



SMART
SENSOR
BUSINESS

3C SERIES

Compact photoelectric sensors
and diffuse sensors

powerreserve.



SENSOR SOLUTIONS FOR ALMOST ANY APPLICATION

The 3C series offers a range of unique features and the largest selection of functions that any device currently available on the market in this performance segment has to offer.

*power*reserve.



COMPACT, ROBUST, VERSATILE AND USER-FRIENDLY

In addition to large operating ranges and increased function reserves, the 3C series scores with simple handling and fast commissioning. Thus, the devices stand for reliable object detection even in dusty environments or with high alignment tolerances.

Technologies such as A²LS (Active Ambient Light Suppression), simple one-point teaching and the optional IO-Link interface characterize this series.



THE ALL-ROUNDERS AMONG THE SENSORS

Thanks to the diverse range of models of the compact 3C series, these sensors are used in a wide range of applications, such as in mounting/handling technology as well as in the transport of very small containers, in printing technology or in packaging systems.

powerreserve.

- Maximum function reserves
- High extraneous light protection through A²LS
- Energy savings through low power consumption
- Degree of protection IP 67 and IP 69K for demanding environmental conditions

easyhandling.

- 360° visibility of the indicator diodes
- Teaching devices, also with line teaching
- Protection against manipulation by means of a lockable button
- Significantly reduced squint angle simplifies mounting without alignment
- All sensors optionally with IO-Link

thinkmodular.

- Models with M3 threaded sleeves
- Slotted hole for flexible mounting
- Diffuse sensors with background suppression and special light-spot profiles (rectangular, small)
- Diffuse sensors with background suppression
- Sensors with autocollimation principle
- Photoelectric sensors and diffuse sensors with laser light and collimated light beam propagation
- Models with PNP and NPN outputs
- Connection options include M8 connector, 2,000 mm cable and cable with M8 or M12 connector

Simple, one-point teaching



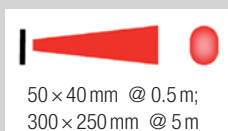
Integrated metal mounting sleeve



Robust M8 metal thread



RETRO-REFLECTIVE PHOTOELECTRIC SENSORS



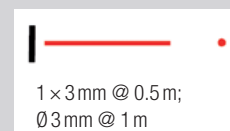
The retro-reflective photoelectric sensor for reliable detection
PRK 3C



	PRK 3C
Operating range limit	0 – 10 m
Switching frequency	1,500 Hz
Functions	Standard

- High function reserve
- Reliable detection with standard light spot

Detection of containers



The single-lenses device for exact positioning applications
PRK 3C.A / PRK 3CL.A

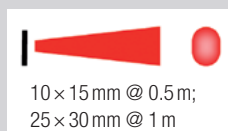


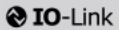
	PRK 3C.A	PRK 3CL.A
Operating range limit	0 – 5 m	0 – 3 m
Switching frequency	1,500 Hz	3,000 Hz
Functions	Autocollimation	Dynamic teach

- Specially suited for positioning with high accuracy
- Object detection through slits, holes and gaps
- Reliable detection in fast processes
- Reliable detection of objects with a diameter ≥ 1 mm

Detection of tamper-evident seals





The retro-reflective photoelectric sensors for films and transparent objects
PRK 3C.T / TT 

	PRK 3C.T / PRK 3C.TT	PRK 3C.TT
Operating range limit	0–3.5 m	
Switching frequency	1,500 Hz	
Functions	For bottles	Tracking

- Maximum threshold adjustability for detection of transparent objects
- High switching point stability through temperature compensation
- Automatic contamination compensation with tracking

Detection of clear glass containers



MATCHING ACCESSORIES FOR RETRO-REFLECTIVE PHOTOELECTRIC SENSORS

Plastic triple reflectors
 TKS 20x40, TKS 40x60



Micro-triad-type reflectors for laser
 types MTKS 14x23, MTKS 20x30



Reflective tapes
 REF 20x20, REF 50x50



DIFFUSE REFLECTION SENSORS



HT 3C



HT 3CL

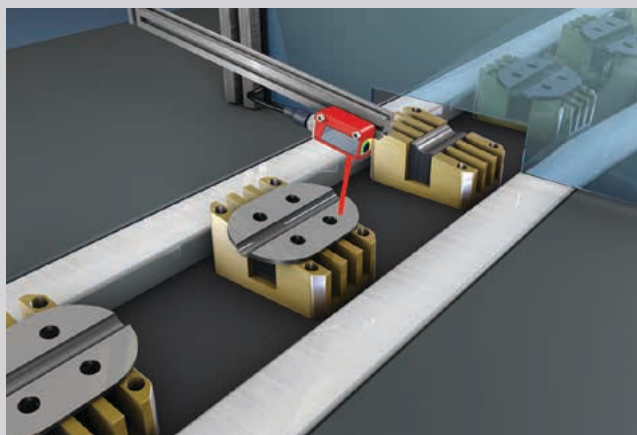


Diffuse reflection sensor
with background suppression
HT 3C / HT 3CL

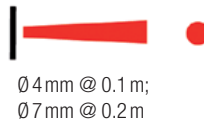
	HT 3C	HT 3CL
Operating range limit	5 – 400 mm	15 – 550 mm
Switching frequency	1,000 Hz	3,000 Hz
Functions	Standard	

- Very good black/white behavior and reliable switching
- Exact range adjustment via 8-turn potentiometer
- Also available with laser class 1 (HT 3CL)

Detection of workpiece holders



HT 3C-S



HT 3C-XL



HT 3C-V

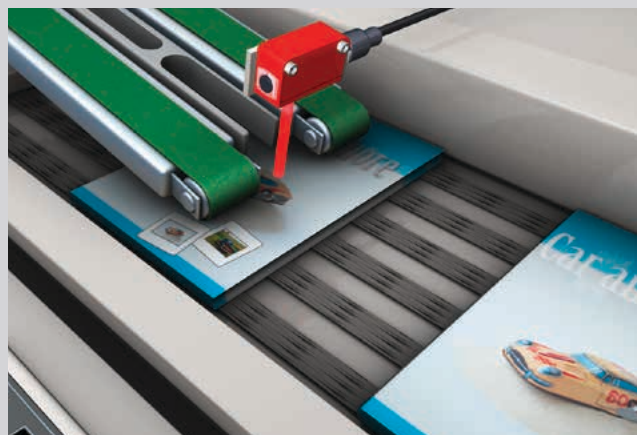


Sensor for demanding
object detection
HT 3C-S/-XL/-V

	HT 3C-S	HT 3C-XL	HT 3C-V
Operating range limit	5 – 200 mm	5 – 100 mm	15 – 150 mm
Switching frequency	1,000 Hz		
Functions (light spot)	Small	Long	V-optics

- Light spot HT 3C-S: For glossy and color structured objects
- Light spot HT 3C-XL: Detection of objects with bore holes and grooves, e.g. circuit boards
- Light spot HT 3C-V: Especially suitable for planar, reflective and high-gloss surfaces

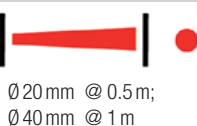
Detection of high-gloss objects



THROUGHBEAM PHOTOELECTRIC SENSORS

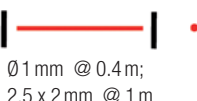


L 3C




Ø 20 mm @ 0.5 m;
Ø 40 mm @ 1 m

L 3CL



Ø 1 mm @ 0.4 m;
2.5 x 2 mm @ 1 m

Throughbeam photoelectric sensor  **IO-Link**
for large operating range and small objects

L 3C / L 3CL

	L 3C	L 3CL
Operating range limit	10 m	
Switching frequency	1,500 Hz	3,000 Hz
Functions	Standard	Laser

- Reliable detection with small light spot
- Activation input / warning output

Detection of small objects



MATCHING ACCESSORIES

Sensor mounting bracket
BT205M / BT3B



Sensors rod mount
BTU 200M



Sensor voltage supply
PSU



Sensor distribution box with M8-/M12
ports MD7XX



Connection and interconnection cables
K DS / K DU



Signaling column
A7 / A4

