

Smart Automation and Monitoring System

PHOTOELECTRIC SENSORS WITH CONDITION MONITORING

SAMS (Smart Automation and Monitoring System) stands for Balluff's comprehensive automation philosophy. On the one hand, the Smart Automation and Monitoring System comprises a large number of additional functions and additional information for each individual component while, on the other hand, it is characterized by its uniform and standardized operating, configuration and diagnosis concept.

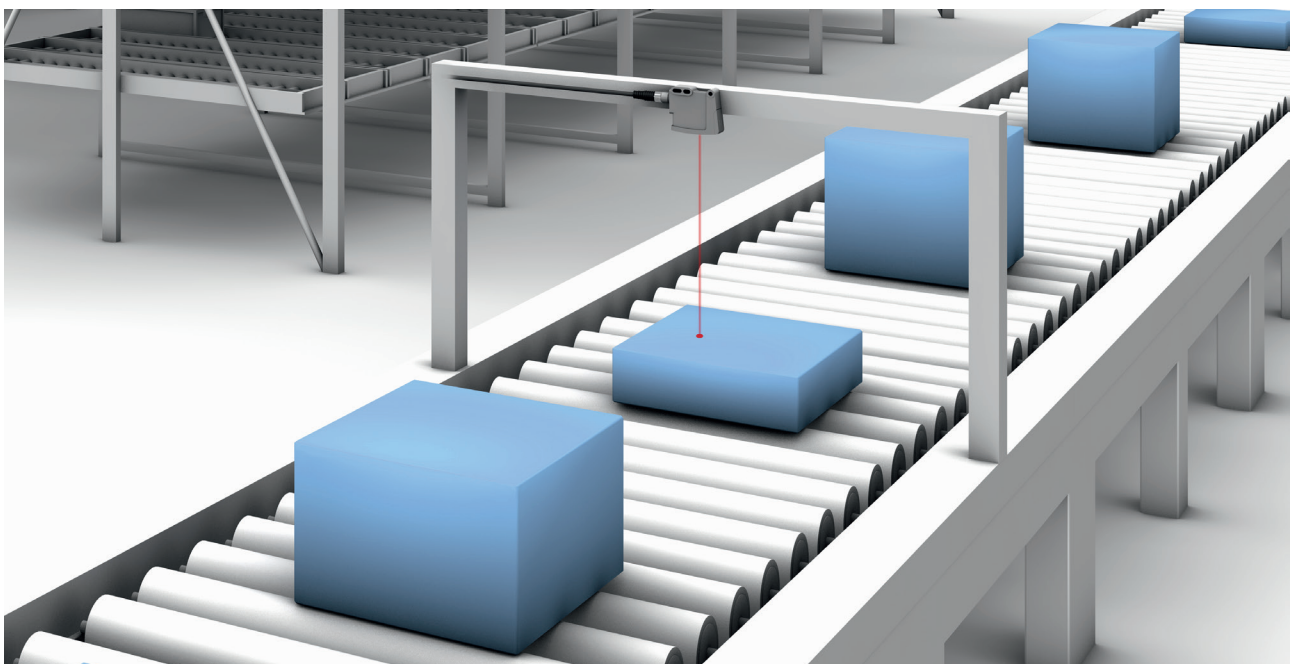
Part of this system is our new BOS R254K photoelectric sensor for reliable detection of objects like bottles, containers and pallets in the food industry and in the packaging sector. Designed for demanding applications, it is ideal wherever cleaning involves aggressive media and high pressure. Resistant to cleaning agents (Ecolab), it has passed the cleaning cycle according to the high Balluff standard. IP67 and IP69K ratings enable use in critical applications with harsh ambient conditions, especially in factory automation.

Another plus: its numerous additional functions provide for comprehensive condition monitoring. The sensor is self-monitoring while also providing helpful diagnostic data. You also gain valuable information related to the installed location including the application itself. All in all, the sensor ensures greater equipment uptime.

The sensor family includes diffuse sensors with background suppression, retro-reflective sensors and through-beam sensors. A particular highlight is the laser photoelectric proximity switch with a range of 1000 mm, which operates with time-of-flight technology. This technology enables both virtually object-independent object detection and reliable small part detection. The laser retro-reflective sensor with autocollimation is characterized by high switching accuracy and optimized small part detection even over long distances.

Features

- IO-Link V1.1 (Smart Sensor Profile 2)
- Additional functions: various operating modes also for demanding object detection (averaging, time and counting functions, dynamic switching threshold variation, preset switching thresholds, emitter LED monitoring, recording of extreme values)
- Designed for harsh ambient conditions
- Sensor monitors itself and its environment: temperature, humidity, vibration, inclination, contamination, function reserve



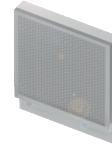
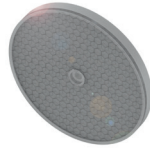
For demanding applications in packaging and logistics

PHOTOELECTRIC SENSORS



DIFFUSE SENSOR, TIME-OF-FLIGHT (TOF)	BOS02C1									
DIFFUSE SENSOR, TRIANGULATION		BOS02C3	BOS02C4	BOS0285		BOS02C2				
RETROREFLECTIVE SENSOR							BOS0286	BOS02C0		
THROUGH-BEAM SENSOR, RECEIVER									BOS0288	BOS02C5
THROUGH-BEAM SENSOR, EMITTER									BOS0289	BOS02C6
Series	R254K	R254K	R254K	R254K		R254K	R254K	R254K	R254K	R254K
Dimension	20.4 × 62.7 × 49.5 mm	20.4 × 62.7 × 49.5 mm	20.4 × 62.7 × 49.5 mm	20.4 × 60.3 × 49.5 mm		20.4 × 62.7 × 49.5 mm	20.4 × 60.3 × 49.5 mm	20.4 × 62.7 × 49.5 mm	20.4 × 60.3 × 49.5 mm	20.4 × 62.7 × 49.5 mm
Interface	IO-Link 1.1	IO-Link 1.1	IO-Link 1.1	IO-Link 1.1		IO-Link 1.1	IO-Link 1.1	IO-Link 1.1	IO-Link 1.1	IO-Link 1.1
Switching output	Pin 4	Push-pull NO/NC	Push-pull NO/NC	Push-pull NO/NC		Push-pull NO/NC	Push-pull NO/NC	Push-pull NO/NC	Push-pull NO/NC	Push-pull NO/NC
	Pin 2	PNP/NPN/push-pull NO/NC	PNP/NPN/push-pull NO/NC	PNP/NPN/push-pull NO/NC		PNP/NPN/push-pull NO/NC	PNP/NPN/push-pull NO/NC	PNP/NPN/push-pull NO/NC	PNP/NPN/push-pull NO/NC	PNP/NPN/push-pull NO/NC
Special optical feature	Background suppression	Background suppression	Background suppression	Background suppression		Background suppression		Autocollimation		
Beam characteristic	Collimated	Divergent	Divergent	Focus at 400 mm		Collimated	Divergent	Collimated	Divergent	Collimated
Light type	LED red light	LED red light	LED red light	Laser red light		Laser red light	LED red light	Laser red light	LED red light	Laser red light
Range	10...250 mm	10...250 mm	30...500 mm	30...250 mm		30...500 mm	8 m	0...8 m	0...20 m	0...70 m
Connection	Connector, M12 male, 4-pin	Connector, M12 male, 4-pin	Connector, M12 male, 4-pin	Connector, M12 male, 4-pin		Connector, M12 male, 4-pin	Connector, M12 male, 4-pin	Connector, M12 male, 4-pin	Connector, M12 male, 4-pin	Connector, M12 male, 4-pin
Teach-in	via IO-Link	via IO-Link	via IO-Link	via IO-Link		via IO-Link	via IO-Link	via IO-Link	via IO-Link	via IO-Link
Housing material	PA 12, PA PACM 12	PA 12, PA PACM 12	PA 12, PA PACM 12	PA 12, PA PACM 12		PA 12, PA PACM 12	PA 12, PA PACM 12	PA 12, PA PACM 12	PA 12, PA PACM 12	PA 12, PA PACM 12
Material sensing surface	PA PACM 12	PA PACM 12	PA PACM 12	PA PACM 12		PA PACM 12	PA PACM 12	PA PACM 12	PA PACM 12	PA PACM 12
Operating voltage U _B	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC		10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
Approval/conformity	CE, cULus, Ecolab	CE, cULus, Ecolab	CE, cULus, Ecolab	CE, cULus, Ecolab		CE, cULus, Ecolab	CE, cULus, Ecolab	CE, cULus, Ecolab	CE, cULus, Ecolab	CE, cULus, Ecolab

ACCESSORIES



	BAM00UK	BAM00UY
Use	Reflector for photoelectric retroreflective sensors, for LED red light types	Reflector for photoelectric retroreflective sensors, for LED red light and Laser types
Dimension	Ø 84 × 7.3 mm	51 × 61 × 7.5 mm
Material sensing surface	PMMA	PMMA

CONNECTIVITY



	BCC0JRK	BCC0LC6	BCC0JRZ
Connection 1	M12 female, straight, 5-pin, A-coded	M12 female, right-angle, 5-pin, A-coded	M12 female, straight, 5-pin, A-coded
Connection 2			M12 male, straight, 4-pin, A-coded
Cable	TPE-V gray, 5 m	TPE-V gray, 5 m	TPE-V gray, 2 m