GLOBAL BEAM
Standard sensors for automation
COMPACT, EFFICIENT AND ECONOMICAL

Our sensor solutions of series 5, 15, 28, 318B and 328 have been optimized for standard automation tasks.

WE ALWAYS HAVE THE RIGHT SENSOR FOR YOUR DETECTION TASK

The Global Beam sensors are always the right choice when a powerful, robust and economical standard detection task, for example in transport systems or packaging technology, is required. All of our devices have large operating ranges and a multitude of technical highlights to ensure optimum usability. The devices also stand out from a cost-efficiency viewpoint thanks to their optimum price/performance ratio.
WE ALWAYS HAVE THE RIGHT DESIGN FOR YOUR APPLICATION

As the device is available in a cubic, cylindrical or universal housing, you will always find a Global Beam sensor in the appropriate design to suit your specific installation requirements. The integrated M3 metal threaded sleeves, the cable outlets, which are available either pointing downward or to the rear, and the cylindrical M18 design open up many options, particularly in situations with limited installation space.

easy handling.

- 3 different designs available with identical performance data
- Cubic 15 series for applications that require high operating ranges
- Models with 1 or 2 transistor outputs can be selected
- M8/M12 connection, cable piece available with connector or as a cable version in various lengths
- Sensors available as a set or pre-mounted for quick and easy installation
- Multiple mounting options with a large selection of accessories
- Highly visible status LEDs

think modular.

- Broad function selection matching the respective application (throughbeam and retro-reflective photoelectric sensors)
- Powerful basic version with preset operating range and extended models with adjustable operating range
- With 2-level teach (object or background), alternatively fine adjustment using potentiometer in the case of diffuse sensors with background suppression
- Energetic diffuse reflection sensors with red and infrared light for objects of similar type
- Application-specific designs, e.g. as V-type sensors for labels, for shrink-wrapped objects

brightVision®: Fast and simple alignment through very bright light spot
User-friendly thanks to easily accessible teach button
Versatile selection of connections available: cable, M8, M12 Pigtail
THROUGHBEAM, RETRO-REFLECTIVE PHOTOELECTRIC SENSOR

Throughbeam photoelectric sensor
L 5, L 15*, L 28, L 318B and L 328

Retro-reflective photoelectric sensor
PRK 5, PRK 15, PRK 15D, PRK 28, PRK 318B and PRK 328

<table>
<thead>
<tr>
<th></th>
<th>L 5 (l)</th>
<th>L 15*</th>
<th>L 28</th>
<th>L 318B/ L 328 (l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light source</td>
<td></td>
<td></td>
<td></td>
<td>Highly visible red light or infrared</td>
</tr>
<tr>
<td>Operating range limit</td>
<td>0 – 15 m</td>
<td></td>
<td></td>
<td>0 – 15.0 m (23 m axial optics)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0 – 8.0 m (90° optics)</td>
</tr>
<tr>
<td>Switching frequency</td>
<td></td>
<td></td>
<td></td>
<td>500 Hz</td>
</tr>
</tbody>
</table>

- High function reserve enables reliable detection even in extreme situations and reduces the risk of a system standstill
- Simple alignment by means of optimized beam geometry
- Transmitter deactivation for testing and networking
- 328 series: Metal threads for high strength mounting
- L 5 / 318B series: Also available with infrared

*Available from Q1 / 2018

<table>
<thead>
<tr>
<th></th>
<th>PRK 5</th>
<th>PRK 15</th>
<th>PRK 15D</th>
<th>PRK 28</th>
<th>PRK 318B</th>
<th>PRK 328</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light source</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating range limit</td>
<td></td>
<td>0.02 – 6.0 m</td>
<td></td>
<td>0.02 – 6.0 m (axial optics)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.02 – 5.0 m (90° optics)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switching frequency</td>
<td></td>
<td>500 Hz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Homogeneous light spot for safe switching behavior and easy alignment
- Safe suppression of direct reflection due to polarization filter
- Series 5 / 15: Warp-resistant housing with reliably strong mount prevents depolarization effects
- 15 series: Special models for reflective shrink-wrapped objects
- 328B series: Metal threads for high strength mounting
- 5 / 328 series: Sensitivity adjustment by means of teach button

Wood plate detection

Object detection on the transport system
DIFFUSE REFLECTION SENSOR

Diffuse reflection sensor
ET 5, ET 5.1, ET 28, ET 318B and ET 328 –
ergetic FT 5, FT 5.1, FT 28, FT 318B and
FT 328 – with fading

Diffuse reflection sensor
with background suppression
HT 5.1 and HT 15

<table>
<thead>
<tr>
<th>Light source</th>
<th>Operating range limit</th>
<th>Switching frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET 5/FT 5</td>
<td>ET/FT 5.1 FT 5i.X3</td>
<td>500 Hz</td>
</tr>
<tr>
<td>ET 28</td>
<td>FT 28</td>
<td></td>
</tr>
<tr>
<td>ET 318B</td>
<td>FT 318 FT 318B. X3</td>
<td></td>
</tr>
<tr>
<td>ET 328B</td>
<td>FT 328 (I) FT 328 I.X3</td>
<td></td>
</tr>
<tr>
<td>Light source</td>
<td>Operating range limit</td>
<td>Switching frequency</td>
</tr>
<tr>
<td>HT 5.1</td>
<td>0–0.4 m</td>
<td>500 Hz</td>
</tr>
<tr>
<td>HT 15</td>
<td>0–1.0 m</td>
<td></td>
</tr>
</tbody>
</table>

- High function reserve enables reliable detection even in extreme situations
- Simple detection of flat objects
- Optimum adaptation with teach button and 2 levels (object or background)
- 328 series: Metal threads for high strength mounting
- NEW FT.X3: Fading sensor with V-optics

Detection of glossy objects

Object detection on transportation systems

Diffuse refl ection sensor
ET 5, ET 5.1, ET 28, ET 318B and ET 328 –
ergetic FT 5, FT 5.1, FT 28, FT 318B and
FT 328 – with fading

Diffuse refl ection sensor
with background suppression
HT 5.1 and HT 15

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<tr>
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<th>Switching frequency</th>
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<tr>
<td>ET 5/FT 5</td>
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<tr>
<td>ET 28</td>
<td>FT 28</td>
<td></td>
</tr>
<tr>
<td>ET 318B</td>
<td>FT 318 FT 318B. X3</td>
<td></td>
</tr>
<tr>
<td>ET 328B</td>
<td>FT 328 (I) FT 328 I.X3</td>
<td></td>
</tr>
<tr>
<td>Light source</td>
<td>Operating range limit</td>
<td>Switching frequency</td>
</tr>
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<td>HT 5.1</td>
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<td>0–1.0 m</td>
<td></td>
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- Simple detection of flat objects
- Optimum adaptation with teach button and 2 levels (object or background)
- 328 series: Metal threads for high strength mounting
- NEW FT.X3: Fading sensor with V-optics

Detection of glossy objects

Object detection on transportation systems
NOW YOU JUST HAVE TO SELECT THE ONE SUITABLE FOR YOUR APPLICATION

The comprehensive eco-line range in 4 housing designs and many different variants provides an optimum solution for every application.

<table>
<thead>
<tr>
<th></th>
<th>PRK 5</th>
<th>PRK 28</th>
<th>PRK 15 / PRK 15.D</th>
<th>PRK 318B / PRK 328</th>
<th>HT 5.1</th>
<th>HT 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>32.5 x 13.6 x 20.2 mm</td>
<td>46.5 x 15 x 37.3 mm</td>
<td>38.9 x 15 x 30 mm</td>
<td>M18 x 50 / 60 mm (W)</td>
<td>34.2 x 11.4 x 18.3 mm</td>
<td>38.9 x 15 x 30 mm</td>
</tr>
<tr>
<td>Housing material</td>
<td>Plastic</td>
<td>Plastic</td>
<td>Plastic</td>
<td>Plastic / metal sleeve</td>
<td>Plastic</td>
<td>Plastic</td>
</tr>
<tr>
<td>Operating range</td>
<td>0.02 – 6.0 m</td>
<td>0.02 – 6.0 m</td>
<td>0.02 – 10.0 m (depol optics) 0.05 – 8.0 m</td>
<td>0.02 – 6.0 m (axial optics) 0.02 – 5.0 m (90° optics)</td>
<td>0.005 – 0.4 m</td>
<td>0.01 – 1 m</td>
</tr>
<tr>
<td>Light source</td>
<td>Highly visible red light</td>
<td>Highly visible red light</td>
<td>Highly visible red light</td>
<td>Highly visible red light</td>
<td>Highly visible red light</td>
<td>Highly visible red light</td>
</tr>
<tr>
<td>Adjustment element</td>
<td>–</td>
<td>–/Teach button</td>
<td>Potentiometer</td>
<td>–/Teach button</td>
<td>Potentiometer</td>
<td>Potentiometer</td>
</tr>
<tr>
<td>Connection (Degree of protection) (Switching frequency)</td>
<td>M8 / cable / Pigtail</td>
<td>M12 / cable / Pigtail</td>
<td>M8 / cable / Pigtail</td>
<td>M12 / cable / Pigtail</td>
<td>M8 / cable / Pigtail</td>
<td>M8 / cable / Pigtail</td>
</tr>
<tr>
<td>Outputs</td>
<td>2 / push-pull</td>
<td>2 / push-pull</td>
<td>1 / NPN / PNP</td>
<td>2 / push-pull</td>
<td>1 / NPN / PNP</td>
<td>1 / NPN / PNP</td>
</tr>
<tr>
<td>Accessories</td>
<td>BTU 200M-Dxx</td>
<td>BTD 18M.5</td>
<td>BTU 200M-Dxx</td>
<td>BTD 18M.5</td>
<td>BT 205M</td>
<td>BTU 200M-Dxx</td>
</tr>
<tr>
<td></td>
<td>BT 200M.5</td>
<td>BTD 21M</td>
<td>BT 200M.5</td>
<td>BTD 21M</td>
<td>BT 205M</td>
<td>BTU 200M-Dxx</td>
</tr>
<tr>
<td></td>
<td>BT 205M</td>
<td>BTP 200M-Dxx</td>
<td>BTP 200M-Dxx</td>
<td>BTP 200M-Dxx</td>
<td>BTP 200M-Dxx</td>
<td>BTP 200M-Dxx</td>
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</tbody>
</table>

*Available from Q1 / 2018
Now you just have to select the one suitable for your application.

### Diffuse reflection sensor - energetic

<table>
<thead>
<tr>
<th>ET 5 / FT 5 (I) FT 51 X3</th>
<th>ET / FT 5.1</th>
<th>ET 28 / FT 28</th>
<th>ET 318B / ET 318BI X3 FT 328(I) FT 328I X3</th>
<th>L 5 (I)</th>
<th>L 28</th>
<th>L 15*</th>
<th>L 318B / L 328 (I)</th>
</tr>
</thead>
<tbody>
<tr>
<td>32.5 x 13.6 x 20.2 mm</td>
<td>34.2 x 11.4 x 18.3 mm</td>
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<td>M18 x 50 / 60 mm (W)</td>
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<td>46.5 x 15 x 37.3 mm</td>
<td>38.9 x 15 x 30 mm</td>
<td>M18 x 50 / 60 mm (W)</td>
</tr>
<tr>
<td>ET: 0 – 1 m FT: 0 – 0.28 m</td>
<td>ET: 0 – 0.85 m FT: 0 – 0.25 m</td>
<td>ET: 0 – 1 m FT: 0 – 0.28 m X3: 0 – 0.14 m</td>
<td>Plastic</td>
<td>Plastic</td>
<td>Plastic</td>
<td>Highly visible red light / infrared</td>
<td></td>
</tr>
<tr>
<td>Highly visible red light / infrared</td>
<td>Highly visible red light</td>
<td>Highly visible red light / infrared</td>
<td>Highly visible red light / infrared</td>
<td>Highly visible red light / infrared</td>
<td>Highly visible red light / infrared</td>
<td>Highly visible red light / infrared</td>
<td></td>
</tr>
<tr>
<td>Teach button</td>
<td>Potentiometer</td>
<td>Teach button</td>
<td>Teach button</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>M8 / cable / Pigtail</td>
<td>M8 / cable / Pigtail</td>
<td>M12 / cable / Pigtail</td>
<td>M12 / cable / Pigtail</td>
<td>M8 / cable / Pigtail</td>
<td>M12 / cable / Pigtail</td>
<td>M8 / cable / Pigtail</td>
<td>M12 / cable / Pigtail</td>
</tr>
<tr>
<td>BTU 200M-Dxx BT 200M.5 BT 205M BTP 200M-Dxx Available as set</td>
<td>BT 205M BTU 200M-Dxx</td>
<td>BTD 18M.5 BT 201M BT 200M.5 BTP 200-Dxx</td>
<td>BTD 18M.5 BT 21M BT 200M.5 BTU D 18M-Dxx</td>
<td>BTU 200M-Dxx BT 200M.5 BT 205M BTP 200M-Dxx Available as set</td>
<td>BTD 18M.5 BT 21M BT 200M.5 BTP 200-Dxx</td>
<td>BTD 18M.5 BT 21M BT 205M BTP 200M-Dxx</td>
<td>BTD 18M.5 BTU D 18M-Dxx</td>
</tr>
</tbody>
</table>

### Throughbeam photoelectric sensors

- **PRK 5**
- **PRK 28**
- **PRK 15**
- **PRK 15.D**
- **PRK 318B**
- **PRK 328**
- **HT 5.1**
- **HT 15**
- **ET 5**
- **FT 5 (I)**
- **FT 5 I.X3**
- **ET 28**
- **FT 28**
- **ET 318B**
- **ET 318BI.X3**
- **FT 328(I)**
- **FT 328I.X3**

**Dimensions**

- 32.5 x 13.6 x 20.2 mm
- 46.5 x 15 x 37.3 mm
- 38.9 x 15 x 30 mm
- M18 x 50 / 60 mm (W)
- 34.2 x 11.4 x 18.3 mm
- 38.9 x 15 x 30 mm
- 32.5 x 13.6 x 20.2 mm
- 46.5 x 15 x 37.3 mm
- M18 x 50 / 60 mm (W)
- **Housing material**
  - Plastic
  - Plastic
  - Plastic
  - Plastic / metal sleeve
  - Plastic
  - Plastic
  - Plastic
  - Plastic / metal sleeve
- **Operating range**
  - 0.02 – 6.0 m
  - 0.02 – 6.0 m
  - 0.02 – 10.0 m (depol optics)
  - 0.05 – 8.0 m
  - 0.02 – 6.0 m (axial optics)
  - 0.02 – 5.0 m (90° optics)
  - ET: 0 – 1 m
  - FT: 0 – 0.28 m
  - X3: 0 – 0.14 m
  - ET: 0 – 1 m
  - FT: 0 – 0.28 m
  - X3: 0 – 0.14 m
  - ET: 0 – 1 m
  - FT: 0 – 0.28 m
  - X3: 0 – 0.14 m
  - ET: 0 – 15 m
  - FT: 0 – 15 m
  - X3: 0 – 30 m
- **Light source**
  - Highly visible red light
  - Highly visible red light
  - Highly visible red light
  - Highly visible red light
  - Highly visible red light
  - Highly visible red light
  - Highly visible red light
  - Highly visible red light
  - Highly visible red light / infrared
  - Highly visible red light / infrared
  - Highly visible red light / infrared
  - Highly visible red light / infrared
  - Highly visible red light / infrared
- **Adjustment element**
  - – / Teach button
  - Potentiometer / Teach button
  - – / Teach button
  - Potentiometer / Teach button
  - – / Teach button
  - Potentiometer / Teach button
- **Connection (Degree of protection)**
  - M8 / cable / Pigtail
  - M12 / cable / Pigtail
  - M8 / cable / Pigtail
  - M12 / cable / Pigtail
  - M8 / cable / Pigtail
  - M12 / cable / Pigtail
  - M8 / cable / Pigtail
  - M12 / cable / Pigtail
  - M8 / cable / Pigtail
  - M12 / cable / Pigtail
  - M8 / cable / Pigtail
  - M12 / cable / Pigtail
- **Outputs**
  - 2 / push-pull
  - 2 / push-pull
  - 1 / NPN / PNP
  - 2 / push-pull
  - 2 / push-pull
  - 2 / push-pull
  - 1 / NPN / PNP
  - 2 / push-pull

**Accessories**

- BTU 200M-Dxx
- BT 200M.5
- BT 205M
- BTP 200M-Dxx
- Available as set
- BTU 200M-Dxx
- BT 200M.5
- BT 205M
- BTP 200M-Dxx
- Available as set
- BTU 200M-Dxx
- BT 200M.5
- BT 205M
- BTP 200M-Dxx
- Available as set
- BTU 200M-Dxx
- BT 200M.5
- BT 205M
- BTP 200M-Dxx
- Available as set
- BTU 200M-Dxx
- BT 200M.5
- BT 205M
- BTP 200M-Dxx
- Available as set
- BTU 200M-Dxx
- BT 200M.5
- BT 205M
- BTP 200M-Dxx
- Available as set

*Available from Q1 / 2018*
HOUSING DESIGNS
CUBIC AND
UNIVERSAL

Flexibly adjustable side mounting for bracket or rod.

Cable outlets - Integration even in extremely limited installation spaces thanks to flexible cable outlet at the bottom or rear of the device

Through holes for M3 screws

On the front with M18 hole mounting at the beam exit

Standing screw fitting or M18 thread on the bottom of the device

On the side using robust screw fitting on the housing

MOUNTING ACCESSORIES

BT D21M and BT D18M.5:
Sensor mounting bracket

BTU 200M:
Sensor mounting brackets for rod mounting

BT 200M.5 and BT 205M:
Sensor mounting bracket
HOUSING DESIGN
CYLINDRICAL
WITH *omni-mount*

For limited installation space in M18 hole with minimum mechanical set-up, also with angled head.

Simple and reproducible M18 hole mounting by means of the two mounting nuts, which are positioned flatly one on top of the other.
SR 318B: Plastic nuts
SR 328: Metal nuts

With the BT 318P-LS mounting bracket, simple and flush mounting, e.g., in the belts of a conveyor system, is possible. The brackets can be used both for fastening the axial sensors as well as for sensors with 90° optics.

The *omni-mount* fastening system (BT 318B-OM) included in the scope of delivery of the SR 318B convinces users with its simple and ingenious possibilities for fine adjustment.

An additional model with 90° light beam gate extends the possible uses into even difficult installation situations.

**MOUNTING ACCESSORIES**

*BT D18M and BT D21M:*
Sensor mounting bracket

*BTU D18M-Dxx:*
Sensor attachment for rod mounting

*BT 318P-LS and BT 318B-OM:*
Sensor clip and *omni-mount* system
ACCESSORIES FOR ALL ECO-LINE STANDARD SENSORS CAN BE FOUND AT www.leuze.com

Even simpler and faster when used as a set

**BTP 200M:**
Sensor protective covers for rod mounting

**Selection of reflectors and reflective tapes**

**Sensor distribution box with M8 or M12 ports:**
Sensor distribution boxes with 4 / 6 / 8 / 10 ports provide greater transparency in installation

Large selection of straight or angled connection and interconnection cables with M8 and M12 connectors, also with LED
SMARTER PRODUCT USABILITY

With regard to our product developments, we systematically place emphasis on the especially good usability of all devices. To this end, simple mounting and alignment are taken into account – just as the uncomplicated integrability of the sensors in existing field bus systems and easy configuration, e.g. via a web browser, are.

SMARTER APPLICATION KNOW-HOW

Whoever can do it all, can do nothing right. Which is why we concentrate on selected target sectors and applications. There, we are specialists and know all aspects inside out. For this purpose, we optimize our solutions and offer a comprehensive product range that makes it possible for our customers to obtain the absolute best solutions from a single source.

SMARTER CUSTOMER SERVICE

The technical and personal proximity to our customers, and a skilled, straightforward handling of queries and problems, are among our strengths – and will remain so. Consequently, we will continue to expand our service offerings and, indeed, also forge ahead in new directions to persistently redefine the utmost in customer service. Whether on the phone, on the Internet or on-site with our customers – regardless of when and where the expertise of the sensor people is needed at any time.

Info at: www.leuze.com
Switching Sensors
- Optical Sensors
- Ultrasonic Sensors
- Fiber Optic Sensors
- Inductive Switches
- Forked Sensors
- Light Curtains
- Special Sensors

Measuring Sensors
- Distance Sensors
- Sensors for Positioning
- 3D Sensors
- Light Curtains
- Forked Sensors

Products for Safety at Work
- Optoelectronic Safety Sensors
- Safe Locking Devices, Switches and Proximity Sensors
- Safe Control Components
- Machine Safety Services

Identification
- Bar Code Identification
- 2D-Code Identification
- RF Identification

Data Transmission/Control Components
- MA Modular Connection Units
- Data Transmission
- Safe Control Components
- Signaling Devices
- Connection Technology and Passive Distribution Boxes

Industrial Image Processing
- Light Section Sensors
- Smart Camera