨。

Toward Less Sensitive Method: Slightly adjust from the least sensitive point toward the most sensitive side.

■ 灵敏度影响因素/Factors Affecting Sensitivity

1. 管道直径：建议应用于外径 6-12mm 管径，管径越大，检测效果越好；（低于 6mm 建议用接触式，高于 12mm 可以用贴壁式）

Pipe diameter: Recommended for outer diameter 6-12mm; larger diameter improves detection. (Below 6mm, use contact type; above 12mm, use wall-mounted type)

2. 管壁厚度：建议控制 1.5mm 内，越厚需要灵敏度越高，抗干扰能力更差；

Pipe wall thickness: Should be within 1.5mm; thicker walls require higher sensitivity and have poorer interference resistance.

3. 水质影响：TDS 值越高越容易被检查，自来水比纯净水更加好检测，油类比纯净水检测效果更差；

Water quality: Higher TDS values make detection easier; tap water is easier to detect than purified water; oils are harder to detect than purified water.

4. 温度影响：理论上温度抬高，水分子活性增加，灵敏度会增加；

Temperature: Higher temperature increases water molecule activity, improving sensitivity.

5. 外部环境影响：靠近金属体灵敏影响会比较大，有附近有导线尽量做好收集；外壳太过于靠近，也可能抬高灵敏度，建议控制间隔在 10mm 以上。

External environment: Sensitivity is affected near metal objects; keep wiring organized; casing too close may increase sensitivity—recommend spacing over 10mm.

6. 安装感应面尽量紧贴被检查液体外壁，中间不要留缝隙；弹簧款套管款式尽量选择对应外径的弹簧。

Installation: Sensor surface should closely contact the liquid container wall without gaps; for spring/sleeve types, choose springs matching the outer diameter.

■ 使用注意事项/Precautions for use:

1. 由于传感器没有加装外壳，适用于安装于有外箱体的机器内部使用。使用过程尽量保证传感器应用环境干燥和干净；
Since the sensor has no outer casing, it is suitable for installation inside machines with external enclosures. Keep the sensor's environment dry and clean during use.
2. 安装位置尽量空旷，如果旁边有金属体，如引线，应该将金属体进行固定；
Install the sensor in an open area; if metal objects like wires are nearby, secure them firmly.
3. 传感器尽量固定安装，防止移动靠近其他金属体导致误触；
Fix the sensor firmly to prevent movement that could cause false triggers near other metal objects.
4. 传感器如果应用于潮湿环境，建议进行防水处理，如加装外壳等（外壳不宜直接紧密包裹传感器，预留至少 5mm 的缝隙，特别是靠近弹簧处）；
For humid environments, waterproof the sensor by adding a casing (do not wrap it tightly; leave at least 5mm gap, especially near the spring).
5. 灵敏调试，尽量要上整机调试。在外面调试好再安装，容易导致环境引起的灵敏偏差，整机一般灵敏会抬升一些。
Perform sensitivity tuning on the complete machine. Adjusting sensitivity before installation may cause environment-related deviations; sensitivity usually increases when installed in the full system.
6. 根据应用环境的要求，选择合适的调试方法，具体参照灵敏度调节方法；如果应用涉及到纯净水和自来水，建议以纯净水来调试依据。
Choose the tuning method based on the application environment, referring to sensitivity adjustment methods. For applications involving purified and tap water, calibrate using purified water as reference.

■ 其他说明/Other Notes

1. 传感器可以加装连接线，引线长度/端子类别/线序等可以根据客人要求来订做，有起订量要求，单价重新核算；
Sensors can be equipped with connecting wires; wire length, terminal type, and wiring sequence can be customized per customer requirements, with minimum order quantities and price recalculation.
2. 传感器功能可以根据客人要求进行修改，有起订量要求，单价重新核算；
Sensor functions can be modified according to customer requests, subject to minimum order quantities and price recalculation.
3. 传感器不同的生产批次，可能会对传感器功能/线路/外观等进行优化，我司无法一一通知到应用端，如已做了认证或者其他原因对此有要求，请提前报备我司业务；
Different production batches may include optimizations to sensor functions, circuitry, or appearance. We cannot notify customers individually; if certifications or other requirements exist, please inform our sales team in advance.
4. 传感器应用如涉及人生命财产安全或者可能存在造成巨大损失的场景，建议做好多层保护，防止传感器因为某种特殊原因导致失效带来损失，我司不承担因此带来的附加损失。
For applications involving personal safety or significant potential losses, multiple layers of protection are recommended to prevent sensor failure causing damage. Our company is not responsible for any additional losses resulting from such failures.