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Photoelectric Sensors

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Photoelectric Sensor Technologies Expand Applications



What type of photoelectric sensor is best for me?

There are many different styles of photoelectric sensors, but really only four basic technologies: through-beam, reflective, diffuse, and background suppression. The chart describes some advantages and disadvantages of each technology.

Type	Advantages	Disadvantages
Through-beam	<ul style="list-style-type: none"> • Most accurate • Longest sensing range • Very reliable 	<ul style="list-style-type: none"> • Must install at two points on system: emitter and receiver • Costly - must purchase both emitter and receiver
Reflective	<ul style="list-style-type: none"> • Cost less than through-beam • Only slightly less accurate than through-beam • Sensing range better than diffuse • Very reliable 	<ul style="list-style-type: none"> • Must install at two points on system: sensor and reflector • Slightly more costly than diffuse • Sensing range less than through-beam
Diffuse	<ul style="list-style-type: none"> • Only install at one point • Cost less than through-beam or reflective 	<ul style="list-style-type: none"> • Less accurate than through-beam or reflective • More setup time involved
Background Suppression	<ul style="list-style-type: none"> • Effective with reflective backgrounds 	<ul style="list-style-type: none"> • Cost more than diffuse, reflective or through-beam • Most setup time required

How do these sensors benefit me?

Everybody wants to know how a particular product will help them. With AUTOMATIONDIRECT photoelectric sensors from Lamonde Automation, you benefit from:

- Rectangular formats that provide mounting holes directly into the sensor. This eliminates the need for mounting plates and allows for easier installation.
- Quick-disconnect cable versions available for all sensors. The Q/D sensors make for fast and easy replacement. Troubleshooting is also much faster with Q/D devices as the user need only unscrew the connector and change out the sensor. This eliminates the need for disconnecting wires and cutting wire ties, thus speeding up the replacement process with much less room for error.
- Electrical protection against short circuit, reverse polarity, and transient noise. Even if the sensor is initially wired wrong, or wired into a noisy environment, the sensor will still operate properly.
- 30-day, money-back guarantee. Nothing else needs to be said. If you are not satisfied with the performance of your sensor, just send it back.

The Most Popular Photoelectric Sensor Styles

The most popular, and widely-accepted, photoelectric sensor mounting format in the market is the 18 mm diameter. From a standard through-beam (plastic) sensor to a unique right-angle, background suppression diffuse sensor, we have a model to fit your needs.

- Metal or plastic housing
- Diffuse, polarized reflective, through-beam, and background suppression models
- Straight or unique right-angle optics
- 3-wire and 4-wire outputs
- NPN and PNP models
- Normally open and normally closed (light or dark operation) models

Also available are 5, 8 and 12 mm diameter models in various styles.



Rectangular styles for unique mounting needs

- The CX series offers a built-in LED that indicates when dirt is blocking the light emission. This feature ensures reliable operation and eliminates constant cleaning of the sensor. The CX series is also completely sealed with potting and has an IP65, watertight rating.
- The FG series offers universal voltages with a 3A relay output
- All sensors contain adjustment potentiometers and double-alignment LEDs. This simplifies installation and setup time and allows for customization to your specific application.

Quick-disconnect cables and accessories



Quick-disconnect cables, reflectors, mounting brackets and other accessories available include:

- Micro (12 mm) and pico (8 mm) Q/D sizes in 2 m, 5 m, and 7 m lengths
- Extension cables for quick-disconnect sensors
- Round and rectangular reflectors in many sizes
- Photoelectric shutters that focus your photoelectric sensor on small targets
- Right-angle adapters for special mounting applications

A photoelectric sensor must suit your application, and must also be easy to install, simple to set up, and operate flawlessly. LAMONDE understands these needs and offers products that solve your application problems:

- **Unique right-angle mounting sensors.** Have you ever tried to install a right-angle sensor? Have you tried getting the mounting nut over the right-angle head of the sensor? It's not easy! We offer a right-angle sensor that a nut will fit directly over. Our competitors don't offer a product that's so easy to use. This technology will save you time and headaches during installation.
- **IP67 (washdown) rating.** All of our sensors are watertight and built to last. Since you won't have to swap sensors out constantly, you will ultimately save money.
- **Metal or plastic sensors.** Plastic sensors are great for corrosion resistance, while metal sensors are rugged and can absorb more punishment. We offer both.
- **Alignment LEDs.** With onboard indicators, our sensors simplify installation to save you time and money.

We are so confident of our sensors' quality, we offer a 30-day money-back guarantee if you don't like them.



FE and FG Series

CX Series

Photoelectric Sensor Lineup



5 mm, C5 series

- Power: 10-30 VDC
- Embedded cable or M8 Q/D
- 3-wire, NPN/PNP output
- Fixed sensitivity



8 mm, HE series thru-beam

- Power: 10-30 VDC
- Embedded cable or M8 Q/D
- 3-wire, NPN or PNP output,
- Fixed sensitivity



12 mm, DM series

- Power: 10-30 VDC
- Embedded cable or M12 Q/D
- 4-wire, NPN/PNP output,
- LO/DO selectable
- Teach auto calibration



18 mm non-metal, SS/MS/MV series

- Power: 10-30 VDC or 20-250VAC
- Embedded cable or M12 Q/D
- 4-wire, NPN/PNP output,
- triac output
- Fixed sensitivity



18 mm metal, C18 series

- Power: 10-36 VDC
- Embedded cable or M12 Q/D
- 3-wire, NPN/PNP output
- Adjustable sensitivity
- Axial or right-angle optics



18 mm non-metal, FA series

- Power: 10-30 VDC
- Embedded cable or M12 Q/D
- 4 wire, NPN/PNP output
- Laser or LED, fixed sensitivity



AC/DC rectangular, FG series

- Universal voltage, 12-240 VDC, 24-240 VAC
- Embedded cable
- 3A SPDT relay output
- Adjustable sensitivity



Mini DC Rectangular, FE Series

- Power: 10-30 VDC
- Embedded cable or M8 Q/D
- 3-wire, NPN/PNP output,
- LO/DO selectable switch
- Adjustable sensitivity



DC rectangular, CX series

- Embedded cable or M8 Q/D
- 3-wire, NPN/PNP output
- Adjustable sensitivity



DC rectangular, QX series

- Power: 10.8-30 VDC
- Embedded cable or M12 Q/D
- 4-wire, NPN/PNP output,
- Adjustable sensitivity



DIN rail fiber amplifiers, DFT and DFP series

- Power: 10-30 VDC
- Embedded cable or M8 Q/D
- 3-wire, NPN/PNP output,
- LO/DO selectable via user interface



18 mm fiber amplifier, SSF series

- Power: 10-30 VDC
- Embedded cable or M12 Q/D
- 4-wire, NPN/PNP output, LO/DO selectable
- Teach auto calibration



Cutttable fibers, CF series

- 2.2 mm Ø Diameter
- Length 2 m, field cuttable
- Use with DFP/DFT/SSF series



Light screens, BX series

- Power: 12-24 VDC
- M12 Q/D
- 4-wire, NPN/PNP output,
- NO/NC selectable
- Screen measures 2 m x 70 mm
- 12 light beams,
- 5 mm resolution