

## OLC-D1-B 光电式液位监视器



OLC-D1-B 光电式油位监视器是非接触式的液位监测器，此监控功能的实现是通过安装在所需测量位置的液位测量棱镜组件(玻璃头)以及可拆卸式光电探测装置(电子头)共同完成。

无需从被测设备拆卸油位测量棱镜组件，便可自由更换其探测装置，因此不会影响系统的密封性。

油位监视器在接通供电电压约3秒钟后启动，继电器吸合。在低液位时，LED 亮红橙色，继电器延迟5S后断开，LED 亮红色；当液位在正常区域时，LED 灯熄灭，继电器延迟5S后重新接通，LED 亮绿色。

### LED 灯颜色代码

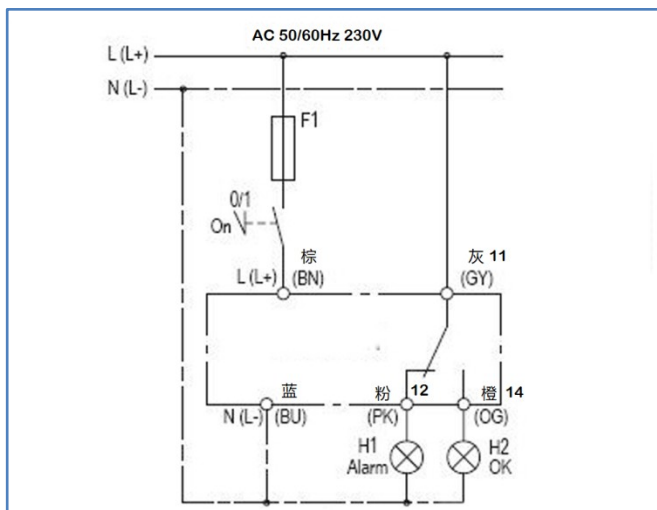
**红色闪烁 (10 Hz): 未与监测棱镜正确装配或者内部错误**

**红色:** 液位低-继电器断开

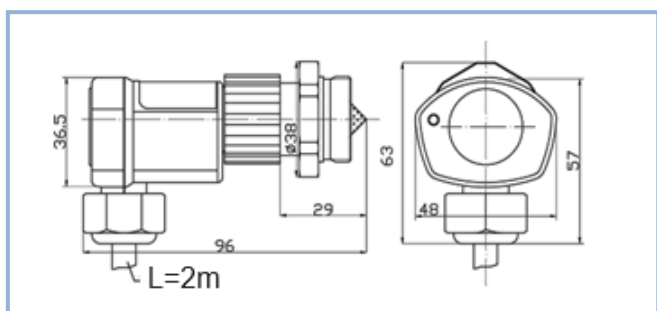
**绿色:** 液位正常-继电器吸合

**橙色:** 液位低-继电器延时断开

安装时保证玻璃头的密封，1/2" NPT 玻璃头宜用液体黄胶作为螺纹密封胶，拧入力矩不大于 75N.M，过大的力矩玻璃头容易碎裂，24 小时螺纹密封胶完全固化后，投入使用承压。电子头安装前须检查该监视器（尤其是玻璃）的清洁度，并在电子头上套上 O 型圈向玻璃头压紧并同时旋合，保证与棱镜精密旋合。电缆接口朝下，依接线图进行电气连接。



线路参考图



尺寸图 mm

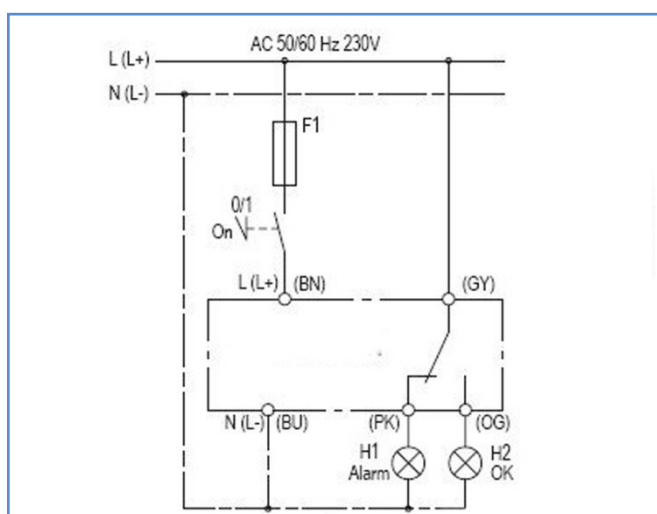
### 特征

- 具有未连接光学棱镜保护、不受光线直射影响、液位检测防抖动延时处理
- 旋入式光学棱镜可承受-55°C~125°C的液体（见技术参数栏）
- 选配隔沫罩后，不对泡沫敏感（隔沫罩只能与 118XP 光学棱镜相配）

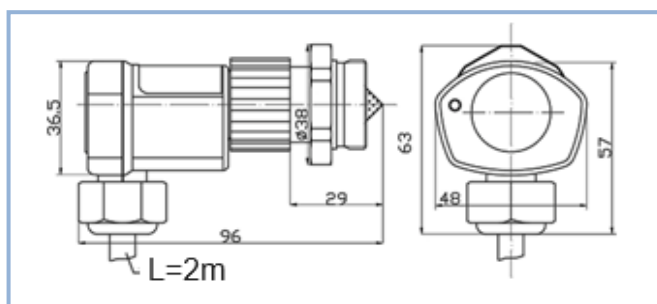
### 技术参数

旋入式光学棱镜(玻璃头)	
118XP 光学棱镜	连接螺纹: 1-1/8UNFE-18-2A
运行压力(接液温度)	0 ...140bar(-10...+125°C)
(可选配隔沫罩)	-1...105bar (-55...-10°C)
118A 光学棱镜	连接螺纹: 1-1/8UNFE-18-2A
运行压力(接液温度)	-1 ...60bar(-40...+125°C)
M20A 光学棱镜	连接螺纹: M20x1.5
运行压力(接液温度)	-1 ...60bar(-40...+125°C)
1/2NPT 光学棱镜	连接螺纹: 1/2"-14 NPT
运行压力(接液温度)	-1 ...60bar(-40...+125°C)
光电探测装置(电子头)	
供电电压	AC 230V -15%...+10% 3VA
环境温度	-30...+70°C
环境湿度	20%...90% (不得凝露与结霜)
延时:	
上电继电器延时吸合	3s±1s
低液位时继电器断开	5s±2s, 橙色/红色 LED 亮
液位正常继电器吸合	5s±2s, 绿色 LED 亮
输出继电器	Max,AC 240V 2.5A C300 Min,AC/DC>24V>20mA
机械寿命	约 1 百万次(开关循环)
连接线	5 芯电缆, AWG18#-0.5mm <sup>2</sup> L 长度=2m
保护等级(EN 60529)	IP54 (连接棱镜)
安装	螺纹连接
重量	约 220g

## OLC-D1-B Optical Level monitoring



Wiring diagram



Dimensions in mm

### Characteristics

- With unconnected optical prism protection, not affected by direct light, level detection anti-jitter delay processing.
- Screw-in optical prism can withstand- 55 °C ~ 125 °C liquid (See Technical parameters).
- It is not sensitive to foam when equipped with the foam isolation cap (118XP optical prism only).

The OLC-D1 optical level monitoring (sensor) is used for contactless monitoring of the liquid level. This is accomplished by a screw-in unit installed at the measuring point for optical level scanning as well as an electronic, removable evaluation unit. The evaluation unit can be replaced without opening the reservoir of the monitored media. The relay trips 3 seconds after connecting the supply voltage. If no level is detected, the red-orange LED illuminates, after a delay the relay switches off after a delay and the red LED is ON. If the level reaches the good range, the relay picks up again after a delay and the green LED is ON. The own monitoring system of the optics integrated into the OLC-D1 ensures increased operational reliability. An installation check monitors the proper assembly. If there is a fault, the relay switches off after a delay, the red LED illuminates.

### A built-in LED signals the current status(see flash code)

- Redflashing: Internal error
- Red LED On: Level missing
- Green LED On: Level good, no error
- Orange LED On: Low level for delay

### Installation instructions

**Mounting:** The installer must ensure seal tightness for the specific application. The maximum tightening torque is approx. 75Nm. Clean the inside of the screw-in part as well as the prism. Fit the electrical part in the screw-in part and tighten the coupling ring (torque approx. 10Nm). Pay attention to the position of the lead (cable exit downwards). Complete the electrical wiring in accordance with the attached circuit suggestions. After filling the tank, check the tightness of all joints.



The unit must be connected by trained electrical personnel.

### Technical specifications

#### Screw-in unit

<b>118XP</b> Operating P/at the liquid temp. (Foam shield is optional)	Connecting thread: 1-1/8UNFE-18-2A 0 ...140bar / -10...+125°C -1...105bar / -55...-10°C
<b>118A</b> Operating P/at the liquid temp.	Connecting thread): 1-1/8UNFE-18-2A -1 ...60bar / -40...+125°C
<b>M20A</b> Operating P/at the liquid temp.	Connecting thread: M20x1.5 -1 ...60bar / -40...+125°C
<b>1/2NPT</b> Operating P/at the liquid temp.	Connecting thread: 1/2"-14 NPT -1 ...60bar / -40...+125°C
<b>Weight</b>	Approx.110g

#### Evaluation unit

Supply voltage	AC 230V -15%...+10% 3VA
Permitted ambient temp.	-30...+70°C
Relative humidity	Max. 95%RH non-condensing. Circuit board is coated
Delay:	
-Relay On after the supply voltage is ON	3s±1s
-Relay off(level missing)	5s±2s, Orange/Red LED On
-Relay On(level good)	5s±2s, Green LED On
Output relay	Max,AC 240V 2.5A, C300 Min,AC/DC > 24V > 20mA
Mechanical service life	Approx.1millionswitching cycles
Connection type	Cable 5xAWG-18(0.75mm <sup>2</sup> ), L=2m, coloure coded
Protection class acc. To EN60529	IP54 in mounted condition
Mounting	Union nut
Weight	Approx. 220g