

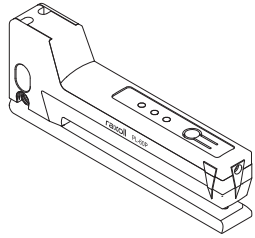
raxoll

PL-60 Series

Photoelectric Label Sensor



raxoll.com



INSTRUCTION MANUAL

Thank you for choosing raxoll photoelectric label sensor. Please read the manual before using this product.

- The product should be applied by someone with a certain level of electrical knowledge.
- Please read and make sure that you understand how to operate the product before using it.
- Please keep this manual readily accessible for future reference when needed.

WARNING



Please do not exceed maximum rated voltage during usage in order to prevent tester malfunction or fire.



Please do not apply AC power supply to avoid breakage.



Please do not subject the product to high temperature to avoid scalding.

SAFETY PRECAUTIONS

It is dangerous to wire or attach/remove the connector with the power on. Make sure to turn off the power before operation. Make sure to use the product with the protective cover attached and closed.

Installing in the following places may result in malfunction:

1. A dusty or steamy place.
2. A place generating corrosive gas.
3. A place directly receiving scattering water or oil.
4. A place suffered from heavy vibration or impact.

The product is not designed for outdoor use.

Do not use the sensor in transient state after power on (approx. 300ms.)

Do not wire with the high voltage cable or the power line.

Failure to do this will cause malfunction by induction or damage.

The sensor performance or digital display values may depend on the individual units or the condition of detected product.

This product is not an explosion-proof construction.

Do not use the product under flammable, explosive gas or liquid environment.

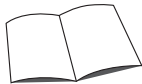
Do not use the product in water.

Do not disassemble, repair or convert the product.

Failure to do this may cause failure, fire or electric shock.

Operate within the rated range.

ACCESSORIES LIST



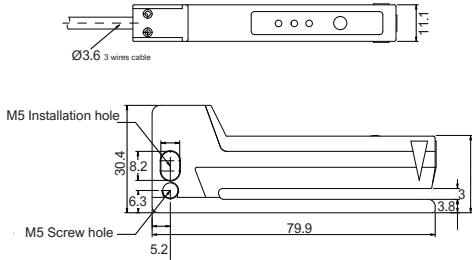
1 PCS INSTRUCTION MANUAL

TECHNICAL SPECIFICATIONS

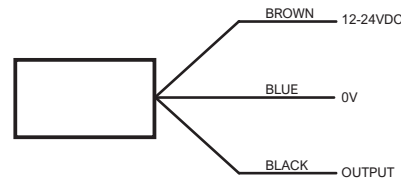
Power Source Voltage	12-24VDC
Slot Size	Width 3mm
Deep	60mm
Minimum Detection Width	≥2mm
Minimum Detection Deep	≥2mm
Response Time	<50µs
Response Frequency	Max. 10kHz
Conveyor Speed	≤20mm/min (0.3m/s)
Delay After Startup	≤300ms
Residual Voltage	≤15% of UB 3
Open Circuit Current	≤ 0mA
Switch Output Function	LON / DON (Switchable)
Warning Output	Red Indicator Light Up
Signal Voltage	±(UB-2V) / ±2V
Output Current	≤100mA
Capacitive Load	≤0.2 µF
Indicator Light	Red Errors in adjust / Errors in operation
Green	NO / NC
Blue	Switching Output Signal of Detection Label
Working Temperature	-20 to +60°C (No dew, no ice)
Storage Temperature	-30 to +70°C (No dew, no ice)
Protection Level	IP65
VDE Security Level	111
Weight	About 100g with the cable
Material	Die casting; Electroless nickel(silver) plating on the surface; PC plastics

DIMENSIONS

*Unit : mm



WIRING DIAGRAM



PRODUCT CHARACTERISTIC

- 3mm detection groove width and 60mm detection groove depth photoelectric sensor for optical detection, which can accurately detect labels on the machine.
- High-speed switching frequency and very short response speed ensure good repeatability.
- The desing of long strip groove makes it easy to place labels directly on the edge of the operation groove for inspection.
- Self-adaptive logic circuit function (automatic level control): the optimal performance is achieved through the self-optimization of switch threshold.
- Warning Output for Calibration Value Display and Functional Operation Errors.
- Simple adjustment through closed calibration button or calibration output.

AUTOMATIC LEVEL CONTROL FUNCTION

1-) Each current signal of the sensor is the displayed number, and the result is the optimal switch threshold calculated for the maximum performance reserve. As long as the dynamic data in the system remain unchanged and the material environment changes, all values will be permanently preserved and their correctness maintained.

2-) The signal changes every time the conveyor belt rolls, even if the label looks the same. Signal changes may be caused by material changes or changes in dynamic parameters, which will have a negative impact on the performance reserve of sensors.

3-) Under this function, the sensor can automatically adjust the switch threshold. In the process of operation, the maximum performance reserve is in common use, which ensures absolute reliability of the sensor and no errors.

4-) If the sensor does not realize switch conversion when a detector changes, it can be calibrated again.

The following description is applicable to the photoelectric sensor PL-60, where switching signals occur in the tag gap detection. The device version of the output signal appears when the label is detected, and the display of the LED indicator is opposite.

NO mode (green light always on):

- Move one or more tags from the substrate and push the blank area into the sensor.
- When the black area is pushed into the detection center, the blue output indicator is turned on.
- When the tag pushes to the test center, the blue output indicator is turned off.
- If set correctly, the LED lights will on or off between the label and the gap.

The operation is finished.

NC mode (green light always on):

- When the black area is pushed into the detection center, the blue output indicator is turned off.
- When the tag pushes to the test center, the blue output indicator is turned on.
- If set correctly, the LED lights will on or off between the label and the gap.

The operation is finished.

SIMPLE CALIBRATION ADJUSTMENT

NO/NC Function will Open after normal operation

Error Indicator - Red Light
NO/NC Indicator - Green Light
Detected label switch output signal indicator - Blue Light

Press SET ≥12s

Return

Calibration of "NO/NC Mode" Setting Switch Output: Signal Output in Gap/Tags

[NC Setting]: Press SET for 12 seconds, during which the green and blue lights will flash together. Then the green light was always on. Press the button again for a short time. If the current switch can be used properly, the settings will end.

Blue Light: light on = signal output in gap, light off = signal output in label.

[NO Setting]: Press SET for 12 seconds, during which the green and blue lights will flash at the same time. Then the green light was always on. Press the button again for a short time. If the current switch can be used properly, the settings will end.

Blue Light: light on = signal output in gap, light off = signal output in label.

Press SET 3s

Press SET Return

Calibration of "Object Setting" Detection of opaque labels (static or moving)

Place the gap or blank area of the label under the detection area. Press the SET key for 3 seconds, and the green and blue lights will flash at the same time.

Place the label under the detection area, Press SET key briefly to stop the calibration, the blue light is off, and the green light is always on.

Error indicator
Red light: If there is no error in calibration, the red light will go out.

YOU CAN NOTE HERE

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