# Retro reflective sensors

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Retro reflective sensors are photoelectric sensors. They consist of an emitter and receiver in a single housing. The light produced by the emitter is reflected back to the receiver with a reflector. Whenever this light beam is obstructed, the output signal of the sensor changes state. photoelectric retro-reflective sensors for the detection of transparent objects are characterized by their long sensing ranges of up to 6 m on the IRR-7M reflector and their small housing. Combined with an extensive range of accessories, they provide a simple way to integrate sensors into systems.
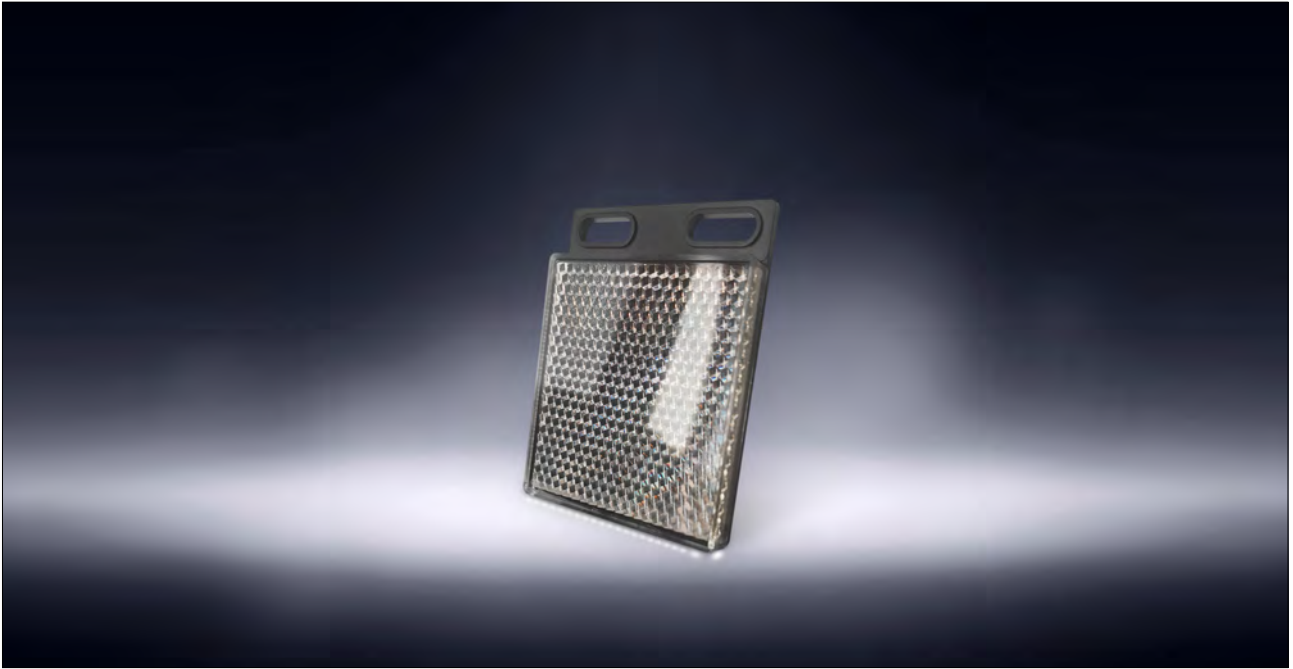
The IRR-7M reduces the time required to install and align the sensor to just a few seconds, making this the ideal product for logistics applications. It provides quick and flexible sensor installation, ensures error-free operation, and keeps costs under control.

Technical parameter

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Sensing mode	Retro-reflective
Sensing distance	7M
Sensing object	Opaque object,min ψ75mm
Standard target	Reflector
Response time	≤3ms
Supply voltage	DC12-24V(10-30V DC)/ ripple(p-p): 10% max
Output type	NPN output
Output status	N.O.
Consumption	≤20mA
Load current	200mA
Voltage drop(V,)	≤1.8V(200mA)
LED display	Red LED
Sensitivity adjustment	non-adjustable
Circuit Protection	Short circuit protection, reversed polarity protection and overload protection
Operating temperature	-10....+55℃
Insulation Resistance	≥50MΩ
Anti-impact	10...55Hz(amplitude 1.5mm)X,Y, Z direction, each 10times
Protection	Ip67
Connection	Cable: ψ4.8mm 2M
Housing material	PBT
Accessories	mounting bracket: 1pcs; Reflector: 1pcs
Product size	50*50*18cm

Feature

Long Sensing Distance	A Through-beam Sensor, for example, can detect objects more than 6 m away. This is impossible with magnetic, ultrasonic, or other sensing methods.
Virtually No Sensing Object Restrictions	These Sensors operate on the principle that an object interrupts or reflects light, so they are not limited like Proximity Sensors to detecting metal objects. This means they can be used to detect virtually any object, including glass, plastic, wood, and liquid.
Fast Response Time	The response time is extremely fast because light travels at high speed and the Sensor performs no mechanical operations because all circuits are comprised of electronic components.
High Resolution	The incredibly high resolution achieved with these Sensors derives from advanced design technologies that yielded a very small spot beam and a unique optical system for receiving light. These developments enable detecting very small objects, as well as precise position detection.
Non-contact Sensing	There is little chance of damaging sensing objects or Sensors because objects can be detected without physical contact. This ensures years of Sensor service.
Easy Adjustment	Positioning the beam on an object is simple with models that emit visible light because the beam is visible.

Applications

Logistics: Storage & Conveyor, especially pallet detection
Machine builders (e.g. packaging, handling, wood processing, paper)
Automotive
Automated car park systems
Doors and gates
Distribution

Product size

OUT

POW

22

2-6.4X

6.0

39.5

50

40

OUT
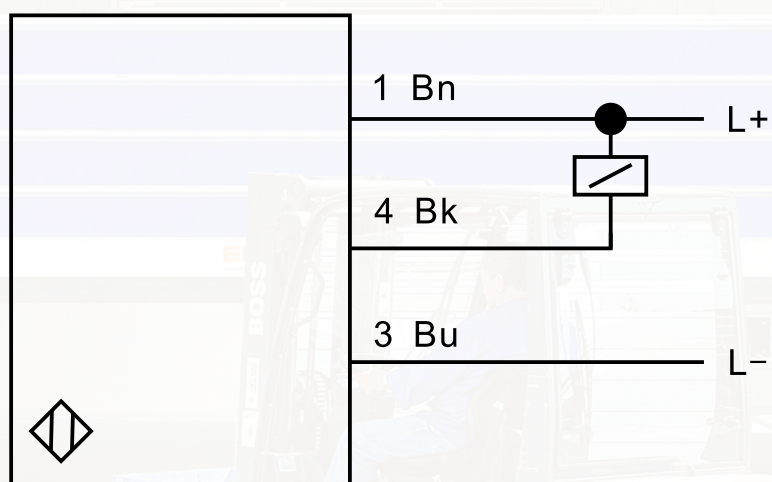
POW

50

40

18

40

50

50

40

2-φ4.4

R56.6

40

60

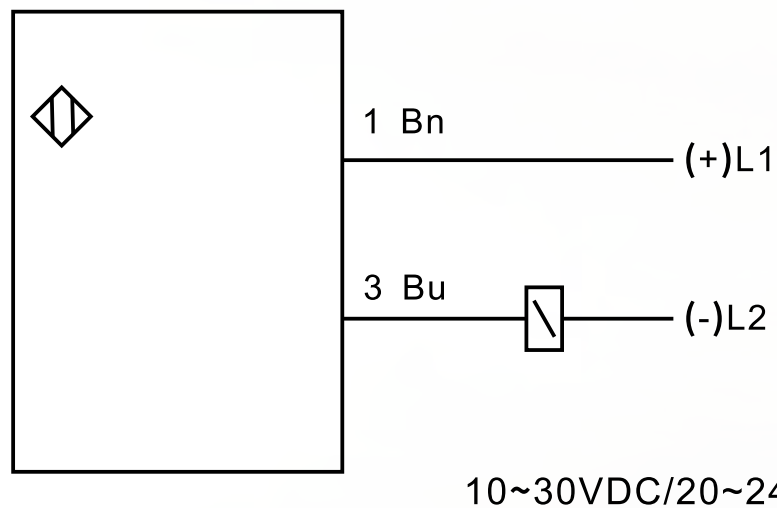10

58

90°

25
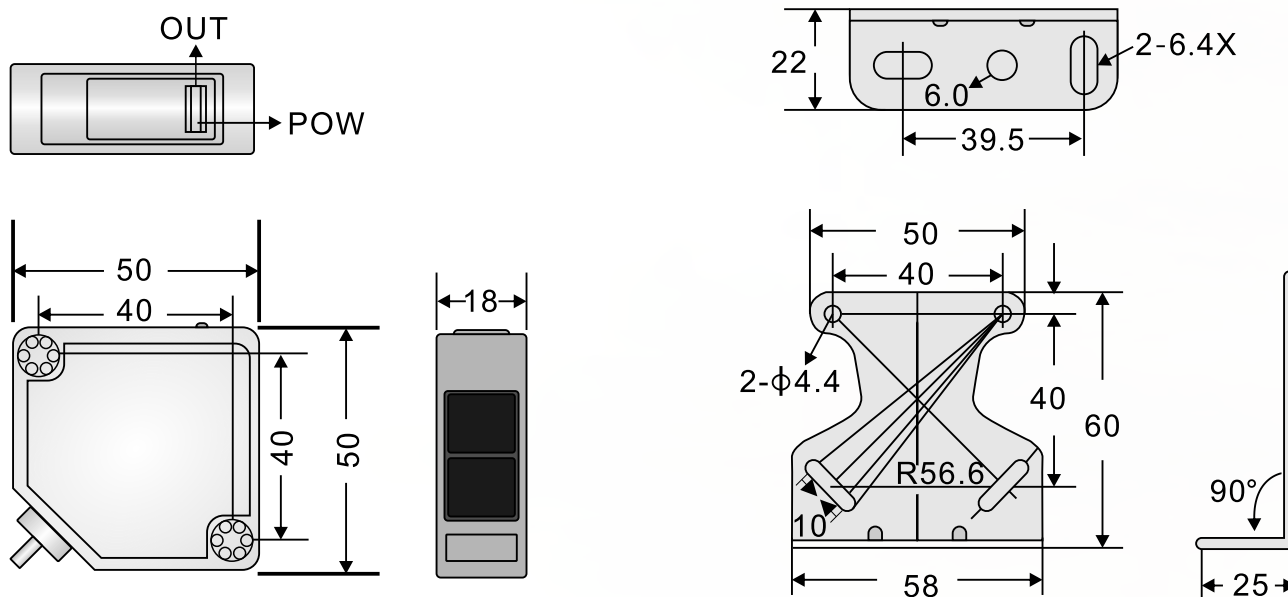
Wiring diagram

Please use the correct wiring strictly according to the following illustrations. If the wiring is wrong, the switch may not work properly or burned.
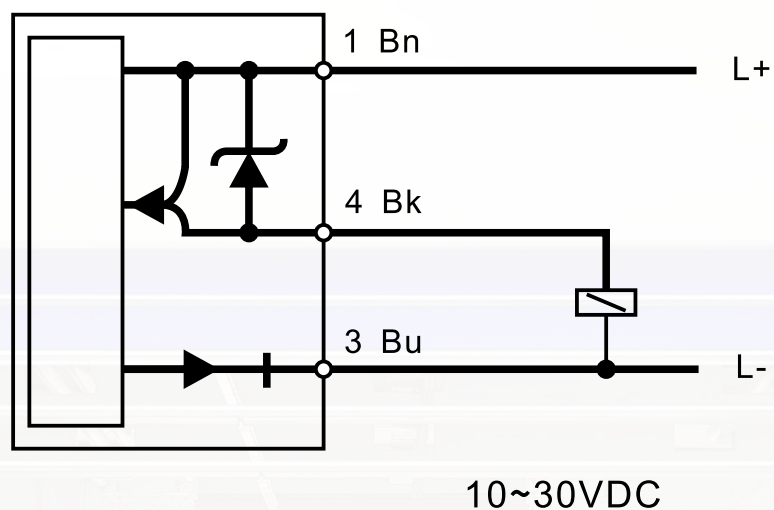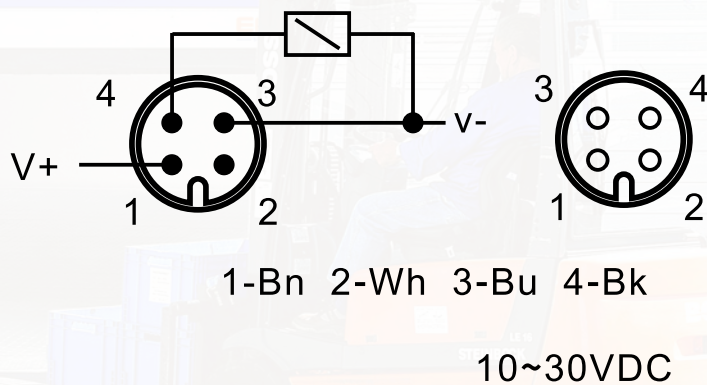
Three-wire NPN N.O. or N.C

1 Bn

L+

4 Bk

3 Bu

L−

10~30VDC

DC, AC / DC transmitter

1 Bn   (+)L1

3 Bu   (-)L2

10~30VDC/20~240VAC/DC

PNP N.O./N.C. Convertible (3-wire type)

1 Bn   L+

4 Bk

3 Bu   L-

10~30VDC

M 12 connector PNP N.O. or N.C

4   3

V+

1   2

V-

3   4

1   2

1-Bn 2-Wh 3-Bu 4-Bk

10~30VDC

We are very willing to help our customers to develop their own brand and assist customers in their local marketing. And not only photocell sensor, but also a series of high-quality products around the automatic door and villa security solutions. Both of us will create more and more benefits, growing up together.

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