

Precise, fast and high range

## BOS 6K SENSORS WITH TIME-OF-FLIGHT-TECHNOLOGY

The BOS 6K optoelectronic sensor family consists of cubical midi sensors that cover all relevant detection principles and use different light sources for this purpose. The latest generation convinces with proven, but also completely new functional principles and technologies.

What all sensors in the family have in common is their housing shape, their operating concept and the IO-Link communication standard. This uniformity considerably simplifies the parameterization and integration of the sensors. In combination with the intelligent PNP/NPN output, this also reduces the number of variants required.

In addition to the standard red light and laser variants, Balluff now also offers sensors equipped with Time-of-Flight (TOF) technology for long-distance sensing. They are capable of detecting objects safely and reliably at longer distances, despite their small housing.

### Multitalented sensors with Time-of-Flight technology

The new BOS 6K sensors with TOF are a precise, fast and versatile solution for distance measurement. This is particularly advantageous for background suppression, as it means that even a background close to the object can be reliably distinguished from the object.

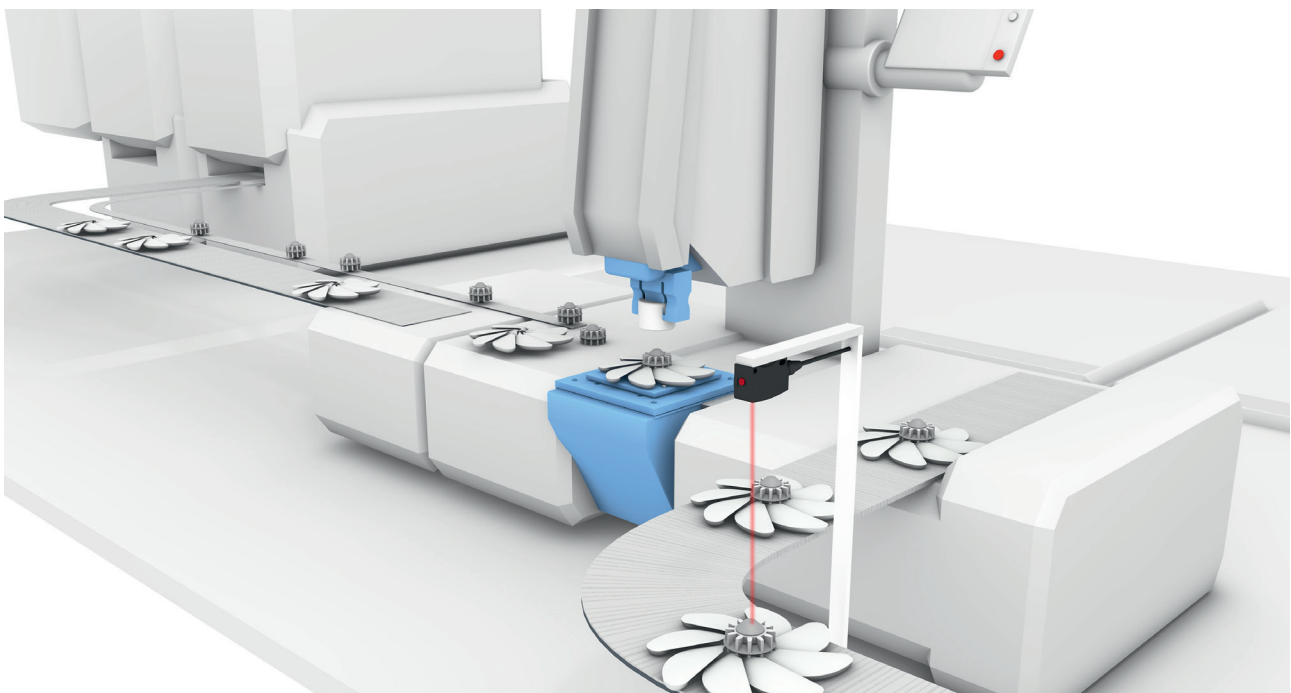
The time-of-flight method also works reliably at greater distances, which means that the sensors can be used for distances of up to 1.5 m despite their compact design. This opens up completely new possibilities in the design of automation systems and makes the sensors very flexible to use.

Another major advantage of TOF sensors is their versatility: they can be used in different environments, as their operation doesn't depend on the surface and colour of the object. They reliably detect both light and dark surfaces.

Finally, the sensors are impressively robust: These dust- and waterproof Time-of-Flight sensors with their IP69 protection class, like all the BOS 6K sensors, are ready for use in harsh, industrial environments.

### Features

- Uniform space-saving housing shape for all variants
- Uniform operating concept and simple integration thanks to IO-Link
- Time-of-Flight sensors for precise distance measurement up to 1.5 m
- Object detection independent of object surface and color
- Robust, dust- and waterproof for industrial environments



Detection of object details at long distances

BOS 6K SENSOR  
WITH TIME-OF-FLIGHT-  
TECHNOLOGY



	BOS02EK
Series	BOS 6K
Optical operating principle	Background suppression
Range	0...1500 mm
Gray value shift (20%/90%)	≤ 15 mm
Light type	Laser red light, 655 nm
Laser class	1
Beam characteristic	Collimated
Light spot size	2 × 3 mm at 1500 mm
Interface	IO-Link 1.1.3 COM 2
Output function	Pin 4: AutoDetect (PNP/NPN) NO/NC selectable, Pin 2: Teach
Switching hysteresis	4...7 mm (at switching frequency 5 Hz)
Switching frequency	5...500 Hz
Connection	Connector, M8 male, 4-pin
Operating voltage U <sub>B</sub>	18...30 V DC
Dimensions	34 × 20 × 12 mm
Housing material	ABS
Material sensing surface	PMMA
Approval/conformity	CE, UL, UKCA

ACCESSOIRES



	BAM00UH	BAM0304	BAM0305
Version	2 adjustable axes	Multifunctional holder	Holder with protective housing
Material	Steel zinc plated	Die-cast zinc	Die-cast zinc
Dimension	14 × 30 × 20 mm	∅ 32 × 16 mm	∅ 32 × 16 mm
Mounting part	Screw M3	Screws, clamps	Screws, clamps

CONNECTIVITY



	BCC02TL	BCC03KC	BCC03JW	BCC02N2
Connection 1	M8-female, straight, 4-pin, A-coded	M8-female, angled, 4-pin, A-coded	M8-female, straight, 4-pin, A-coded	M8-female, straight, 4-pin, A-coded
Connection 2	M8-male, straight, 4-pin, A-coded	M12-male, straight, 4-pin, A-coded	M12-male, straight, 4-pin, A-coded	
Cable	PUR black, 2 m, drag chain compatible	PUR black, 2 m, drag chain compatible	PUR black, 2 m, drag chain compatible	PUR black, 2 m, drag chain compatible