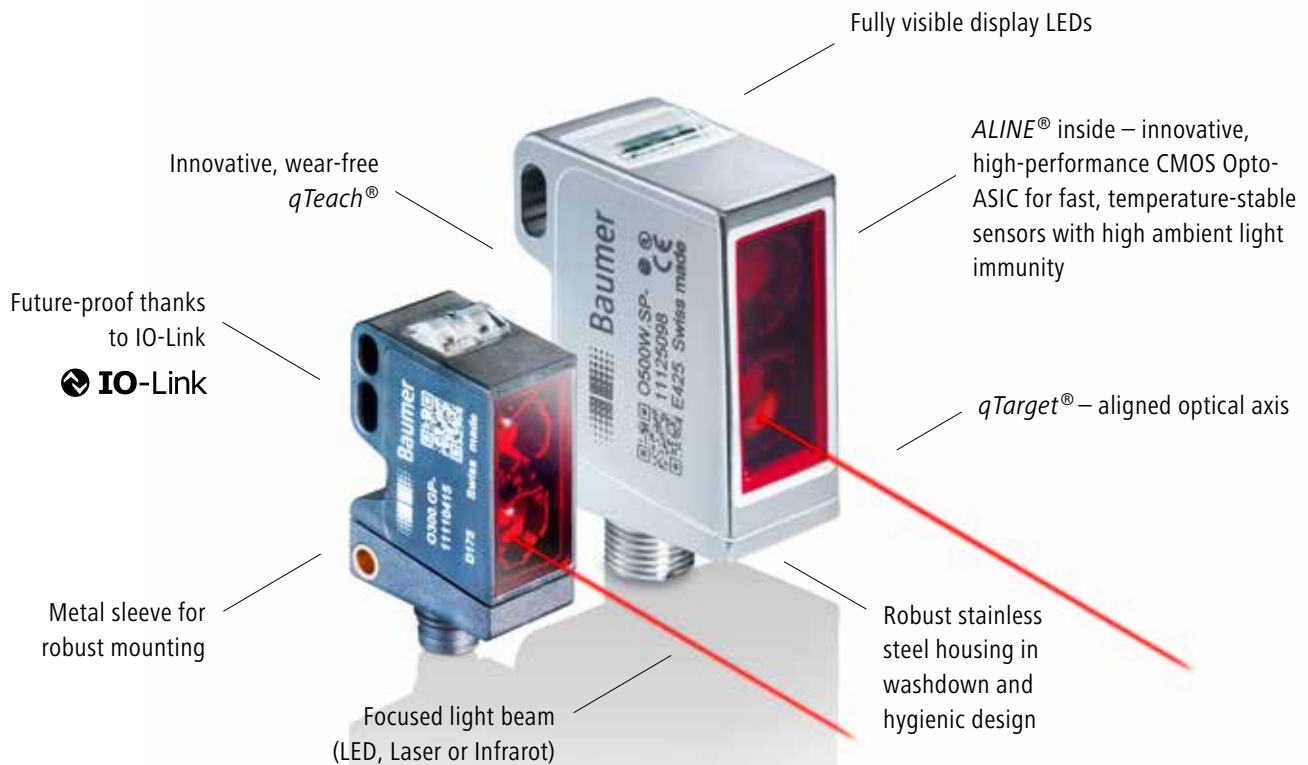


# O300, O500 Light barriers and diffuse sensors

A unique portfolio for reliable object detection.



# O300/O500 – The easy solution for reliable object detection.



## Solve applications simply and properly

Thanks to the choice of two housing sizes in three designs, four light sources and seven sensor principles, among other options, you are sure to find the right sensor solution for your application.

## Process safety through extended performance reserves

Powerful processors, sophisticated optical measuring technology, high MTF values and intelligent analysis algorithms guarantee you the necessary reserves to make sure that objects are always reliably detected, even under difficult conditions.

## Simple implementation

Flexibility in machine design thanks to the uniform housing in *OneBoxDesign*, fast installation thanks to the *qTarget®* aligned light beam and optimum adjustment with the reliable and wear-free *qTeach®* and 1-step teach-in procedure allow you to implement solutions very easily.

## Uniform operating concept

*qTeach®*, the comfortable and wear-free teach-in procedure by Baumer, allows flexible and accurate adjustment of the sensors. The shortened 1-step teach-in procedure is available for simple applications.

## Ready for Industry 4.0

The use of additional sensor data via the IO-Link interface offers not only further improvements in efficiency but also the option of developing completely new products and services. Examples are proactive maintenance and highly flexible parameterization in complex format changes.

# The O300/O500 highlights.

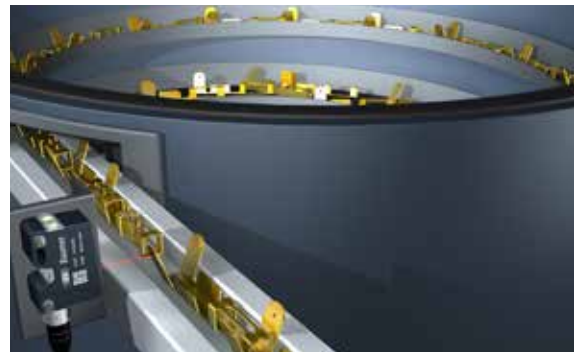
## In a nutshell – O300/O500 laser

- Detection of tiny objects thanks to a very accurate, 0.1 mm light beam
- Precise control of fast processes thanks to response times <0.1 ms
- Reliable detection of parts positioned close together
- Laser class 1, to protect your eyes
- The high repeatability allows very precise positioning of small objects



## SmartReflect® – the first light barrier without a reflector

- Highly reliable object detection thanks to the sensor principle
- Greater process safety through elimination of the reflector as the weak point
- No function impairment from dirt accumulation
- Reduction of running costs: fast installation, no downtimes caused by defective or dirty reflector



## Detection of transparent objects from up to one meter without reflector

- Unique range of 1 meter without reflector
- Response time of only 0.25 ms allows usage in fast applications
- One sensor for all objects: PET and glass bottles, trays, films or flow packs
- Large sensing distance thanks to very small blind region


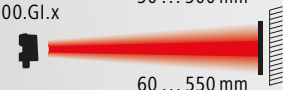

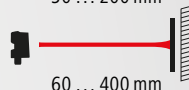







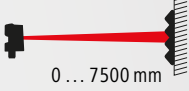
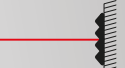
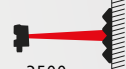
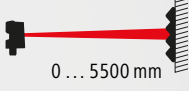

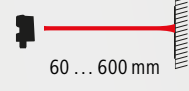
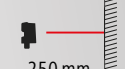

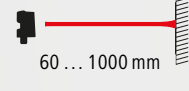


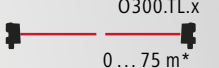


## Improvement in reliability – O300/O500 in stainless steel with *proTect+*

- Thanks to the *proTect+* impermeability concept by Baumer, the sensors offer maximum reliability and a long service life
- The special design and the selection of high-quality materials guarantee maximum strength
- More than just IP 69K: the sensors undergo a demanding testing procedure consisting of high-pressure cleaning, immersion tests lasting 168 hours as well as temperature shock tests in water and air

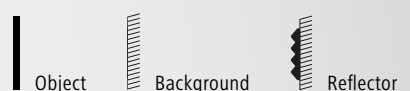


# Light sources for every application.

Standard LED (R)/ Infrared LED (I)	Baumer <i>PinPoint</i> (P)	Laser (L)
<b>Diffuse sensor with background suppression (O300.Gx)</b>		
O300.GR.x/O300.GI.x  30 ... 300 mm O500.GR.x/O500.GI.x  60 ... 550 mm	O300.GP.x  30 ... 200 mm O500.GP.x  60 ... 400 mm	O300.GL.x  30 ... 250 mm
<b>Diffuse sensor with intensity difference (O300.Zx)</b>		
O300.ZR.x/O300.ZI.x  10 ... 400 mm O500.ZR.x/O500.ZI.x  20 ... 600 mm		O300.ZL.x  10 ... 250 mm
<b>Retro-Reflexive sensor (O300.Rx)</b>		
O300.RR.x  0 ... 4000 mm O500.RR.x  0 ... 7500 mm	O300.RP.x  0 ... 5000 mm O500.RP.x  0 ... 7500 mm	O300.RL.x  0 ... 5000 mm
<b>Retro-Reflexive sensor for transparent objects (O300.Rx.T)</b>		
	O300.RP.T.x  0 ... 3500 mm O500.RP.T.x  0 ... 5500 mm	
<b>SmartReflect® light barrier without reflector (O300.Sx)</b>		
	O300.SP.x  30 ... 300 mm O500.SP.x  60 ... 600 mm	O300.SL.x  30 ... 250 mm
<b>SmartReflect® Transparent (O300.Sx.T)</b>		
	O300.SPT.x  30 ... 300 mm O500.SPT.x  60 ... 1000 mm	
<b>Through beam barrier (O300.Ex / O300.Tx)</b>		
O300.ER.x  O300.TR.x 0 ... 15 m O500.ER.x  O500.TR.x 0 ... 40 m		O300.EL.x  O300.TL.x 0 ... 75 m*

\*Range: light barriers = nominal range, diffuse sensors = sensing distance

Please find the complete portfolio including hygienic and washdown design in the Baumer product finder at [www.baumer.com](http://www.baumer.com).



# The ideal platform for tailor-made solutions.

- O300 – for tight spaces (12.9 × 32.3 × 23 mm)
- O500 – for larger ranges (18 × 45 × 32 mm)



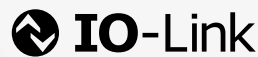
- Compact plastic housing IP 67
- Stainless steel washdown design IP 68/69K, Ecolab and *proTect*<sup>+</sup>
- Stainless steel hygienic design with Ecolab and *proTect*<sup>+</sup> conforms to EHEDG and FDA



2 housing sizes

3 housing designs

More than 2500 sensor variants



7 sensor principles

4 light sources

- Diffuse sensor with background suppression
- Diffuse sensor with intensity difference
- *SmartReflect*<sup>®</sup> – light barrier without reflector
- *SmartReflect*<sup>®</sup> Transparent
- Retro-Reflexive sensor
- Retro-Reflexive sensor for transparent objects
- Through beam barrier



**Standard LED** – diffuse light spot, especially suited for object detection during parts feeding



**Baumer *PinPoint* LED** – small, homogenous light spot with a sharp focus



**Infrared LED** – invisible light spot e.g. used for light barriers



**Laser** – focused, clearly visible light beam, well suited for accurate positioning tasks

# Accessories.



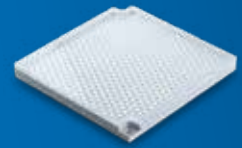
Sensofix mounting



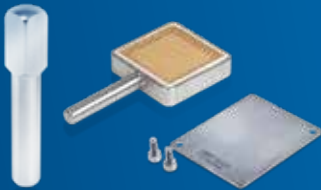
Mounting angles



Connectors



Reflector



Stainless steel reflectors,  
EHEDG and Ecolab-certified



Mountings for sensors in  
hygienic design



Connectors/Plugs in  
washdown design



Magnetic teach pen



USB IO-Link Master

You can find further information about additional models of the new performance category in optical sensors at:



[www.baumer.com/O300-0500](http://www.baumer.com/O300-0500)

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