Photoelectric sensors Series 14
The economical solution for your application
Photoelectric sensors Series 14
The flexible product family

**Highlights**

- **A large line of sensors**
  Baumer offers you the entire product spectrum from diffuse sensors up to laser sensors for transparent objects
- **A variety of connection options**
  Now with durable M8 metallic plug connection, M12 plug connection or cable version
- **Transparent housing base**
  Ensures good LED visibility from all sides
- **Ingenious accessories**
  The right accessories guarantee optimal installation

**Your benefit**

- The new Series 14 provides the right technology for every user – no compromises and complete reverse compatibility
- Greater freedom in connector selection: The new, patented cable output requires no additional installation depth – the ideal solution where space is limited
- Service friendly commissioning and increased security during operation
- Saves installation time and offers flexible and efficient sensor mounting

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**Two connector versions – smart cable output**

You can now select from the following connection options for every sensor version:

- Durable, metallic M8 plug connector (S35A)
- Now also available with M12 plug connectors (S14)
- New cable outputs for installation in particularly tight areas, including corners
- Option: Flylead connectors

The new Series 14 housing design offers you greater flexibility!
Series 14 – the right solution for every application.

Positioning
Print marks such as those employed for example for strip advertising can be quickly, precisely and securely detected by a diffuse sensor.

Difficult object surroundings
With proper background suppression, diffuse sensors can securely and precisely detect objects against even a reflective background. Laser models are also available for very small objects.

Transparent objects
For transparent objects such as glassy drug ampoules, retro-reflective sensors offer the right solution. They reliably meet their needs even if the environment alters. The easily visible LEDs simplify installation, adjustment and help support operation.

Typical fields of application
- Packaging industry
- Warehousing and conveyor technology
- Graphics industry
- Handling and robotics industry
- Textile industry

The right accessories
Using the new frame adapter allows sensors to be simply and easily installed on frames and sheet metal using a simple snap-on fixing. The Sensofix installation kit provides the necessary degree of flexibility to optimally align and install the sensor. The proper accessories are vital to the correct security of any sensor application. For through beam sensors, a slot aperture sticker supports the secure detection of particularly small objects. A broad spectrum of appropriate reflectors are available for use with retro-reflective sensors.
Product overview of the series 14 photoelectric range

**Diffuse sensors**

<table>
<thead>
<tr>
<th>Light source</th>
<th>Red light</th>
<th>Laser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensing distance Tw</td>
<td>5 ... 600 mm</td>
<td>20 ... 300 mm</td>
</tr>
<tr>
<td>Response time</td>
<td>&lt; 1 ms</td>
<td>&lt; 0,15 ms</td>
</tr>
<tr>
<td>Sensitivity adjustment</td>
<td>Pot 270°</td>
<td>Teach-in</td>
</tr>
</tbody>
</table>

| Ordering information | FZDK 14 | OZDK 14 |

**Diffuse sensors with background suppression**

<table>
<thead>
<tr>
<th>Light source</th>
<th>Red light</th>
<th>Laser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensing distance Tw</td>
<td>20 ... 500 mm</td>
<td>20 ... 350 mm</td>
</tr>
<tr>
<td>Response time</td>
<td>&lt; 0,5 ms</td>
<td>&lt; 0,5 ms</td>
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<tr>
<td>Sensitivity adjustment</td>
<td>Pot or Teach-in</td>
<td>Pot, 9 turns</td>
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</table>

| Ordering information | FHDK 14 | OHDK 14 | FNDK 14 |

**Retro-reflective sensors**

<table>
<thead>
<tr>
<th>Light source</th>
<th>Red light</th>
<th>Laser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal range Sn</td>
<td>7,2 m</td>
<td>11 m</td>
</tr>
<tr>
<td>Response time</td>
<td>&lt; 1 ms</td>
<td>&lt; 0,25 ms</td>
</tr>
<tr>
<td>Sensitivity adjustment</td>
<td>None</td>
<td>Teach-in</td>
</tr>
</tbody>
</table>

| Ordering information | FPDK 14 | OPDK 14 |

**Retro-reflective sensors with single lens optics**

<table>
<thead>
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<th>Light source</th>
<th>Red light</th>
<th>Laser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal range Sn</td>
<td>3,8 m</td>
<td>11 m</td>
</tr>
<tr>
<td>Response time</td>
<td>&lt; 1 ms</td>
<td>&lt; 0,25 ms</td>
</tr>
<tr>
<td>Sensitivity adjustment</td>
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<td>Teach-in</td>
</tr>
</tbody>
</table>

| Ordering information | FPDK 14 | OPDK 14 |

**Retro-reflective sensors for transparent objects**

<table>
<thead>
<tr>
<th>Light source</th>
<th>Red light</th>
<th>Laser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal range Sn</td>
<td>8 m</td>
<td>5,2 m</td>
</tr>
<tr>
<td>Response time</td>
<td>&lt; 0,1 ms</td>
<td>&lt; 0,25 ms</td>
</tr>
<tr>
<td>Sensitivity adjustment</td>
<td>Teach-in</td>
<td>Teach-in</td>
</tr>
</tbody>
</table>

| Ordering information | FRDK 14 | OPDK 14 |

**Through beam sensors**

<table>
<thead>
<tr>
<th>Light source</th>
<th>Red light</th>
<th>Laser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal range Sn</td>
<td>15 m</td>
<td>10 m</td>
</tr>
<tr>
<td>Response time</td>
<td>&lt; 1,2 ms</td>
<td>&lt; 0,5 ms</td>
</tr>
<tr>
<td>Sensitivity adjustment</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

| Ordering information | FEDK 14 / FSDK 14 | OSDK 14 / OEDK 14 |

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