

Fork Ultrasonic Label Sensor LAU Series

Operation manual



www.lanbaosensor.com

Precautions

- Please make sure that the power supply voltage is within the rated voltage range before powering on
- The sensor can be detected normally after 100ms of power charged on
- When using different power sources for the sensor and load, be sure to turn on the power of the sensor first
- When the sensor is not used, it is recommended to cut off the power of the load first and then turn off the power of the sensor
- Do not subject the sensor to severe external forces (such as hammer hits, etc.) during installation, so as not to damage the sensor performance
- Avoid using thinner, alcohol or other organic solvents when cleaning

Safety warning

- Do not use in an environment with flammable, explosive or corrosive gases
- Do not use in oil or chemical environments
- Do not use in a high humidity environment
- Do not use in direct sunlight
- Do not use in other environmental conditions that exceed the rated value
- Do not disassemble, service or modify this product without authorization

Scrap treatment

- When the product is scrapped, please dispose of it as industrial waste

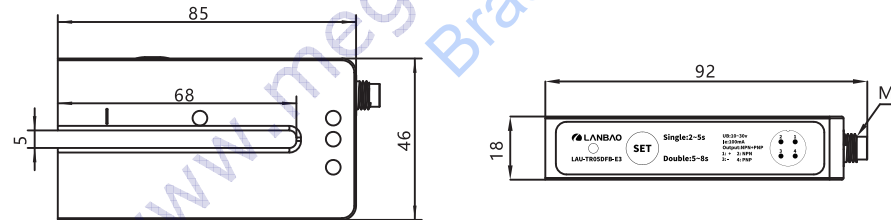
Functional description

Ultrasonic fork sensors are used to identify the printing mode of labels and carrier materials and how transparent and rough the surface of the material, and can identify whether the material is one layer or two layers. For example, transparent labels on transparent carrier materials and different printed patterns on labels. Ultrasonic fork sensors recognize labels with a minimum pitch of 2mm, high positioning accuracy, short response time and small volume, which makes fork sensor applications very common. The principle of ultrasonic sensors is based on the attenuation of signals caused by different material thicknesses.

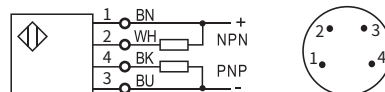
Technical specifications

Model	NPN+PNP	LAU-TR05DFB-E3
Slot width		5mm
Slot depth		68mm
Min. target		Min. label spacing \geq 2mm
Supply voltage		10...30VDC
Input type		With synchronization function and teach-in function
Response time		250 μ s
Output current		100mA
Switching frequency		1.2KHz
Indicator		Yellow LED: no target (Air); Red LED: double sheets detected Green LED: single sheet detected
Circuit protection		Reverse polarity protection
Ambient temperature		-25...70°C (248-343K)
Storage temperature		-40...85°C (233-358K)
Protection degree		IP64
Weight		105g
Material		Metal, aluminum
Connection		M8 4-pin connector

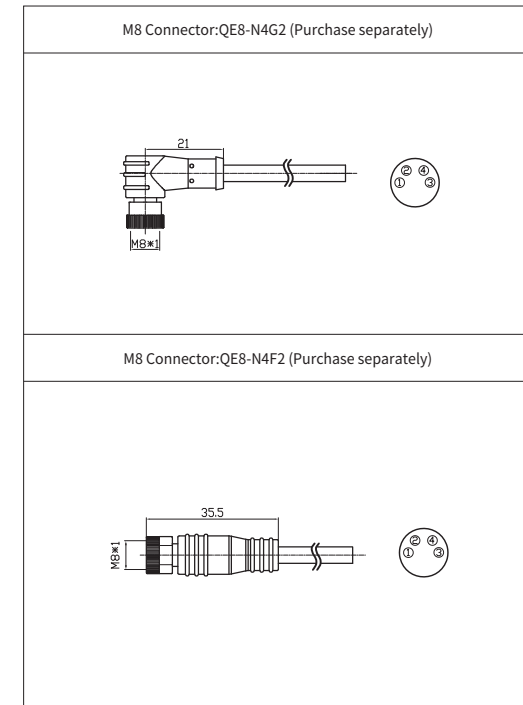
Dimensions



Wiring diagram



Accessory dimensions



Teach-in function

Power-on status:

Yellow light for air, green light for single sheet, red light for double sheet; The factory default is NO. To switch from NO to NC, you need to press the SET button first and then power on. Press the button for about 5s and release it when the red light flashes. At this time, it switches to NC. To switch from NC to NO, you also need to press the SET button first and then power on. Press the button for about 3s and release it when the green light flashes. At this time, it switches to NO.

Learning status:

- ① When the button is pressed for more than 2s, the green light starts to flash. Release it at this time and start to automatically learn a single sheet (if successful, the green light will continue to flash 3 times; if failed, the red light will flash 3 times);
- ② When the button is pressed for more than 5s, the flashing green light switches to flashing yellow light. Release it at this time and start to automatically learn double sheets (if successful, the green light will flash 3 times; if failed, the red light will flash 3 times);
- ③ When learning a single sheet, the double sheet threshold is automatically completed, and it starts to work automatically after learning is completed. The learning function is not limited in time.

LAU-Ver. 1.2 Y1021

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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