

NPN/PNP

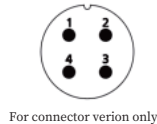
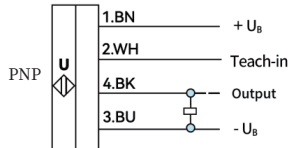
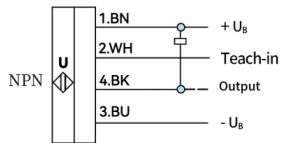


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Precautions

- Please do not supply voltages other than the normal operating voltage to avoid burnout of the proximity switch.
- Please avoid pulling on the lead wires to prevent damage to the electrical connections of the proximity switch.
- Do not cover the surface of the sensor probe to avoid affecting the detection range of the sensor.
- Please use the supplied mounting nut to secure the sensor in place and avoid using other non-standard clamping devices to ensure good sensitivity.
- Strong mechanical vibration should be avoided when the sensor is used, and the working environment should not have strong electromagnetic interference and rapid air circulation.
- Please do not disassemble the sensor without permission. If the sensor does not work properly, please contact the after-sales service in time to solve. The company will not bear all the consequences caused by the disassembly without permission.

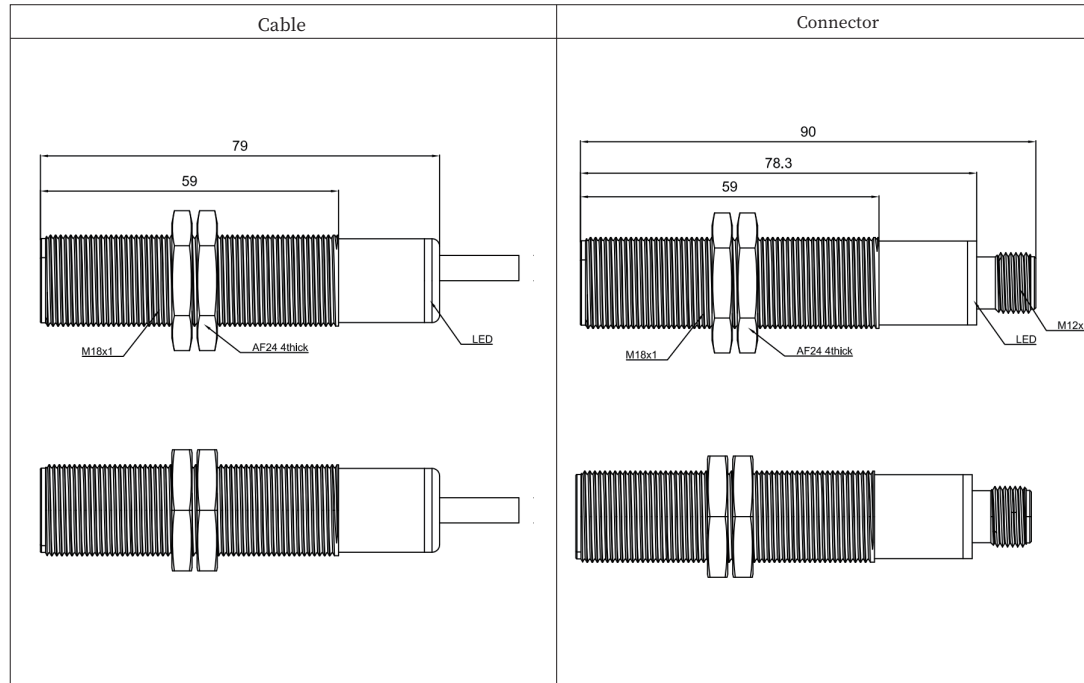
Wiring diagram



Technical specifications

Model	NPN	UR18-CM1DNB	UR18-CM1DNB-E2
	PNP	UR18-CM1DPB	UR18-CM1DPB-E2
Sensing range	60-1000mm		
Blind area	0-60mm		
Resolution ratio	0.5mm		
Repeat accuracy	±0.15% of full scale value		
Absolute accuracy	±1% (temperature drift compensation)		
Response time	100ms		
Switch hysteresis	2mm		
Switching frequency	10Hz		
Power on delay	<500ms		
Working voltage	15...30VDC		
No-load current	≤25mA		
Input type	With teach-in function		
Output indication	Red LED: No target detected in teach-in state, always on Yellow LED: In normal working mode, the switch status Blue LED: Target detected in teach-in state, flashing Green LED: Power indicator light, always on		
Ambient temperature	-25°C...70°C (248-343K)		
Storage temperature	-40°C...85°C (233-358K)		
Output characteristics	Support serial port upgrade and change the output type		
Material	Copper nickel plating, glass bead filled epoxy resin		
Protection degree	IP67		
Connection	2m PVC cable		4 pin M12 connector

Dimensions



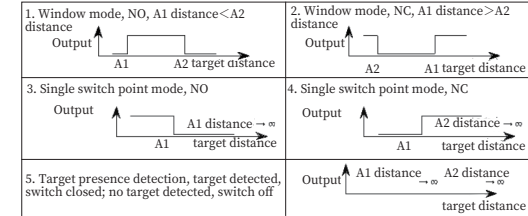
Set the detection range

Factory setting: default window mode, A1=60mm; A2=1000mm

A1: Target distance from near to far, through the A1 point, the switch from open to closed

A2: Target distance from near to far, through the A2 point, the switch from closed to open

Working Mode: A1 and A2 can be learned individually, and the working mode can be selected by setting the position of A1 point and A2 point. There are 5 kinds of working modes as below:



Note: A1 or A2 distance → ∞, when learning, no target detected (red light on)

First, the sensor is powered on, the green light at the back of the sensor will light up.

Set the A2 point:

- 1) Put a measured object at the place where the distance is to be set.
- 2) Connect the white wire (learning wire) and the brown wire (positive pole) together. During this period, if the measured object is captured, the blue light will keep blinking, and this state lasts for two to three seconds, then take away the white wire, the A2 setup is successful. The red light will be lit up if the target is not detected during the setup period.

Set the A1 point:

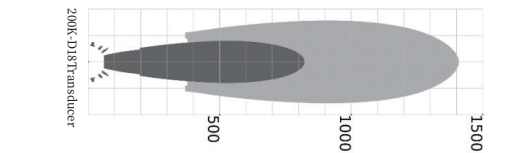
- 1) Put a measured object at the place where the distance is to be set.
- 2) Connect the white wire (learning wire) to the blue wire (negative pole) and repeat the above steps.

Note: To ensure the best accuracy and system stability, please try not to set the A1 and A2 points within 20mm from the blind zone. Learning mode is effective within 5 minutes of power on, more than 5 minutes need to re-power on to learn.

Mounting

Since ultrasonic sensors are directional, the mounting position needs to be taken care of. It is recommended that the mounting position be perpendicular to the measured object to obtain better relative accuracy.

Response characteristic curve



2023LB V1

This specification doesn't relate to patent responsibility. Moreover, our company is always devoting to improving product quality, and reserves the right to improve products by changing pattern or size without prior notice. We have considered all the notes when compiling this specification, but for the wrong or clipped parts, and any loss caused by using this manual information, we bear no responsibility.

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