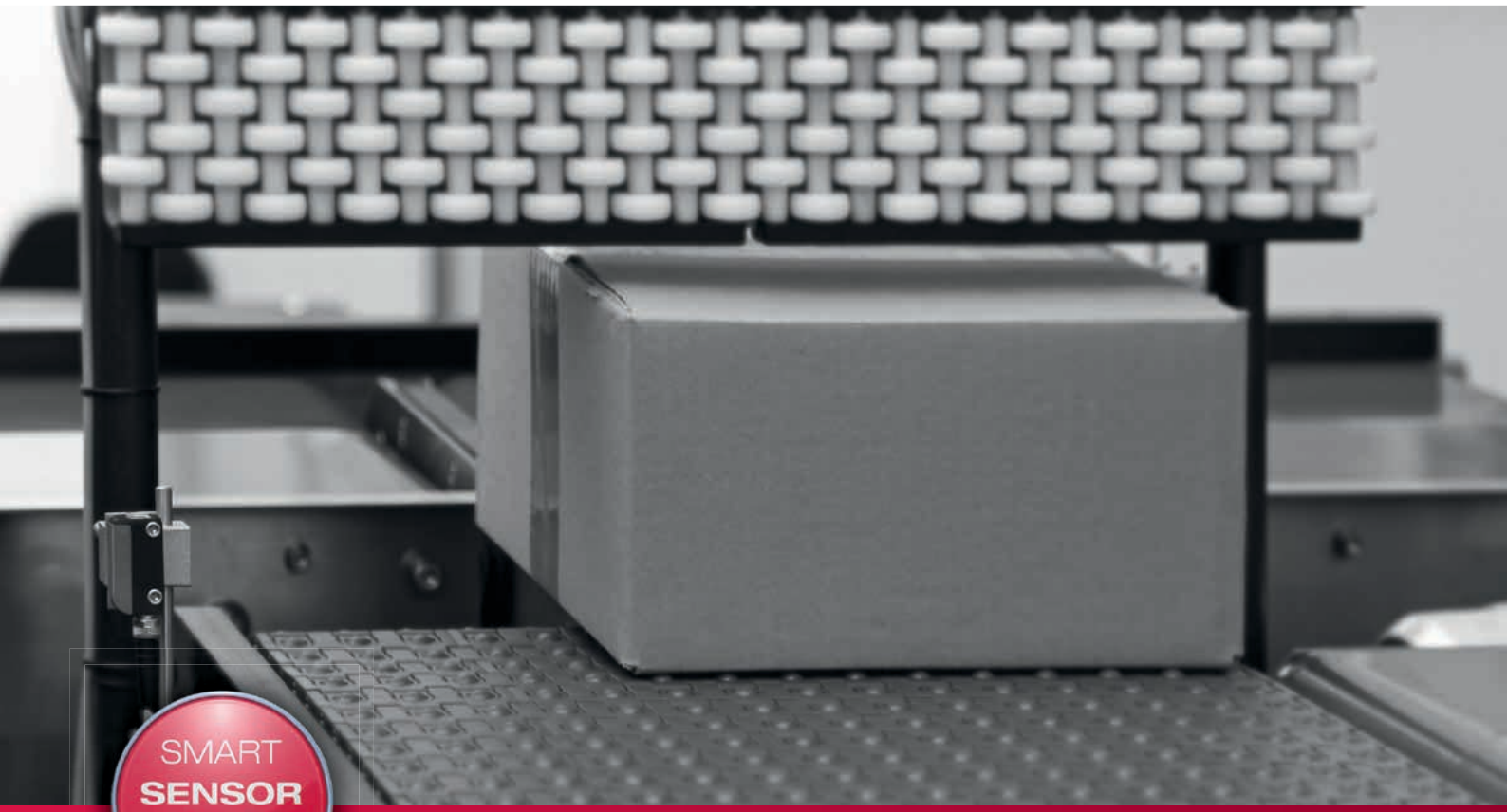
Leuze electronic

the sensor people



SMART
SENSOR
BUSINESS

GLOBAL BEAM

Standard sensors for automation

www.leuze.com

ПРОМЭЛЕКТРОНИКА / sales@prom-elec.com

COMPACT, EFFICIENT AND ECONOMICAL

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

*easy*handling.

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

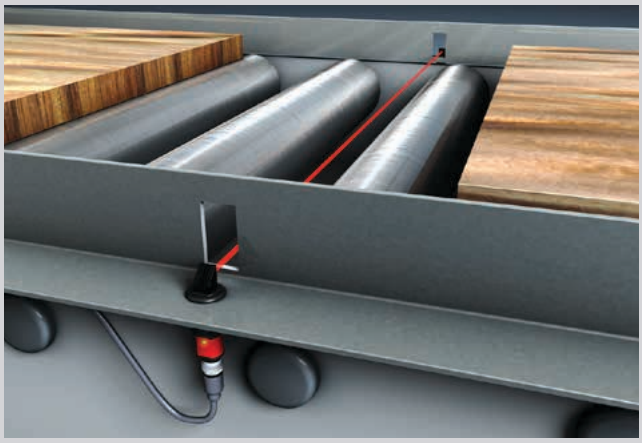
Throughbeam photoelectric sensor
L 5, L 15*, L 28, L 318B and L 328

	L 5 (I) L 15* L 28	L 318B / L 328 (I)
Light source	Highly visible red light or infrared	
Operating range limit	0 – 15 m	0 – 15.0 m (23 m axial optics) 0 – 8.0 m (90° optics)
Switching frequency	500 Hz	

- 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

Wood plate detection



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

	PRK 5 PRK 15 PRK 15D PRK 28	PRK 318B PRK 328
Light source	Highly visible red light	
Operating range limit	0.02 – 6.0 m	0.02 – 6.0 m (axial optics) 0.02 – 5.0 m (90° optics)
Switching frequency	500 Hz	

- 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

Object detection on the transport system

DIFFUSE REFLECTION SENSOR

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

		ET 5 / FT 5 ET / FT 5.1 FT 5I.X3	ET 28 FT 28	ET 318B FT 318 FT 318BI.X3	ET 328B FT 328 (I) FT 328 I.X3
Light source		Highly visible red light			
Operating range limit	ET	0 – 1.0 m	0.03 – 0.85 m	0 – 1.0 m	0 – 1.0 m
	FT	0 – 0.28 m	0.02 – 0.25 m	0 – 0.28 m	0 – 0.28 m
	X3	0 – 0.14 m	–	0 – 0.14 m	0 – 0.14 m
Switching frequency		500 Hz			

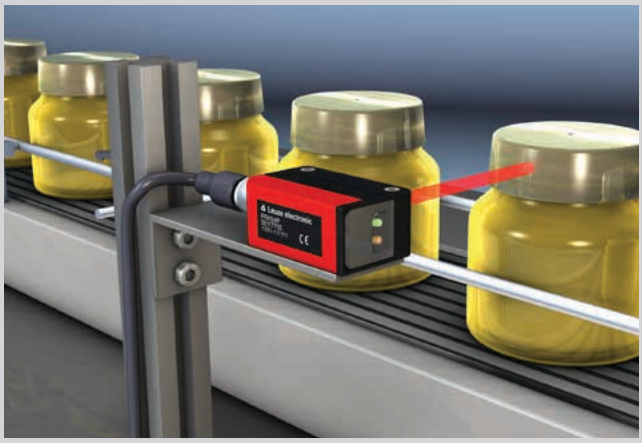
- High function reserve enables reliable detection even in extreme situations
- Simple detection of flat objects
- Optimum adaptation with teach button and 2 levels (object or background)
- 328 series: Metal threads for high strength mounting
- **NEW** FT.X3: Fading sensor with V-optics

Diffuse reflection sensor
with background suppression
HT 5.1 and HT 15

	HT 5.1	HT 15
Light source	Highly visible red light	
Operating range limit	0 – 0.4 m	0 – 1.0 m
Switching frequency	500 Hz	

- Easy alignment by means of bright light spot
- Sensitivity adjustment by means of potentiometer
- Only available in cubic compact housing

Detection of glossy objects



Object detection on transportation systems

NOW YOU JUST HAVE T THE ONE SUITABLE FO APPLICATION

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

Retro-reflective photoelectric sensors

Diffuse reflection sensor with background suppression

	PRK 5	PRK 28	PRK 15 / PRK 15.D	PRK 318B / PRK 328	HT 5.1	HT 15
Dimensions	32.5 × 13.6 × 20.2 mm	46.5 × 15 × 37.3 mm	38.9 × 15 × 30 mm	M18 × 50 / 60 mm (W)	34.2 × 11.4 × 18.3 mm	38.9 × 15 × 30 mm
Housing material	Plastic	Plastic	Plastic	Plastic / metal sleeve	Plastic	Plastic
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)	0.005 – 0.4 m	0.01 – 1 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
Adjustment element	–	– / Teach button	Potentiometer	– / Teach button	Potentiometer	Potentiometer
Connection (Degree of protection) (Switching frequency)	M8 / cable / Pigtail	M12 / cable / Pigtail	M8 / cable / Pigtail	M12 / cable / Pigtail	M8 / cable / Pigtail	M8 / cable / Pigtail
Outputs	2 / push-pull	2 / push-pull	1 / NPN / PNP	2 / push-pull	1 / NPN / PNP	1 / NPN / PNP
Accessories	BTU 200M-Dxx BT 200M.5 BT 205M BTP 200M-Dxx Available pre-mounted as a set	BTD 18M.5 BTD 21M BT 200M.5 BTP 200-Dxx	BTU 200M-Dxx BT 200M.5 BT 205M BTP 200M-Dxx	BTD 18M.5 BTD 21M BTU D 18M-Dxx	BT 205M BTU 200M-Dxx	BTU 200M-Dxx BT 200M.5 BT 205M BTP 200M-Dxx

*Available from Q1 / 2018

O SELECT
R YOUR

Diffuse reflection sensor - energetic

Throughbeam photoelectric sensors

ET 5 / FT 5 (I) FT 5I.X3	ET / FT 5.1	ET 28 / FT 28	ET 318B / ET 318BI.X3 FT 328(I) FT 328I.X3	L 5 (I)	L 28	L 15*	L 318B / L 328 (I)
32.5 × 13.6 × 20.2 mm	34.2 × 11.4 × 18.3 mm	46.5 × 15 × 37.3 mm	M18 × 50 / 60 mm (W)	32.5 × 13.6 × 20.2 mm	46.5 × 15 × 37.3 mm	38.9 × 15 × 30 mm	M18 × 50 / 60 mm (W)
Plastic	Plastic	Plastic	Plastic / metal sleeve	Plastic	Plastic	Plastic	Plastic / metal sleeve
ET: 0 – 1 m FT: 0 – 0.28 m X3: 0 – 0.14 m	ET: 0 – 1 m FT: 0 – 0.28 m	ET: 0 – 0.85 m FT: 0 – 0.25 m	ET: 0 – 1 m FT: 0 – 0.28 m X3: 0 – 0.14 m	0 – 15 m	0 – 15 m	0 – 30 m	0 – 15.0 m (axial optics) 0 – 8.0 m (90° optics)
Highly visible red light / infrared	Highly visible red light	Highly visible red light	Highly visible red light / infrared	Highly visible red light / infrared	Highly visible red light	Highly visible red light	Highly visible red light / infrared
Teach button	Potentiometer	Teach button	Teach button	–	–	–	–
M8 / cable / Pigtail	M8 / cable / Pigtail	M12 / cable / Pigtail	M12 / cable / Pigtail	M8 / cable / Pigtail	M12 / cable / Pigtail	M8 / cable / Pigtail	M12 / cable / Pigtail
2 / push-pull	1 / NPN / PNP	2 / push-pull	2 / push-pull	2 / push-pull	2 / push-pull	1 / NPN / PNP	2 / push-pull
BTU 200M-Dxx BT 200M.5 BT 205M BTP 200M-Dxx Available as set	BT 205M BTU 200M-Dxx	BTD 18M.5 BTD 21M BT 200M.5 BTP 200-Dxx	BTD 18M.5 BTD 21M BTU D 18M-Dxx	BTU 200M-Dxx BT 200M.5 BT 205M BTP 200M-Dxx Available as set	BTD 18M.5 BTD 21M BT 200M.5 BTP 200-Dxx	BTU 200M-Dxx BT 200M.5 BT 205M BTP 200M-Dxx	BTD 18M.5 BTD 21M BTU D 18M-Dxx

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

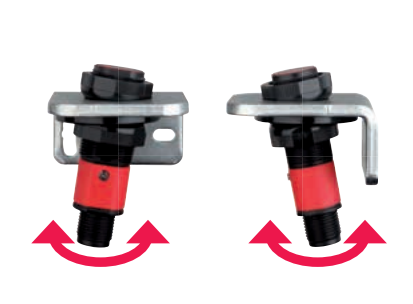
BT 200M.5 and BT 205M:
Sensor mounting bracket

HOUSING DESIGN CYLINDRICAL WITH *omni-mount*

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

Attachment using mounting bracket with axial or angled optical outlet

Embedded installation with clip



Fine adjustment of ±8° possible with omni-mount

Simple and reproducible M18 hole mounting by means ofthe 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 patented ***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

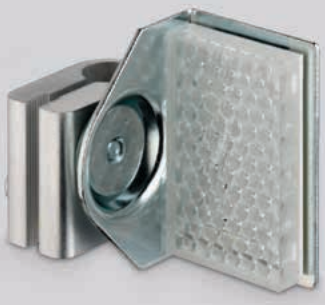
BTU D18M-Dxx:
Sensor attachment for rod mounting

BT 318P-LS and BT 318B-OM:
Sensor clip and *omni-mount* system

ACCESSORIES

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

OUR PROMISE TO YOU

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**

Martina Weil,
Employee in the
Customer Care Center

Switching Sensors
Optical Sensors
Ultrasonic Sensors
Fiber Optic Sensors
Inductive Switches
Forked Sensors
Light Curtains
Special Sensors

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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

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