Leuze electronic

the sensor people

Series 46B
Photoelectric Sensors and Light Scanners

PRODUCT INFORMATION

The new **sensor generation**
Series 46B.

Reliable, high-performance, cost-effective

Series 46B sets new standards in optical sensors. With high performance reserves and large operating ranges, these sensors are ideal for use in the wood-processing industry and in machines for special applications. The highly visible, bright light spot and the reliable detection of stretch-wrapped objects reduce life-cycle costs in materials handling. Thanks to the IP 67 and IP 69K protection classes as well as the ECOLAB certification, high services lives are achieved in spite of the intense cleaning cycles encountered in packaging technology.

The most important advantages at a glance.

Fast commissioning:

With brightVision®:
Fast and easy alignment through the use of a very bright light spot; bright, 360° visible indicator diodes facilitate full control.

Sensor adjustment is quick and reproducible via **teach in**. The **IO-Link** interface enables access to all important parameters directly from the control, thereby making fast commissioning, quick format changes and comprehensive diagnostic options possible.

Protection against interference:

- Insensitive against soiling due to very high performance reserve
- Very robust housing
- Low ambient light sensitivity through A²LS
- High resistance to environmental influences: IP 67, IP 69K, Ecolab
- Large operating temperature range: -40°C – +60°C
- Increased availability through warning output

Maximum performance:

- Large operating ranges
- Scanners with 2 individually adjustable switching points
- Reliable detection of dark, stretch-wrapped and glossy objects as well as objects with coloured structure
- Format conversions and diagnostics via IO-Link interface
- Reliable differentiation between object and background

Throughbeam photoelectric sensors

For reliable function and high ranges.

For efficent machinery protection.

LSR 46B

Light source:	red-light LED
Operating range limit:	60 m
Switching frequency:	500 Hz

- Switching state display visible over the full range
- Robust behaviour by optimised light spot geometry
- Simple alignment and inspection of the adjustment by the spot alignment tool SAT 5

SLSR 46B

Light source:	red-light LED
Operating range limit:	44 m
Switching frequency:	100 Hz

- Protective photoelectric sensor AOPD type 2
- Robust behaviour by optimised light spot geometry
- This protective photoelectric sensor is already conform with EN ISO 13849-1
- Simple alignment and inspection of the adjustment by the spot alignment tool SAT 5

Gab monitoring at high-bay storage devices

Foot space protection at side-tracking shelves

Retro-reflective photoelectric sensors

Reliable function with small, **misadjusted** reflectors and heavy **soiling**.

Reliable detection of **stretch-wrapped** pallets.

PRK 46B

Light source:	red-light LED
Operating range limit:	0.05 – 18 m
Switching frequency:	500 Hz

- Maximum performance reserve
- Reliable object detection with small, misadjusted reflectors, large operating range or heavy soiling

PRK 46B.2

Light source:	red-light LED
Operating range limit:	0.1 – 10 m
Switching frequency:	500 Hz

- Optimised for use on roller conveyors
- Reliable function even with stretch-wrapped pallets

Detection of wood pallets

Detection of stretch-wrapped objects

Diffuse reflection light scanner with background suppression

For reliable detection of dark and glossy objects.

For very simple alignment with extra bright light spot.

HRT 46B

Light source: infrared LED
Scanning range limit: 0 – 2500 mm
Adjustment range: 120 – 2500 mm

- Very high performance reserve
- Very small black/white error
- Optimised for glossy, dark objects
  and large operating ranges

HRTR 46B ⓣ

Light source: red-light LED
Scanning range limit: 5 – 1800 mm
Adjustment range: 120 – 1800 mm

- Versions with mechanical adjustment and teach in
- High performance reserve
- Very visible, bright light spot
- Remote teach via teach cable
- Manipulation protection via lockable button

Object detection on stretch packaging machinery

Vertical positioning

Two scanners in one.

For very precise positioning and detection of small parts.

HRTR 46B-Teach (T) ⊘ IO-Link

Light source:	red-light LED
Scanning range limit:	20 – 1800 mm
Adjustment range:	120 – 1800 mm

- Output from two individually adjustable switching points
- Configuration and diagnostics via IO-Link interface
- Quick format conversions through adjustment of scanning range in millimeters via interface
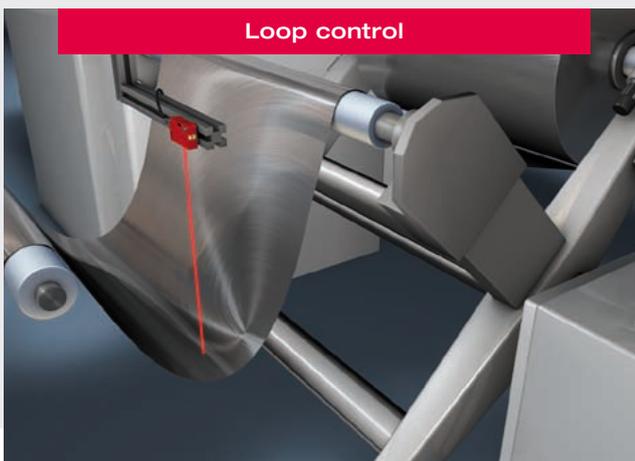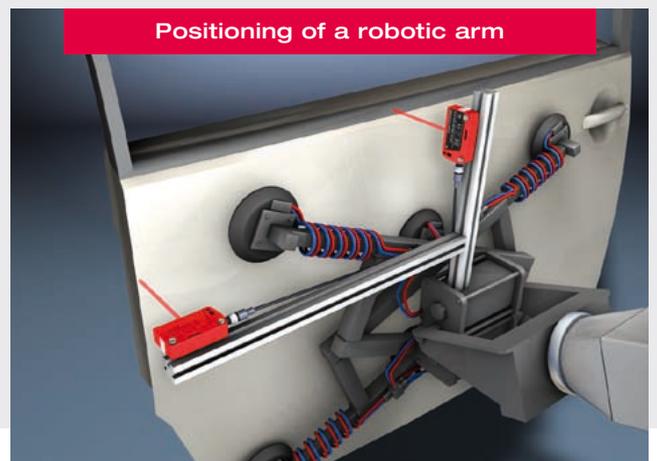- Optimal cost-performance ratio for simple two point regulations

Loop control

HRTL 46B

Light source:	red-light laser
Scanning range limit:	50 – 1200 mm
Adjustment range:	120 – 1200 mm
Switching frequency:	1000 Hz

- Versions in laser class 1 available
- Light spot: 3×5 mm² at distance of 1 m
- Precise positioning and detection of small parts

Positioning of a robotic arm

Diffuse reflection light scanner with background suppression

For reliable detection of objects with coloured structure.

For detection between the rollers of a roller conveyor.

HRTR 46B small beam

Light source:	red-light LED
Scanning range limit:	10 – 500 mm
Adjustment range:	120 – 700 mm
Small light spot:	focussed at approx. 200 mm

- Reliable detection of objects with coloured structure located in front of a background
- Optimised for applications in the wood and packaging industries
- Typical actuation distances: 100 – 300 mm

Detection of wood pallets

HRT 46B, narrow beam

Light source:	infrared LED
Scanning range:	10 – 1200 mm
Adjustment range:	120 – 1200 mm

- Detection through a gap ≥ 6 mm
- Reliable detection of wood or plastic pallets independent of their height
- Simple alignment
- Large optics ensure low sensitivity to soiling
- Detection of overhanging objects

Detection of objects between rollers

Reference scanner

Safe detection of containers on conveying belts.

HRTR 46B-Teach (T) ⬡ **IO**-Link

Actuation distance: 200 – 500 mm

- Safe detection of shiny, dark or partially-transparent objects on conveying belts or in front of a fixed background
- Fast commissioning through teach in on conveying belts or backgrounds

Container transport

Optoelectronic Sensors

Cubic Series
Cylindrical Sensors, Mini Sensors, Fiber Optic Amplifiers
Measuring Sensors
Special Sensors
Light Curtains
Forked Sensors
Double Sheet Monitoring, Splice Detection
Inductive Switches
Accessories

Identification Systems
Data Transmission Systems
Distance Measurement

Barcode Readers
RF-IDent-Systems
Modular Interfacing Units
Industrial Image Processing Systems
Optical Data Transmission Systems
Optical Distance Measurement/Positioning
Mobile Code Readers

Safety Sensors
Safety Systems
Safety Services

Safety Laser Scanners
Safety Light Curtains
Transceivers and Multiple Light Beam Safety Devices
Single Light Beam Safety Devices
AS-i-Safety Product Range
Safety Sensor Technology for PROFIBUS DP
Safety Switches, Safety Locking Devices and Safety Command Devices
Safety Relays
Sensor Accessories and Signal Devices
Safety Engineering Software
Machine Safety Services