# Legacy Sensor Products

## 11.1 Photoelectric Sensors—Legacy

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- **Technical Data and Specifications** .................... V8-T11-5

⚠️ Unless otherwise noted, the products contained in this section should not be used for functional safety applications. These products were not designed or tested to IEC 60947-5-3 or recommended for functional safety.
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Photoelectric Sensors—Legacy

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Photoelectric Sensors—Legacy

Product Overview

The products shown in this section are still offered for sale by Eaton, however, the catalog pages have been moved online. Visit www.eaton.com/legacysensors for electronic product and ordering information.
Product Selection Guide

E64 Terminal Base Series

**Overview**
This flexible sensor family provides stability indication, high current relay output and easy terminal wiring.

**Sensing Types and Ranges**
- Thru-beam: 33 ft
- Reflex: 16.4 ft
- Polarized reflex: 11.5 ft
- Diffuse reflective: 35 in

**Product Features**
- High performance optics
- Built-in multi-voltage power supply for use in AC or DC applications
- Terminal connections with 1/2 in NPT conduit entrance
- Available with optional delay timer, adjustable from 0.6 to 156 seconds and field settable for Normal, ON Delay, OFF Delay, ON-OFF Delay or One Shot Delay

**Approvals**
- CE

**Notes**
For additional product detail, see Technical Data and Specifications on Page V8-T11-5.

1. Range varies with fiber.

E65 Miniature Series

**Overview**
These compact sensors are ideal for a wide variety of applications including reliable detection of clear objects.

**Sensing Types and Ranges**
- Thru-beam: 16.5 ft
- Polarized reflex: 5.8 ft
- Diffuse reflective: 4 and 20 in
- Fixed focus diffuse: 0.5 in
- Plastic fiber optic: }
- Clear object sensor: 24 in

**Product Features**
- Complete line of miniature sensors including clear object detection models
- Forward or right-angle viewing with identical optical performance
- Stability indicator
- Fiber optic models include built-in DIN rail mounting clip

**Approvals**
- —

11 Series

**Overview**
The 11 Series is a highly configurable photoelectric sensor with multiple output options including a high current DPDT relay.

**Sensing Type and Range**
- Reflex: 20 and 30 ft

20 Series

**Overview**
These heavy-duty sensors are designed for use in harsh environments with constant exposure to weather and physical abuse.

**Sensing Types and Ranges**
- Thru-beam: 700 ft
- Reflex: 35 and 75 ft
- Diffuse reflective: 8 ft
- Defined range diffuse reflective: 15 in

**Product Features**
- Sets the industry standard for rugged construction and long range performance
- Interchangeable logic modules and output devices are contained inside the sealed housing
- Ideal for outdoor use

**Approvals**
- UL Listed, E66026
- CSA® Certified, 50513

UL Listed

UL Listed

CSA®}

CSA®
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Photoelectric Sensors—Legacy

50 Series

Overview
These high performance sensors feature interchangeable outputs and logic functions in a fully sealed, self-contained package.

Sensing Types and Ranges
- Thru-beam: 100 ft
- Reflex: 30 ft
- Polarized reflex: 15 ft
- Diffuse reflective: 10, 24 and 72 in
- Glass fiber optic: ①

Product Features
- Interchangeable, plug-in output devices and logic modules
- Built-in 360° rotation. 10° tilt ball-swivel base
- Fully potted construction for use in areas subject to wash-down, high shock and/or vibration.
- Four output options including a 2A SPDT relay

Approvals
- UL Listed, E82537
- CSA Certified, 50513

Notes
For additional product detail, see Technical Data and Specifications on Page V8-T11-5.

55 Series

Overview
These durable sensors offer high optical performance and a built-in swivel bracket for easy and precise alignment.

Sensing Types and Ranges
- Thru-beam: 100 ft
- Reflex: 30 ft
- Polarized Reflex: 15 ft
- Diffuse Reflective: 10, 24 and 72 in
- Glass fiber optic: ①

Product Features
- Identical to 50 Series except without provision for interchangeable output or logic functions.
- Ideal for direct connection to programmable controllers
- Available in universal voltage AC/DC versions as well as DC only models
- Built-in, 360° rotation. 10° tilt ball-swivel base
- Fully potted construction for use in areas subject to wash-down, high shock and/or vibration

Approvals
- UL Listed, E82537
- CSA Certified, 50513
- (except relay output models)

80 Series

Overview
These sensors provide extremely long sensing ranges and the flexibility of interchangeable sensor heads and logic modules.

Sensing Types and Ranges
- Reflex: 50 ft
- Diffuse reflective: 12 ft
- Focused diffuse reflective: 6 in
- Glass fiber optic: ①

Product Features
- Combines the advantages of self-contained packaging with the flexibility of interchangeable sensor heads
- Nine sensor heads, seven control base units, and three logic modules are available to customize the sensor for your application

Approvals
- UL Listed, E82537
- CSA Certified, 50513 (except 1384B-6501)

70 Series

Overview
This high performance family offers a wide choice of sensor heads, control units, output devices, logic modules and accessories to solve virtually any sensing problem.

Sensing Types and Ranges
- Thru-beam: 15, 32, 369 and 743 ft
- Reflex: 23 ft
- Curtain-of-light reflex: 8 ft
- Diffuse reflective: 36 in
- Focused diffuse reflective: 2.5 in
- Glass fiber optic: ①

Product Features
- Ultra-versatile photoelectric control family
- Wide choice of sensor heads, control units, output devices, logic modules, and accessories to solve virtually any sensing problem
- Sensor heads may be mounted up to 1000 ft from the control unit
- Multiple sensor heads can be connected to a single control unit for special sensing applications
- Analog control unit provides a voltage level output proportional to the amount of light received by the sensor detector

Approvals
- CSA Certified, 30639 (some models)

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## Technical Data and Specifications

### Photoelectric Sensors—Legacy

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<th>E65 Miniature Series</th>
<th>11 Series</th>
<th>20 Series</th>
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<td>16–240 Vac/dc</td>
<td>10–30 Vdc</td>
<td>115–125 Vac</td>
<td>95–130 Vac</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>230 Vac</td>
<td>100–125 Vac</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>200–250 Vac</td>
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<tr>
<td>Output function</td>
<td>Selectable light or dark operate</td>
<td>Selectable light or dark operate</td>
<td>Selectable light or dark operate</td>
<td>Selectable light or dark operate</td>
</tr>
<tr>
<td>Maximum load current</td>
<td>1 A at 250 Vac</td>
<td>100 mA NPN or PNP</td>
<td>Varies by output device from 5 mA to 10 A</td>
<td>Varies by output device from 5 mA to 10 A</td>
</tr>
<tr>
<td></td>
<td>2 A at 30 Vdc</td>
<td></td>
<td></td>
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<tr>
<td>Enclosure ratings</td>
<td>NEMA 1, 3, 4, 12 and 13</td>
<td></td>
<td>NEMA 4 and 13</td>
<td>NEMA 3, 4, 6 and 13</td>
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<td></td>
<td>IP66</td>
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<td></td>
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<tr>
<td>Response time range</td>
<td>20 ms</td>
<td>330 microseconds to 2 ms</td>
<td>7 ms</td>
<td>1 ms to 30 ms</td>
</tr>
</tbody>
</table>

### Description

| Operating voltage | 90–132 Vac at 60 Hz | 100–132 Vac at 50 Hz | 180–264 Vac at 60 Hz | 200–264 Vac at 50 Hz | 10–30 Vdc |
| | 20–264 Vac and 15–30 Vdc | 10–30 Vdc | | | |
| Output function | Selectable light or dark operate | Light and dark operate models available | Selectable light or dark operate | Light or dark operate (switch-selected on control unit) |
| Maximum load current | Varies from 50 mA to 2 A | AC/DC units: 300 mA DC units: 260 mA (NPN), 100 mA (PNP) Optional three amp SPDT relay (AC/DC models) | Varies by output device from 5 mA to 10 A | Varies by model from 50 mA to 1 A |
| Enclosure ratings | NEMA 1, 3, 4, 12 and 13 | NEMA 1, 3, 4, 6, 12 and 13 | Varies with control unit or sensor head selected | NEMA 1, 3, 4, 12 and 13 |
| Response time range | 2 ms to 18 ms | 1 ms to 11 ms | 0.5 ms to 14 ms | 5 ms to 18 ms |