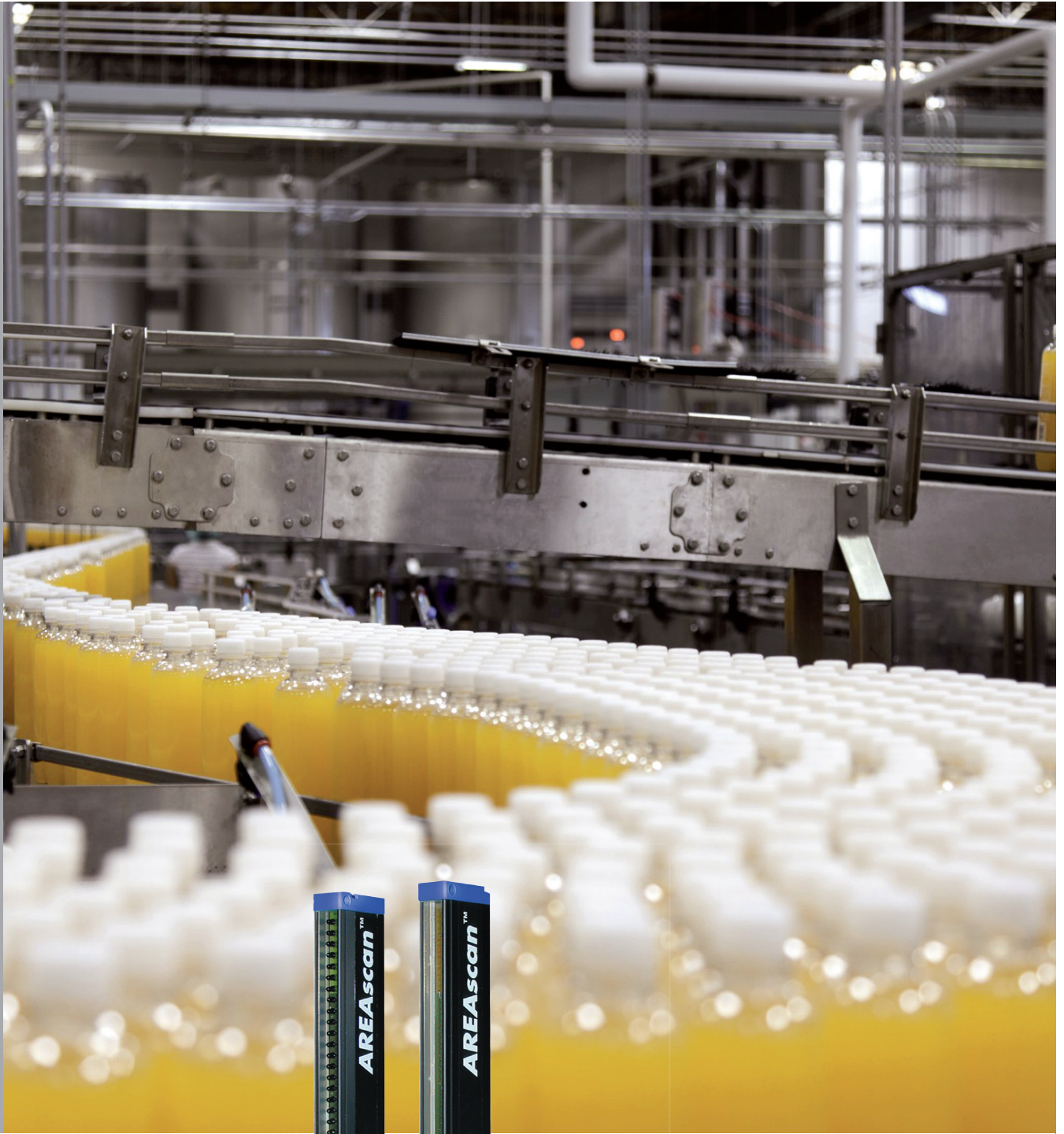


REFERENCE GUIDE



>Photoelectric
Sensors



 **DATALOGIC**

DATALOGIC: SOLUTIONS FOR INDUSTRIAL AUTOMATION

Datalogic Industrial Automation is an industry-leader in products and solutions for material handling, traceability, inspection and detection applications.

With the acquisitions of Accu-Sort and PPT Vision in 2012, the company offers a comprehensive portfolio of products, technologies and solutions delivered by a team of skilled professionals dedicated in providing superior service to customers.

Datalogic is the partner of choice for organizations in the Industrial Automation market.

Factory Automation

- AUTOMOTIVE
- ELECTRONICS
- FOOD & BEVERAGE
- GENERAL MANUFACTURING
- HEALTHCARE - PHARMACEUTICAL

Transportation & Logistics

- AIRPORTS
- COURIER, EXPRESS PARCEL (CEP)
- POSTAL
- RETAIL DISTRIBUTION

Product portfolio

Datalogic Industrial Automation has the most comprehensive offering of products and solutions for traceability, inspection and detection applications in factory automation and logistics processes: industrial LASER scanners, cameras and vision systems, sensors, machine safety devices and LASER markers.

Identification

Even the most demanding and efficient automation of identification processes can leverage Datalogic Industrial Automation's leadership in the market. We manufacture the world's most comprehensive family of fixed-mount line and omnidirectional scanners.

We also offer the latest CCD vision technology with the world's largest installed base of CCD systems for bar code reading and dimensioning.

All of our AUTO-ID products and solutions leverage the broadest decoding library that has been developed through the years. Datalogic's comprehensive AUTO-ID portfolio is used in a wide range of applications and machines which are behind many of the everyday processes that keeps the global economy running.

Sensors & Safety

Datalogic Industrial Automation offers a best-in-class, comprehensive product portfolio of photoelectric and proximity sensors, rotary encoders, temperature controllers and measurement devices, as well as type 2 and type 4 safety light curtains.

These product lines provide solutions for applications involving color, contrast and luminescence, label detection, dimensional and distance measurement, in addition to machine safeguarding and access control in dangerous areas.

Machine Vision

The Datalogic Industrial Automation machine vision product line encompasses both hardware and software while covering a wide range of performance and price point requirements. The vision portfolio of products and solutions ranges from simple vision sensors to smart cameras and embedded vision systems.

Laser Marking

Laser Marking sources and systems provide value driven marking solutions for automotive, metal tools, medical, electronics and packaging. Datalogic Industrial Automation offers an extensive range of state-of-the-art technology, excellent performance and high reliability marking equipment.



PHOTOELECTRIC SENSORS

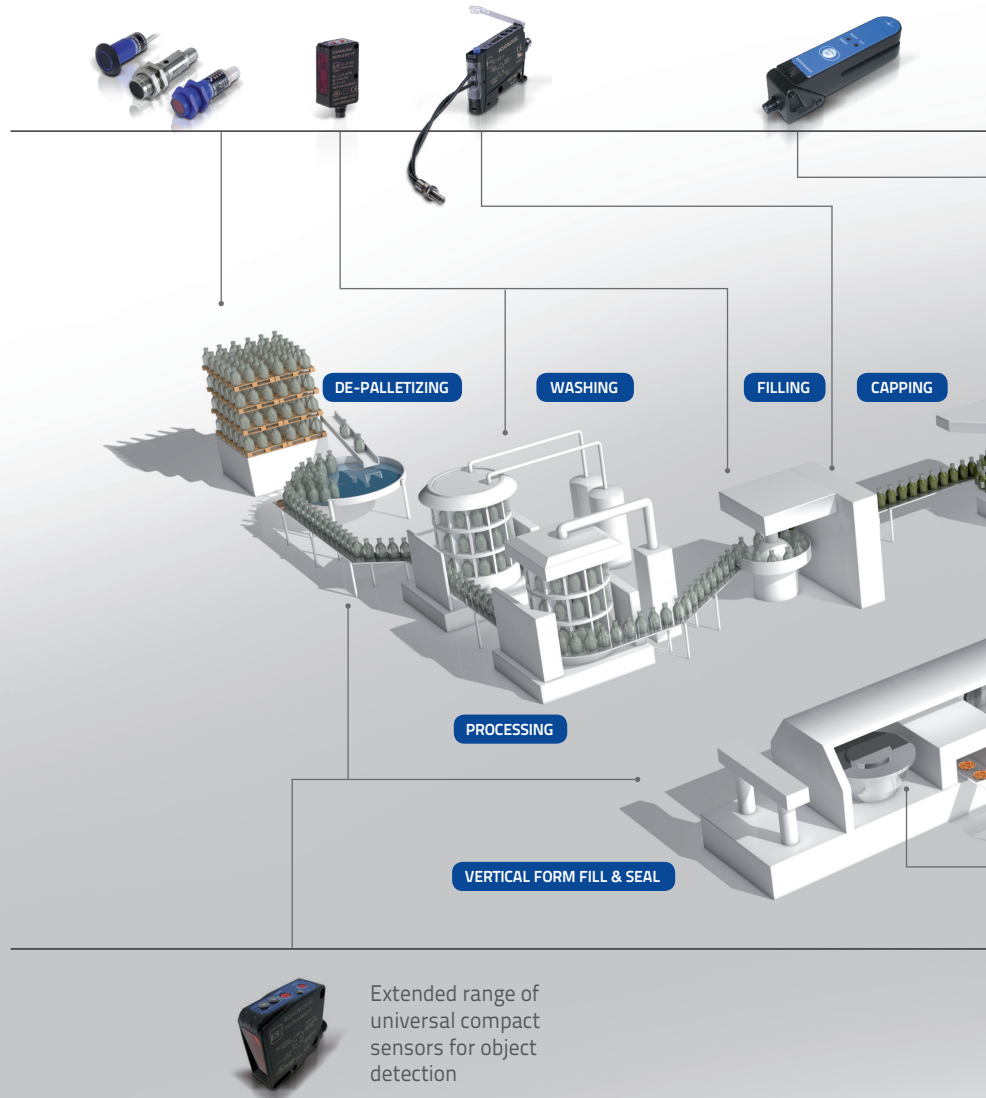
Datalogic has more than 40 years of experience in the sensors and safety sector, developing their first product, a **Photoelectric Sensor**, in 1972. Today, Datalogic is one of the largest manufacturers of sensor and safety products worldwide.

Datalogic is the market leader in Italy for photoelectric sensors and safety light curtains, ranking among the **top-10 manufacturers** in Europe by market share.

Datalogic's **Sensors and Safety** portfolio solves customer applications in **Factory Automation**, specializing in Processing and Packaging machinery, and Automated Material Handling Systems related to manufacturing industries such as Automotive, Electronics, Pharmaceutical, Food & Beverage, Paper and Printing, Wood-working, Ceramics, Glass, and Textiles.

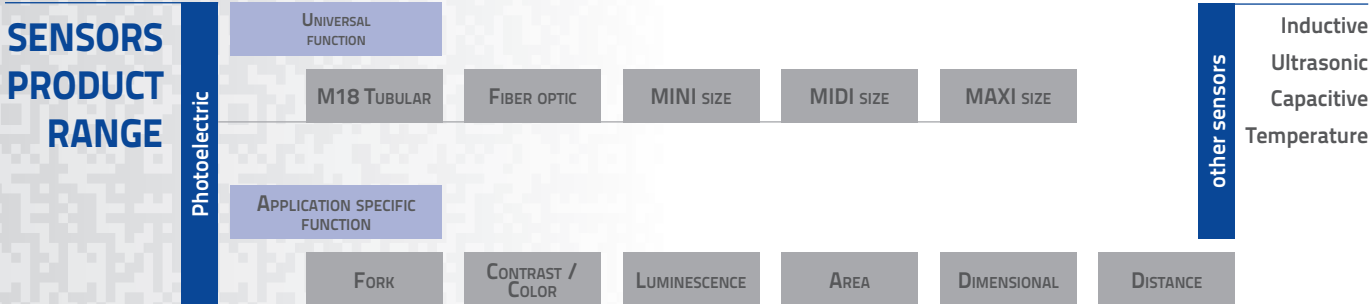
Tubular, Miniature and Fiber Optic sensors for object detection

Fork sensors for label detection



- APPLICATIONS**
- De-Palletizing
 - Washing
 - Filling
 - Capping
 - Labeling
 - Case Packing
 - Stretch-wrapping
 - Palletizing
 - Storage & Retrieval
 - Cartoning
 - Wrapping
 - Vertical Form Fill & Seal
 - Processing

SENSOR PRODUCTS



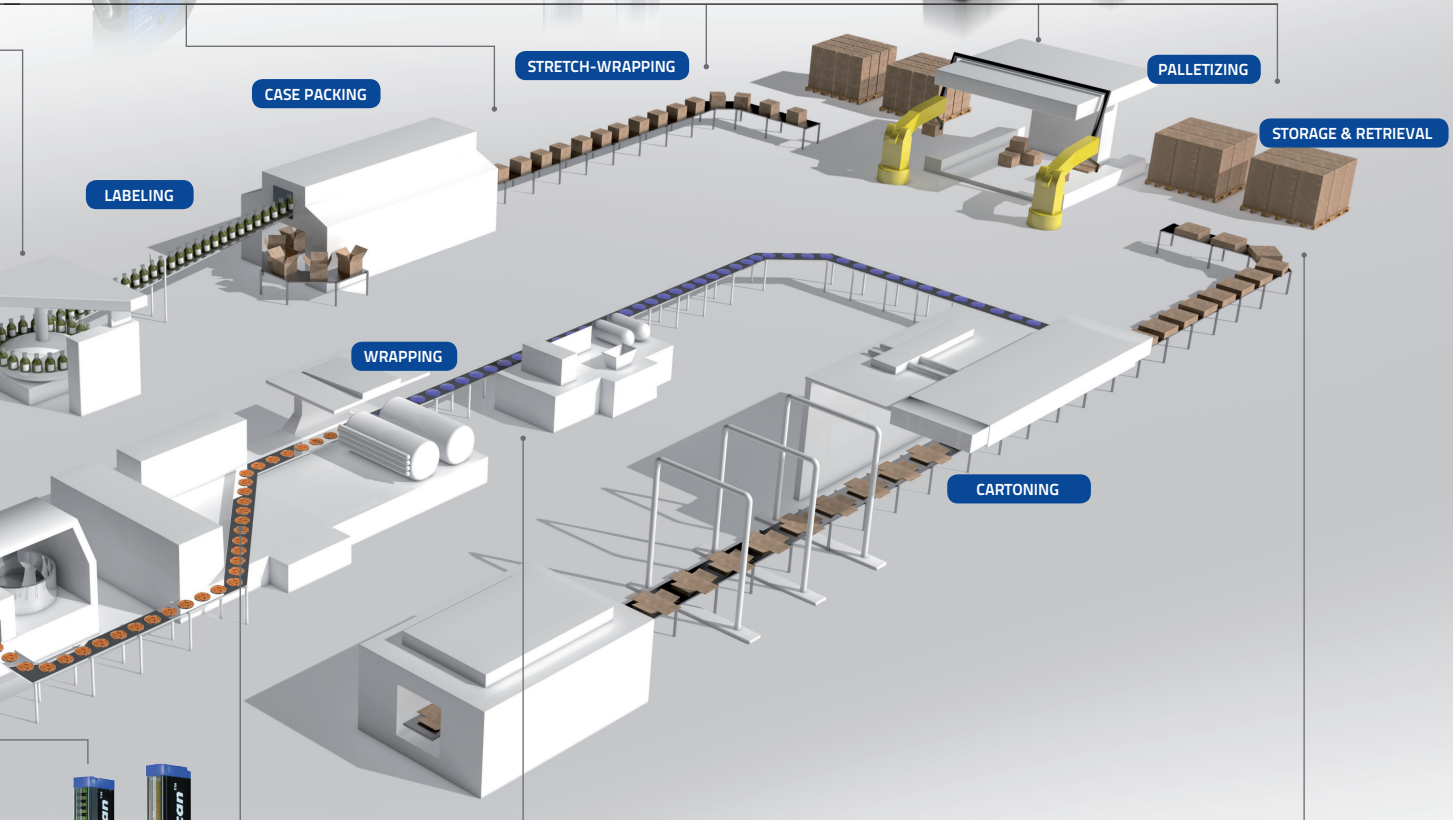
Contrast and Luminescence sensors for registration marks detection



Area sensors for the detection of objects with different shape and dimensions



Maxi and Compact sensors for object detection



Dimensional sensors for height/width measurement and object positioning



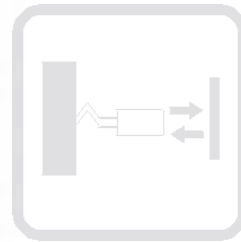
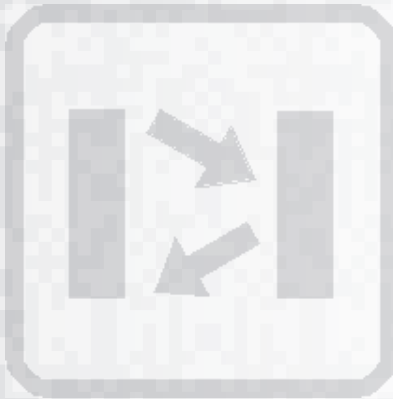
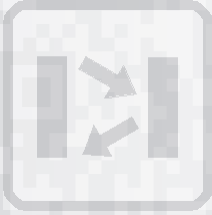
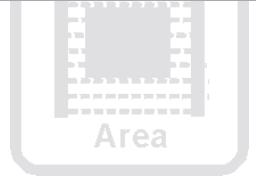
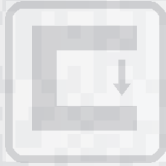
TOF distance sensors for measurement and object positioning



Photoelectric sensors	8
Selection chart	14
Reference guide	18
Tubular sensors	20
Miniature sensors	28
Compact sensors	36
Maxi sensors	44
Fiber optic sensors	48
Slot sensors	52
Fork sensors	54
Contrast sensors	56
Luminescence sensors	60
Color & Contrast sensors	62
Area sensors	64
Dimension light grids	66
Distance sensors	70
Accessories	74



PHOTOELECTRIC SENSORS





A Photoelectric sensor is a device used to detect the distance, absence or presence of an object, as well as to distinguish different items on the basis of their light absorption and reflection properties.

A photoelectric sensor consists of an emitter and receiver unit, coupled by either a modulated LED or LASER light beam. Photoelectric sensors are available in three different functional types depending the environment and the detection objects physical properties: through beam, retro-reflective, and proximity.

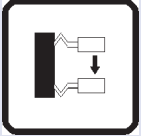
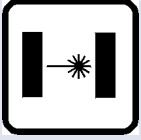
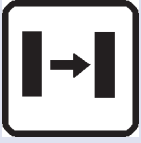
These sensors are ideal for generic industrial applications such as counting, presence control, or automatic positioning.

In addition, Datalogic offers solutions in a variety of applications such as contrast reading, distance and area measuring, as well as luminescence and color detection.

PHOTOELECTRIC SENSORS

PHOTOELECTRIC SENSORS

THROUGH BEAM



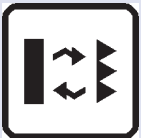
The light emitter and receiver are contained in two different housings and installed facing each other. The light beam released by the emitter directly hits the receiver; every object interrupting the beam is therefore detected. This system is used to obtain significant signal differences (when the light directly hits the receiver and when the object interrupts the beam) with the highest Excess Gain and the largest operating distance (up to 60 m). Moreover, these sensors can operate in the harshest working conditions, such as dirty or dusty environments. The through beam optic function typically operates in the dark mode: the output is activated when the object interrupts the light beam between emitter and receiver.

RETROREFLECTIVE



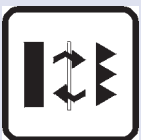
Both emitter and receiver are located inside the same housing for retro-reflective photoelectric sensors. Utilizing a prismatic reflector, the emitted light beam is reflected onto the receiver, detecting the object when it interrupts the light beam.

POLARIZED RETROREFLECTIVE



In polarized retroreflective sensors, the emitted light is polarized on a vertical plane through a polarization filter. The prismatic reflector rotates the light plane by 90°. A polarization filter placed on the receiver selects only the horizontal plane reflected by the prismatic reflector, ignoring the light reflected by other light sources. This technique guarantees a reliable signal reception, reaching significant distances.

RETROREFLECTIVE FOR TRANSPARENT



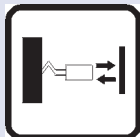
For the detection of transparent objects, such as PET bottles or Mylar sheets, a low-hysteresis polarized retroreflective model (which detects small signal differences) can be used.

These sensors elaborate the slight signal differences received when the light beam passes through a transparent object, avoiding false detections due to the nature of this kind of targets.

This technique mostly suits applications for the detection of objects positioned at considerable distances, where a prismatic reflector can be installed.

Typically, the operating distance proportionally increases with the reflector's dimensions.

DIFFUSE PROXIMITY



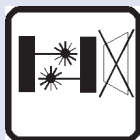
In photoelectric sensors with this optic function, both emitter and receiver are placed inside the same housing. These sensors work with weaker signals because the emitted light beam is reflected to the receiver by the object. As a consequence, the excess gain and the operating distance are reduced. However objects are detected without a prismatic reflector, making installations quick and easy.

FIXED FOCUS PROXIMITY



Fixed focus proximity sensors have a simple fixed background suppression distance, beyond which no objects are detected. The fixed triangulation of the optics greatly reduces the detection distance of reflective objects. The visible red emission simplifies the sensor's installation.

BACKGROUND SUPPRESSION



Background suppression sensors detect objects while avoiding reflections from the background. When the sensor is used for the first time, the proper background suppression distance has to be set through a distance adjustment trimmer. Once the background has been acquired, the objects can be detected regardless of their color. Background suppression sensors are not very reliable with highly clear, transparent or shiny objects.

BACKGROUND SUPPRESSION

FOR CLEAR DETECTION



Background suppression technology often has difficulty reliably detecting transparent, clear, or shiny objects. These objects generate false detections due to their highly reflective surfaces. Datalogic's patented background suppression technology guarantees reliable and repeatable detection, ignoring the false detections. Models are available with LED emission, ideal for reflections caused by moving surfaces such as conveyor belts, or with LASER emission for the detection of small objects on fixed or highly reflective backgrounds. Since background suppression sensors do not require a prismatic reflector, these sensors can substitute for a polarized retroreflective sensor for transparent objects for shorter distances.

PHOTOELECTRIC SENSORS

CONTRAST



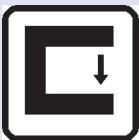
Contrast sensors distinguish the received light beams on the basis of their degrees of intensity, which depend on the color or material of the detected surfaces. A typical application of these sensors is the detection of colored registration marks used in packaging machines to synchronize the folding, cutting and welding phases. In presence of colored surfaces, the contrast is highlighted using a LED with colored light emission, typically a selectable red, green or blue LED. The white light emission allows to detect very slight contrasts in similar materials and colors.

LUMINESCENCE



Luminescence sensors emit invisible ultraviolet light, which is reflected at a higher wavelength (minor energy) on the fluorescent and phosphorescent surface, shifting into the visible light spectrum. The ultraviolet emission is modulated and the visible light reception is synchronized. The maximum immunity against external interferences, like reflections caused by very shiny surfaces, is obtained and fluorescent targets, invisible to the human eye, can be detected. Luminescence sensors are used in several industrial fields to detect items containing phosphorous such as labels on glass or mirrors, fluorescent marks marked on tiles, fluorescent glues on paper, cutting and sewing guides, as well as fluorescent paints or lubricants.

SLOT/FORK



A slot sensor, also known as fork sensor, is based on a particular model of the through beam sensor, where emitter and receiver are placed opposite to each other on the internal sides of an 'U-shaped' housing. Any target passing through the internal slot interrupts the beam and is detected. The most typical slot sensor applications are hole/teeth detection on wheels, label detection on thin supports, and control of edge and continuity of sheets of labels or tapes. The emission is generally infrared or red light in order to detect colored registration marks on translucent films.

COLOR



The color of an object is identified according to the different reflection coefficients obtained with the red (R), green (G) and blue (B) light emissions. For instance, yellow is characterized by R=50% G=50% B=0% reflections, orange by R=75% G=25% B=0%, pink by R=50% G=0% B=0%, the combinations are infinite. Color sensors cover a wide variety of applications, ranging from quality and process controls to automatic material handling for the identification, orientation, and selection of objects according to their color.

DISTANCE



Datalogic distance sensors are based on Time of Flight (T.O.F.): the distance is calculated on the basis of the time between the moment the LASER pulse is generated and the moment the emitted light is reflected off the object, back to the sensor. These sensors are generally used to measure an object's distance within a selected range, while the output is linearly scaled to the analog signal (4...20mA). This technology provides high precision and fast measurements in many applications, such as automatic warehousing (to drive industrial vehicles and avoid collisions), packaging and material handling.

AREA/DIMENSION LIGHT GRIDS



Area and Dimension light grids utilize several light beams for area or dimensional measurements of objects. An object's area and size are measured using parallel cross-beams, which identify obscured beams, providing accurate information to a host GUI or PC. Models of light grids vary by length to match each application requirements.

SELECTION CHART

UNIVERSAL PHOTOELECTRIC SENSORS

		TUBULAR		MINIATURE		
MAX OPERATING DISTANCE		S15	S50/S51	SMall	S40	S41
Through beam		0...20 m	0...60 m	0...2 m		0,1...6 m
Retroreflective		0,1...5 m	0,1...4 m	0,05...1,5 m		
Polarized retroreflective		0,1...4 m	0,1...16 m	0,1...1 m	0,1...6 m	0,1...2,5 m
Retroreflective for transparent		0,1...0,8 m	0,1...1,3 m		100...700 mm	100...700 mm
Diffuse proximity		0...1 m	0...700 mm		5...300 mm	2...350 mm
Fixed focus		0...50 mm	100 mm	3...50 mm		110 mm
Background suppression		40...120 mm	50...100 mm		15...100 mm	
Fiber optic			0...100 mm (through beam) 0...30 mm (diffuse proximity)			
Contrast			10 ±2 mm			
Luminescence			0...20 mm			
Page		20	22	28	30	32

The table shows the maximum operating distance reached by different sensors models. Some measures indicate only the highest performances obtained by the corresponding sensor. Other operating distance values might be available for the same series and some optic functions might be carried out through LED or LASER emission, reaching different distances. For more specific information refer to the dedicated product page in this guide or download datasheets and manuals from our website (www.datalogic.com)

SENSORS

COMPACT					MAXI		FIBER OPTIC
S3Z	S8	S62	S6	S90	S300PA	S300PR	S7
							
0...30 m	0...25 m	0...25 m	20 m	0...60 m	0...50 m	0...60 m	0...300 mm
		0,1...13 m	0,1...6 m		0,1...15 m		
0,3...10 m	0...10 m	0,3...20 m	0,1...5 m	0,1...20 m	0,1...10 m	0,1...22 m	
0...2 m	0...2 m			0...1,7 m			
0...700 mm	0...500 mm	0...2 m	0,01...2 m	0,05...2 m	0,05...2 m	0...5 m	0...100 mm
40...300 mm	50...300 mm	60...600 mm (RED LED) 200...2000 mm (INFRARED LED)	100...500 mm	70...200 mm	0,2...2 m	0,4...2.5 m	
	9 ±2 mm			19 ±2 mm			
				0...40 mm			
34	36	38	40	42	44	46	48

SELECTION CHART

APPLICATION PHOTO

		SLOT	FORK	CONTRAST	
		SR21	SRF	TLμ	TL46
MAX OPERATING DISTANCE					
Slot (width)		2 mm	30, 50, 80, 120 mm		
Contrast				6...60 mm (*)	9 ±3 mm (*)
Luminescence					
Color & Contrast					
Area					
Dimensional					
Distance					
Page		52	54	56	58

(*) The maximum operating distance is determined by the lens used in the specific model

The table shows the maximum operating distance reached by different sensors models. Some measures indicate only the highest performances obtained by the corresponding sensor. Other operating distance values might be available for the same series and some optic functions might be carried out through LED or LASER emission, reaching different distances. For more specific information refer to the dedicated product page in this guide or download datasheets and manuals from our website (www.datalogic.com)

DELECTRIC SENSORS

LUMINESCENCE	COLOR & CONTRAST	AREA	DIMENSION LIGHT GRIDS		DISTANCE	
LD-46 	S65 	AS1 	DS-1 	DS-2 	S80 	S81 
	12...20 mm					
10...50 mm (*)						
	5...45 mm					
		0,3...3 m				
			0,15...4 m	0,3...10 m		
					0,3...100,3 m	0,3...4 m
60	62	64	66	68	70	72

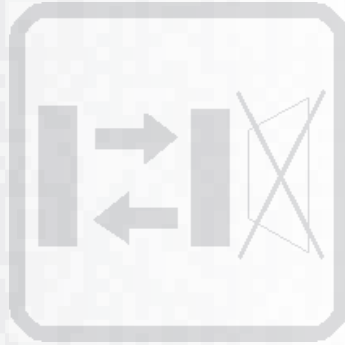
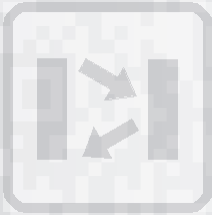
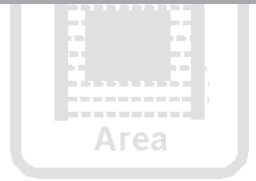
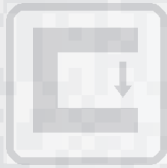
ACCESSORIES

	FIBER OPTIC	CONNECTORS	BRACKETS	REFLECTORS
	OF/OFA 	CS 	ST 	R 
Page	50	74	76	77

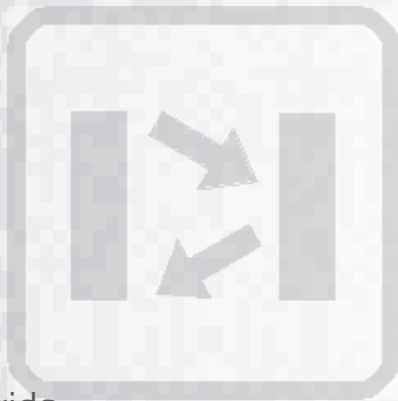
REFERENCE GUIDE



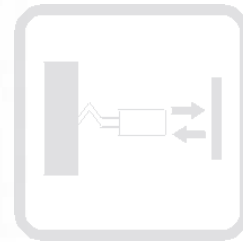
Tubular
Miniature
Compact
Fiber optic
Maxi



Slot
Fork

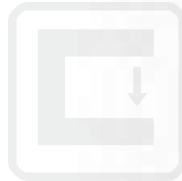


Contrast
Luminescence
Color & Contrast



Area
Dimension light grids
Distance
Accessories





REFERENCE GUIDE

TUBULAR SENSORS

S15

Plastic and stainless steel tubular M18 photoelectric sensors every environment

- Short case models for cost and space savings
- Plastic and stainless steel case with IP69K protection
- All optic functions at optimal operating distances
- Models with fixed settings or adjustment trimmer
- Cable, M12 connector and pig-tail models



APPLICATIONS

- Processing and Packaging machinery
- Assembling and Conveyor lines



IP69K

Diversy

ECOLAB



(*) Stainless steel models.
ATEX II 3DG

S15		
Through beam		0...20 m
Retroreflective (on R2 reflector)		0,1...5 m
Polarized retroreflective		0,1...4 m
Retroreflective for transparent (on R2 reflector)		0,1...0,8 m
Diffuse proximity		short distance 0...100 mm medium distance 0...350 mm long distance 1 m
Fixed focus		0...50 mm
Background suppression		40...120 mm
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	
Output	PNP	▪
	NPN	▪
	NPN/PNP	
	relay	
	other	
Connection	cable	▪
	connector	▪
	pig-tail	▪
Approximate dimensions (mm)		M18x44/48
Housing material		ABS, INOX AISI 316L
Mechanical protection		IP65 - IP67 - IP69K

OPTIC FUNCTION	HOUSING	CONNECTION	OUTPUT	MODEL	ORDER No.
Retroreflective	Plastic	2 m cable	NPN	S15-PA-2-A00-NK	952301051
			PNP	S15-PA-2-A00-PK	952301001
		M12 connector	NPN	S15-PA-5-A01-NK	952301300
	PNP		S15-PA-5-A01-PK	952301220	
	Stainless Steel	M12 connector	NPN	S15-PA-3-A00-NK	952301161
			PNP	S15-PA-3-A00-PK	952301111
NPN			S15-NA-5-A01-NK	952301450	
Polarized Retroreflective	Plastic	2 m cable	NPN	S15-PA-2-B00-NK	952301061
			PNP	S15-PA-2-B00-PK	952301011
		M12 connector	NPN	S15-PA-5-B01-NK	952301310
	PNP		S15-PA-5-B01-PK	952301230	
	Stainless Steel	M12 connector	NPN	S15-PA-3-B00-NK	952301171
			PNP	S15-PA-3-B00-PK	952301121
NPN			S15-NA-5-B01-NK	952301460	
Diffuse proximity (short distance)	Plastic	2 m cable	NPN	S15-PA-2-C00-NK	952301071
			PNP	S15-PA-2-C00-PK	952301021
		pig-tail	NPN	S15-PA-3-C00-NK	952301181
PNP	S15-PA-3-C00-PK		952301131		
Diffuse proximity (medium distance)	Plastic	2 m cable	NPN	S15-PA-2-C10-NK	952301081
			PNP	S15-PA-2-C10-PK	952301031
		M12 connector	NPN	S15-PA-5-C11-NK	952301330
	PNP		S15-PA-5-C11-PK	952301250	
	Stainless Steel	M12 connector	NPN	S15-PA-3-C10-NK	952301191
			PNP	S15-PA-3-C10-PK	952301141
NPN			S15-NA-5-C11-NK	952301480	
Diffuse proximity (long distance)	Plastic	M12 connector	NPN	S15-PA-5-C31-NK	952301340
			PNP	S15-PA-5-C31-PK	952301260
	Stainless Steel	M12 connector	NPN	S15-NA-5-C31-NK	952301490
PNP	S15-NA-5-C31-PK		952301410		
Fixed focus	Plastic	2 m cable	NPN	S15-PA-2-D50-NK	952301530
			PNP	S15-PA-2-D50-PK	952301520
		pig-tail	NPN	S15-PA-3-D50-NK	952301550
			PNP	S15-PA-3-D50-PK	952301540
Through beam receiver	Plastic	2 m cable	NPN	S15-PA-2-F00-NK	952301091
			PNP	S15-PA-2-F00-PK	952301041
		M12 connector	NPN	S15-PA-5-F01-NK	952301360
	PNP		S15-PA-5-F01-PK	952301280	
	Stainless Steel	M12 connector	NPN	S15-PA-3-F00-NK	952301201
			PNP	S15-PA-3-F00-PK	952301151
NPN			S15-NA-5-F01-NK	952301510	
Through beam emitter	Plastic	2 m cable	-	S15-PA-2-G00-XG	952301101
		M12 connector	-	S15-PA-5-G01-XG	952301290
		pig-tail	-	S15-PA-3-G00-XG	952301211
	Stainless Steel	M12 connector	-	S15-NA-5-G01-XG	952301440
Background suppression	Plastic	M12 connector	NPN	S15-PA-5-M01-NK	952301350
			PNP	S15-PA-5-M01-PK	952301270
	Stainless Steel	M12 connector	NPN	S15-NA-5-M01-NK	952301500
			PNP	S15-NA-5-M01-PK	952301420
Transparent	Plastic	M12 connector	NPN	S15-PA-5-T01-NK	952301320
			PNP	S15-PA-5-T01-PK	952301240
	Stainless Steel	M12 connector	NPN	S15-NA-5-T01-NK	952301470
			PNP	S15-NA-5-T01-PK	952301390

TUBULAR SENSORS

S50/S51

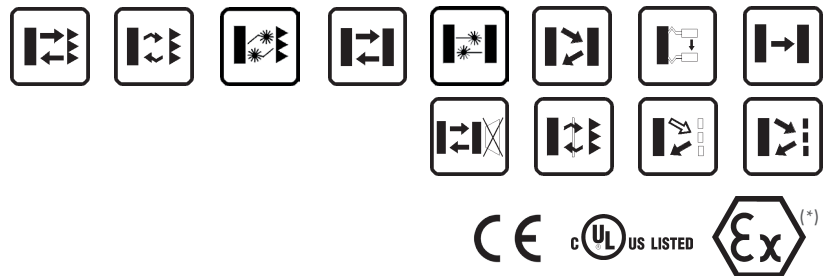
Extended range of standard "One for All" photoelectric tubular M18 sensors

- All optic functions and LASER models
- M18 flat plastic with universal mounting
- Available in M18 metal housing
- Axial or radial optics, cable or connector
- Standard 4-wire NO-NC NPN or PNP output



APPLICATIONS

- Processing and Packaging machinery
- Conveyor lines, material handling
- Ceramics intralogistics
- Automated warehousing



(*) Axial models.
ATEX II 3DG

S50/S51		
Through beam		0...20 m 0...60 m (class 1 LASER) (S50)
Retroreflective (on R2 reflector)		0,1...4 m
Polarized retroreflective		0,1...4 m (S50) 0,1...3 m (S51) 0,1...16 m (class 1 LASER) (S50)
Retroreflective for transparent (on R2 reflector)		0,1...1,3 m (S50)
Diffuse proximity		short distance 0...100 mm medium distance 0...400 mm (S50) 0...450 mm (S51) long distance 0...700 mm long distance LASER 0...350 mm
Fixed focus		100 mm (S50)
Background suppression		50...100 mm (S50)
Through beam with fiber optic		0...100 mm (S50)
Diffuse proximity with fiber optic		0...30 mm (S50)
Contrast sensor		10 ±2 mm
Luminescence sensor		0...20 mm
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	
Output	PNP	▪
	NPN	▪
	NPN/PNP	
	relay	
	other	
Connection	cable	▪
	connector	▪
	pig-tail	
Approximate dimensions (mm)		M18x 55/68
Housing material		PBT, nickel plated brass
Mechanical protection		IP67

S50 PLASTIC MODELS

OPTIC FUNCTION	EMISSION	CONNECTION	OUTPUT	MODEL	ORDER No.
Retroreflective	LED, Axial optic	2m Cable	NPN	S50-PA-2-A00-NN	952002090
			PNP	S50-PA-2-A00-PP	952002080
		M12 Connector	NPN	S50-PA-5-A00-NN	952002110
			PNP	S50-PA-5-A00-PP	952002100
Polarized retroreflective	LED, Axial optic	2m Cable	NPN	S50-PA-2-B01-NN	952001610
			PNP	S50-PA-2-B01-PP	952001010
		M12 Connector	NPN	S50-PA-5-B01-NN	952001500
			PNP	S50-PA-5-B01-PP	952001020
	LED, Radial optic	2m Cable	NPN	S50-PR-2-B01-NN	952001780
			PNP	S50-PR-2-B01-PP	952001030
		M12 Connector	NPN	S50-PR-5-B01-NN	952001720
			PNP	S50-PR-5-B01-PP	952001040
	LASER, Axial optic	2m Cable	NPN	S50-PL-2-B01-NN	952001870
			PNP	S50-PL-2-B01-PP	952001360
		M12 Connector	NPN	S50-PL-5-B01-NN	952001840
			PNP	S50-PL-5-B01-PP	952001370
LASER, Radial optic	2m Cable	NPN	S50-PH-2-B01-NN	952001950	
		PNP	S50-PH-2-B01-PP	952001940	
	M12 Connector	NPN	S50-PH-5-B01-NN	952001970	
		PNP	S50-PH-5-B01-PP	952001960	
Long Diffuse proximity	LED, Axial optic	2m Cable	NPN	S50-PA-2-C01-NN	952001620
			PNP	S50-PA-2-C01-PP	952001050
		M12 Connector	NPN	S50-PA-5-C01-NN	952001510
			PNP	S50-PA-5-C01-PP	952001060
	LED, Radial optic	2m Cable	NPN	S50-PR-2-C01-NN	952001790
			PNP	S50-PR-2-C01-PP	952001070
		M12 Connector	NPN	S50-PR-5-C01-NN	952001730
			PNP	S50-PR-5-C01-PP	952001080
	LASER, Axial optic	2m Cable	NPN	S50-PL-2-C01-NN	952001880
			PNP	S50-PL-2-C01-PP	952001380
		M12 Connector	NPN	S50-PL-5-C01-NN	952001850
			PNP	S50-PL-5-C01-PP	952001390
	LASER, Radial optic	2m Cable	NPN	S50-PH-2-C01-NN	952001990
			PNP	S50-PH-2-C01-PP	952001980
		M12 Connector	NPN	S50-PH-5-C01-NN	952002010
			PNP	S50-PH-5-C01-PP	952002000
Short Diffuse proximity	LED, Axial optic	2m Cable	NPN	S50-PA-2-C10-NN	952001630
			PNP	S50-PA-2-C10-PP	952001240
		M12 Connector	NPN	S50-PA-5-C10-NN	952001520
			PNP	S50-PA-5-C10-PP	952001250
	LED, Radial optic	2m Cable	NPN	S50-PR-2-C10-NN	952001800
			PNP	S50-PR-2-C10-PP	952001490
		M12 Connector	NPN	S50-PR-5-C10-NN	952001740
			PNP	S50-PR-5-C10-PP	952001480
Medium Diffuse proximity	LED, Axial optic	2m Cable	NPN	S50-PA-2-C21-NN	952002170
			PNP	S50-PA-2-C21-PP	952002160
		M12 Connector	NPN	S50-PA-5-C21-NN	952002190
			PNP	S50-PA-5-C21-PP	952002180
Fixed focus	LED, Axial optic	2m Cable	NPN	S50-PA-2-D00-NN	952001640
			PNP	S50-PA-2-D00-PP	952001090
		M12 Connector	NPN	S50-PA-5-D00-NN	952001530
			PNP	S50-PA-5-D00-PP	952001100
	LED, Radial optic	2m Cable	NPN	S50-PR-2-D00-NN	952001810
			PNP	S50-PR-2-D00-PP	952001110
		M12 Connector	NPN	S50-PR-5-D00-NN	952001750
			PNP	S50-PR-5-D00-PP	952001120
Fiber optic	LED, Axial optic	2m Cable	NPN	S50-PA-2-E01-NN	952001650
			PNP	S50-PA-2-E01-PP	952001130
		M12 Connector	NPN	S50-PA-5-E01-NN	952001540
			PNP	S50-PA-5-E01-PP	952001140

TUBULAR SENSORS

Through beam receiver	LED, Axial optic	2m Cable	NPN	S50-PA-2-F01-NN	952001660
		M12 Connector	PNP	S50-PA-2-F01-PP	952001150
			NPN	S50-PA-5-F01-NN	952001550
		M12 Connector	PNP	S50-PA-5-F01-PP	952001160
	LED, Radial optic		2m Cable	NPN	S50-PR-2-F01-NN
		M12 Connector	PNP	S50-PR-2-F01-PP	952001170
			NPN	S50-PR-5-F01-NN	952001760
		PNP	S50-PR-5-F01-PP	952001180	
	LASER, Axial optic	2m Cable	NPN	S50-PL-2-F01-NN	952001890
		M12 Connector	PNP	S50-PL-2-F01-PP	952001400
			NPN	S50-PL-5-F01-NN	952001860
		PNP	S50-PL-5-F01-PP	952001410	
LASER, Radial optic	2m Cable	NPN	S50-PH-2-F01-NN	952002030	
	M12 Connector	PNP	S50-PH-2-F01-PP	952002020	
		NPN	S50-PH-5-F01-NN	952002050	
	PNP	S50-PH-5-F01-PP	952002040		
Through beam emitter	LED, Axial optic	2m Cable	-	S50-PA-2-G00-XG	952001190
		M12 Connector	-	S50-PA-5-G00-XG	952001200
	LED, Radial optic	2m Cable	-	S50-PR-2-G00-XG	952001210
		M12 Connector	-	S50-PR-5-G00-XG	952001220
	LASER, Axial optic	2m Cable	-	S50-PL-2-G00-XG	952001420
		M12 Connector	-	S50-PL-5-G00-XG	952001430
	LASER, Radial optic	2m Cable	-	S50-PH-2-G00-XG	952002060
		M12 Connector	-	S50-PH-5-G00-XG	952002070
Background suppression	LED, Axial optic	2m Cable	NPN	S50-PA-2-M03-NN	952001670
		M12 Connector	PNP	S50-PA-2-M03-PP	952001230
			NPN	S50-PA-5-M03-NN	952001560
		PNP	S50-PA-5-M03-PP	952001000	
	LED, Radial optic	2m Cable	NPN	S50-PS-2-M03-NN	952001900
		M12 Connector	PNP	S50-PS-2-M03-PP	952001910
Retroreflective for transparent	LED, Axial optic	2m Cable	NPN	S50-PA-2-T01-NN	952001690
		M12 Connector	PNP	S50-PA-2-T01-PP	952001260
			NPN	S50-PA-5-T01-NN	952001580
		PNP	S50-PA-5-T01-PP	952001270	
	LED, Radial optic	2m Cable	NPN	S50-PR-2-T01-NN	952001830
		M12 Connector	PNP	S50-PR-2-T01-PP	952001280
			NPN	S50-PR-5-T01-NN	952001770
		PNP	S50-PR-5-T01-PP	952001290	
Luminescence	LED, Axial optic	2m Cable	NPN	S50-PA-2-U03-NN	952001700
		M12 Connector	PNP	S50-PA-2-U03-PP	952001300
			NPN	S50-PA-5-U03-NN	952001590
		PNP	S50-PA-5-U03-PP	952001310	
Contrast	LED, Axial optic	2m Cable	NPN	S50-PA-2-W03-NN	952001710
		M12 Connector	PNP	S50-PA-2-W03-PP	952001320
			NPN	S50-PA-5-W03-NN	952001600
		PNP	S50-PA-5-W03-PP	952001330	

S50 METAL MODELS

OPTIC FUNCTION	EMISSION	CONNECTION	OUTPUT	MODEL	ORDER No.
Retroreflective	LED, Axial optic	2m Cable	NPN	S50-MA-2-A00-NN	952022090
			PNP	S50-MA-2-A00-PP	952022080
		M12 Connector	NPN	S50-MA-5-A00-NN	952022110
			PNP	S50-MA-5-A00-PP	952022100
Polarized retroreflective	LED, Axial optic	2m Cable	NPN	S50-MA-2-B01-NN	952021500
			PNP	S50-MA-2-B01-PP	952021000
		M12 Connector	NPN	S50-MA-5-B01-NN	952021660
			PNP	S50-MA-5-B01-PP	952021200
	LED, Radial optic	2m Cable	NPN	S50-MR-2-B01-NN	952021600
			PNP	S50-MR-2-B01-PP	952021140
		M12 Connector	NPN	S50-MR-5-B01-NN	952021760
			PNP	S50-MR-5-B01-PP	952021340
	LASER, Axial optic	2m Cable	NPN	S50-ML-2-B01-NN	952021820
			PNP	S50-ML-2-B01-PP	952021400
		M12 Connector	NPN	S50-ML-5-B01-NN	952021850
			PNP	S50-ML-5-B01-PP	952021440
	LASER, Radial optic	2m Cable	NPN	S50-MH-2-B01-NN	952021950
			PNP	S50-MH-2-B01-PP	952021940
		M12 Connector	NPN	S50-MH-5-B01-NN	952021970
			PNP	S50-MH-5-B01-PP	952021960
Long Diffuse proximity	LED, Axial optic	2m Cable	NPN	S50-MA-2-C01-NN	952021510
			PNP	S50-MA-2-C01-PP	952021010
		M12 Connector	NPN	S50-MA-5-C01-NN	952021670
			PNP	S50-MA-5-C01-PP	952021210
	LED, Radial optic	2m Cable	NPN	S50-MR-2-C01-NN	952021610
			PNP	S50-MR-2-C01-PP	952021150
		M12 Connector	NPN	S50-MR-5-C01-NN	952021770
			PNP	S50-MR-5-C01-PP	952021350
	LASER, Axial optic	2m Cable	NPN	S50-ML-2-C01-NN	952021830
			PNP	S50-ML-2-C01-PP	952021410
		M12 Connector	NPN	S50-ML-5-C01-NN	952021860
			PNP	S50-ML-5-C01-PP	952021450
	LASER, Radial optic	2m Cable	NPN	S50-MH-2-C01-NN	952021990
			PNP	S50-MH-2-C01-PP	952021980
		M12 Connector	NPN	S50-MH-5-C01-NN	952022010
			PNP	S50-MH-5-C01-PP	952022000
Short Diffuse proximity	LED, Axial optic	2m Cable	NPN	S50-MA-2-C10-NN	952021520
			PNP	S50-MA-2-C10-PP	952021020
		M12 Connector	NPN	S50-MA-5-C10-NN	952021680
			PNP	S50-MA-5-C10-PP	952021220
	LED, Radial optic	2m Cable	NPN	S50-MR-2-C10-NN	952021620
			PNP	S50-MR-2-C10-PP	952021490
		M12 Connector	NPN	S50-MR-5-C10-NN	952021780
			PNP	S50-MR-5-C10-PP	952021480
Medium Diffuse proximity	LED, Axial optic	2m Cable	NPN	S50-MA-2-C21-NN	952022130
			PNP	S50-MA-2-C21-PP	952022120
		M12 Connector	NPN	S50-MA-5-C21-NN	952022150
			PNP	S50-MA-5-C21-PP	952022140
Fixed focus	LED, Axial optic	2m Cable	NPN	S50-MA-2-D00-NN	952021530
			PNP	S50-MA-2-D00-PP	952021030
		M12 Connector	NPN	S50-MA-5-D00-NN	952021690
			PNP	S50-MA-5-D00-PP	952021230
	LED, Radial optic	2m Cable	NPN	S50-MR-2-D00-NN	952021630
			PNP	S50-MR-2-D00-PP	952021160
		M12 Connector	NPN	S50-MR-5-D00-NN	952021790
			PNP	S50-MR-5-D00-PP	952021360
Fiber optic	LED, Axial optic	2m Cable	NPN	S50-MA-2-E01-NN	952021880
			PNP	S50-MA-2-E01-PP	952021040
		M12 Connector	NPN	S50-MA-5-E01-NN	952021890
			PNP	S50-MA-5-E01-PP	952021240

TUBULAR SENSORS

Through beam receiver	LED, Axial optic	2m Cable	NPN	S50-MA-2-F01-NN	952021540	
			PNP	S50-MA-2-F01-PP	952021050	
		M12 Connector		NPN	S50-MA-5-F01-NN	952021700
				PNP	S50-MA-5-F01-PP	952021250
	LED, Radial optic	2m Cable		NPN	S50-MR-2-F01-NN	952021640
				PNP	S50-MR-2-F01-PP	952021170
		M12 Connector		NPN	S50-MR-5-F01-NN	952021800
				PNP	S50-MR-5-F01-PP	952021370
	LASER, Axial optic	2m Cable		NPN	S50-ML-2-F01-NN	952021840
				PNP	S50-ML-2-F01-PP	952021420
		M12 Connector		NPN	S50-ML-5-F01-NN	952021870
				PNP	S50-ML-5-F01-PP	952021460
LASER, Radial optic	2m Cable		NPN	S50-MH-2-F01-NN	952022030	
			PNP	S50-MH-2-F01-PP	952022020	
	M12 Connector		NPN	S50-MH-5-F01-NN	952022050	
			PNP	S50-MH-5-F01-PP	952022040	
Through beam emitter	LED, Axial optic	2m Cable	-	S50-MA-2-G00-XG	952021060	
		M12 Connector	-	S50-MA-5-G00-XG	952021260	
	LED, Radial optic	2m Cable	-	S50-MR-2-G00-XG	952021180	
		M12 Connector	-	S50-MR-5-G00-XG	952021380	
	LASER, Axial optic	2m Cable	-	S50-ML-2-G00-XG	952021430	
		M12 Connector	-	S50-ML-5-G00-XG	952021470	
	LASER, Radial optic	2m Cable	-	S50-MH-2-G00-XG	952022060	
		M12 Connector	-	S50-MH-5-G00-XG	952022070	
Background suppression	LED, Axial optic	2m Cable	NPN	S50-MA-2-M03-NN	952021550	
			PNP	S50-MA-2-M03-PP	952021070	
	M12 Connector		PNP	S50-MA-5-M03-PP	952021270	
			PNP	S50-MS-2-M03-PP	952021910	
LED, Radial optic	2m Cable	PNP	S50-MS-5-M03-PP	952021930		
	M12 Connector	PNP	S50-MS-5-M03-PP	952021930		
Retroreflective for transparent	LED, Axial optic	2m Cable	NPN	S50-MA-2-T01-NN	952021570	
			PNP	S50-MA-2-T01-PP	952021090	
		M12 Connector	NPN	S50-MA-5-T01-NN	952021730	
			PNP	S50-MA-5-T01-PP	952021290	
	LED, Radial optic	2m Cable	NPN	S50-MR-2-T01-NN	952021650	
			PNP	S50-MR-2-T01-PP	952021190	
		M12 Connector	NPN	S50-MR-5-T01-NN	952021810	
			PNP	S50-MR-5-T01-PP	952021390	
Luminescence	LED, Axial optic	M12 Connector	PNP	S50-MA-5-U03-PP	952021300	
Contrast	LED, Axial optic	2m Cable	PNP	S50-MA-2-W03-PP	952021110	
		M12 Connector	NPN	S50-MA-5-W03-NN	952021750	
			PNP	S50-MA-5-W03-PP	952021310	

S51 MODELS					
OPTIC FUNCTION	HOUSING/OPTIC	CONNECTION	OUTPUT	MODEL	ORDER No.
Retroreflective	Nickel Plated Brass, Axial	2m Cable	NPN	S51-MA-2-A00-NK	952701601
			PNP	S51-MA-2-A00-PK	952701541
		M12 Connector	NPN	S51-MA-5-A00-NK	952701801
			PNP	S51-MA-5-A00-PK	952701531
	Nickel Plated Brass, Radial	2m Cable	NPN	S51-MR-2-A00-NK	952701711
			PNP	S51-MR-2-A00-PK	952701651
		M12 Connector	NPN	S51-MR-5-A00-NK	952701911
			PNP	S51-MR-5-A00-PK	952701851
	Plastic, Axial	2m Cable	NPN	S51-PA-2-A00-NK	952701071
			PNP	S51-PA-2-A00-PK	952701001
		M12 Connector	NPN	S51-PA-5-A00-NK	952701331
			PNP	S51-PA-5-A00-PK	952701261
	Plastic, Radial	2m Cable	NPN	S51-PR-2-A00-NK	952701201
			PNP	S51-PR-2-A00-PK	952701131
		M12 Connector	NPN	S51-PR-5-A00-NK	952701461
			PNP	S51-PR-5-A00-PK	952701391

Polarized retroreflective	Nickel Plated Brass, Axial	2m Cable	NPN	S51-MA-2-B01-NK	952701611	
			PNP	S51-MA-2-B01-PK	952701551	
		M12 Connector	NPN	S51-MA-5-B01-NK	952701811	
			PNP	S51-MA-5-B01-PK	952701761	
	Nickel Plated Brass, Radial	2m Cable	NPN	S51-MR-2-B01-NK	952701721	
			PNP	S51-MR-2-B01-PK	952701661	
		M12 Connector	NPN	S51-MR-5-B01-NK	952701921	
			PNP	S51-MR-5-B01-PK	952701861	
	Plastic, Axial	2m Cable	NPN	S51-PA-2-B01-NK	952701081	
			PNP	S51-PA-2-B01-PK	952701011	
		M12 Connector	NPN	S51-PA-5-B01-NK	952701341	
			PNP	S51-PA-5-B01-PK	952701271	
Plastic, Radial	2m Cable	NPN	S51-PR-2-B01-NK	952701211		
		PNP	S51-PR-2-B01-PK	952701141		
	M12 Connector	NPN	S51-PR-5-B01-NK	952701471		
		PNP	S51-PR-5-B01-PK	952701401		
Medium diffuse proximity	Nickel Plated Brass, Axial	2m Cable	NPN	S51-MA-2-C01-NK	952701621	
			PNP	S51-MA-2-C01-PK	952701561	
		M12 Connector	NPN	S51-MA-5-C01-NK	952701821	
			PNP	S51-MA-5-C01-PK	952701771	
	Nickel Plated Brass, Radial	2m Cable	NPN	S51-MR-2-C01-NK	952701731	
			PNP	S51-MR-2-C01-PK	952701671	
		M12 Connector	NPN	S51-MR-5-C01-NK	952701931	
			PNP	S51-MR-5-C01-PK	952701871	
	Plastic, Axial	2m Cable	NPN	S51-PA-2-C01-NK	952701091	
			PNP	S51-PA-2-C01-PK	952701021	
		M12 Connector	NPN	S51-PA-5-C01-NK	952701351	
			PNP	S51-PA-5-C01-PK	952701281	
	Plastic, Radial	2m Cable	NPN	S51-PR-2-C01-NK	952701221	
			PNP	S51-PR-2-C01-PK	952701151	
		M12 Connector	NPN	S51-PR-5-C01-NK	952701481	
			PNP	S51-PR-5-C01-PK	952701411	
	Short diffuse proximity	Nickel Plated Brass, Axial	2m Cable	NPN	S51-MA-2-C10-NK	952701631
				PNP	S51-MA-2-C10-PK	952701571
		M12 Connector	NPN	S51-MA-5-C10-NK	952701831	
			PNP	S51-MA-5-C10-PK	952701521	
Nickel Plated Brass, Radial		2m Cable	NPN	S51-MR-2-C10-NK	952701741	
			PNP	S51-MR-2-C10-PK	952701681	
		M12 Connector	NPN	S51-MR-5-C10-NK	952701941	
			PNP	S51-MR-5-C10-PK	952701881	
Plastic, Axial		2m Cable	NPN	S51-PA-2-C10-NK	952701101	
			PNP	S51-PA-2-C10-PK	952701031	
		M12 Connector	NPN	S51-PA-5-C10-NK	952701361	
			PNP	S51-PA-5-C10-PK	952701291	
Plastic, Radial		2m Cable	NPN	S51-PR-2-C10-NK	952701231	
			PNP	S51-PR-2-C10-PK	952701161	
		M12 Connector	NPN	S51-PR-5-C10-NK	952701491	
			PNP	S51-PR-5-C10-PK	952701421	
Narrow beam proximity		Nickel Plated Brass, Axial	M12 Connector	PNP	S51-MA-5-C20-PK	952701961
Through beam receiver		Nickel Plated Brass, Axial	2m Cable	NPN	S51-MA-2-F00-NK	952701641
			PNP	S51-MA-2-F00-PK	952701581	
		M12 Connector	NPN	S51-MA-5-F00-NK	952701841	
			PNP	S51-MA-5-F00-PK	952701781	
	Nickel Plated Brass, Radial	2m Cable	NPN	S51-MR-2-F00-NK	952701751	
			PNP	S51-MR-2-F00-PK	952701691	
		M12 Connector	NPN	S51-MR-5-F00-NK	952701951	
			PNP	S51-MR-5-F00-PK	952701891	
	Plastic, Axial	2m Cable	NPN	S51-PA-2-F00-NK	952701121	
			PNP	S51-PA-2-F00-PK	952701051	
		M12 Connector	NPN	S51-PA-5-F00-NK	952701381	
			PNP	S51-PA-5-F00-PK	952701311	
Plastic, Radial	2m Cable	NPN	S51-PR-2-F00-NK	952701251		
		PNP	S51-PR-2-F00-PK	952701181		
	M12 Connector	NPN	S51-PR-5-F00-NK	952701511		
		PNP	S51-PR-5-F00-PK	952701441		
Through beam emitter	Nickel Plated Brass, Axial	2m Cable	-	S51-MA-2-G00-XG	952701591	
		M12 Connector	-	S51-MA-5-G00-XG	952701791	
	Nickel Plated Brass, Radial	2m Cable	-	S51-MR-2-G00-XG	952701701	
		M12 Connector	-	S51-MR-5-G00-XG	952701901	
	Plastic, Axial	2m Cable	-	S51-PA-2-G00-XG	952701061	
		M12 Connector	-	S51-PA-5-G00-XG	952701321	
Plastic, Radial	2m Cable	-	S51-PR-2-G00-XG	952701191		
	M12 Connector	-	S51-PR-5-G00-XG	952701451		

SMall

Complete line of amplified subminiature photoelectric sensors

- 15mm, 20mm, 30mm and 50mm fixed focus proximity
- 1,5m retroreflective and 1m polarized retroreflective
- 2m through beam models
- Amplified NPN or PNP output with NO-NC output



APPLICATIONS

- Processing and Packaging machinery
- Automotive
- Beverage & Bottling
- Vending machines



SM-all		
Through beam		0...2 m
Retroreflective (on R2 reflector)		0,05...1,5 m
Polarized retroreflective		0,1...1 m
Fixed focus		3...15 mm
		3...20 mm
		3...30 mm
		3...50 mm
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	
Output	PNP	▪
	NPN	▪
	NPN/PNP	
	relay	
	other	
Connection	cable	▪
	connector	
	pig-tail	
Approximate dimensions (mm)		8x23x12
Housing material		Polycarbonate
Mechanical protection		IP67

OPTIC FUNCTION	OPERATING DISTANCE	CONNECTION	OUTPUT	MODEL	ORDER No.	
Retroreflective	0,05...1,5 m	2m Cable	PNP	SM-PR-2-A00-PP	95B000060	
			NPN	SM-PR-2-A00-NN	95B000070	
Polarized retroreflective	0,1...1 m	2m Cable	PNP	SM-PR-2-B00-PP	95B000080	
			NPN	SM-PR-2-B00-NN	95B000090	
Fixed focus (short distance)	15 mm	2m Cable	PNP	SM-PR-2-D00-PP	95B000020	
			NPN	SM-PR-2-D00-NN	95B000030	
Fixed focus (normal distance)	20 mm		PNP	SM-PR-2-D10-PP	95B000140	
			NPN	SM-PR-2-D10-NN	95B000150	
Fixed focus (medium distance)	30 mm		PNP	SM-PR-2-D20-PP	95B000040	
			NPN	SM-PR-2-D20-NN	95B000050	
Fixed focus (long distance)	50 mm		PNP	SM-PR-2-D30-PP	95B000000	
			NPN	SM-PR-2-D30-NN	95B000010	
Through beam receiver	0...2 m		2m Cable	PNP	SM-PR-2-F00-PP	95B000120
				NPN	SM-PR-2-F00-NN	95B000130
		-		SM-PR-2-G00-XG	95B000160	



MINIATURE SENSORS

S40

High performance miniature European style photoelectric sensors

- High-performance models with Teach-in function
- Background suppression and LASER retroreflective models
- Polarized retroreflective for transparent objects
- 4-wire NO/NC output or Remote teach input



APPLICATIONS

- Processing and Packaging machinery
- Conveyor lines, material handling
- Automated warehousing



S40		
Polarized retroreflective		0,1...2,5 m
Retroreflective for transparent (on R2 reflector)		0,1...6 m (class 2 LASER)
Diffuse proximity		100...700 mm
Background suppression		5...300 mm
		40...150 mm (class 2 LASER)
		15...100 mm
		20...60 mm (class 2 LASER)
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	
Output	PNP	▪
	NPN	▪
	NPN/PNP	
	relay	
	other	
Connection	cable	▪
	connector	▪
	pig-tail	
Approximate dimensions (mm)		12x32x20
Housing material		ABS
Mechanical protection		IP67

OPTIC FUNCTION	EMISSION	CONNECTION	OUTPUT	MODEL	ORDER No.
Polarized retroreflective	LASER	Connector	NPN	S40-PH-5-B03-NH	950401240
			PNP	S40-PH-5-B03-PH	950401250
	LED	2m Cable	NPN	S40-PR-2-B03-NH	950401360
			PNP	S40-PR-2-B03-PH	950401300
		Connector	NPN	S40-PR-5-B03-NH	950401480
			PNP	S40-PR-5-B03-PH	950401420
Diffuse proximity	LASER	Connector	NPN	S40-PH-5-C03-NH	950401260
			PNP	S40-PH-5-C03-PH	950401270
	LED	2m Cable	NPN	S40-PR-2-C03-NH	950401370
			PNP	S40-PR-2-C03-PH	950401310
		Connector	NPN	S40-PR-5-C03-NH	950401490
			PNP	S40-PR-5-C03-PH	950401430
Background suppression	LASER	2m Cable	PNP	S40-PH-2-M03-PH	950401540
		Connector	NPN	S40-PH-5-M03-NH	950401280
			PNP	S40-PH-5-M03-PH	950401290
	LED	2m Cable	NPN	S40-PR-2-M03-NH	950401380
		Connector	PNP	S40-PR-2-M03-PH	950401320
			NPN	S40-PR-5-M03-NH	950401500
Retroreflective for transparent	LED	2m Cable	NPN	S40-PR-2-T03-NH	950401410
			PNP	S40-PR-2-T03-PH	950401350
		Connector	NPN	S40-PR-5-T03-NH	950401530
			PNP	S40-PR-5-T03-PH	950401470



MINIATURE SENSORS

S41

Basic line of miniature European style photoelectric sensors

- Cost-effective universal models with adjustment trimmer
- Polarized retroreflective for transparent objects
- 4-wire connection NO/NC output or Remote teach



APPLICATIONS

- Processing and Packaging machinery
- Conveyor lines, material handling
- Automated warehousing



S41		
Through beam		0,1...6 m
Retroreflective (on R2 reflector)		
Polarized retroreflective		0,1...2,5 m
Retroreflective for transparent (on R2 reflector)		100...700 mm
Diffuse proximity		2...350 mm
Fixed focus		110 mm
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	
Output	PNP	▪
	NPN	▪
	NPN/PNP	
	relay	
	other	
Connection	cable	▪
	connector	▪
	pig-tail	
Approximate dimensions (mm)		12x32x20
Housing material		ABS
Mechanical protection		IP67

OPTIC FUNCTION	ADJUSTMENT TRIMMER	CONNECTION	OUTPUT	MODEL	ORDER No.
Polarized retroreflective	Present	2m Cable	NPN	S41-2-B-N	950701150
			PNP	S41-2-B-P	950701000
		M8 Connector	NPN	S41-5-B-N	950701210
			PNP	S41-5-B-P	950701050
Polarized retroreflective (NO adjustment)	Absent	2m Cable	NPN	S41-2-P-N	950701190
			PNP	S41-2-P-P	950701100
		Connector	NPN	S41-5-P-N	950701250
			PNP	S41-5-P-P	950701110
Diffuse proximity	Present	2m Cable	NPN	S41-2-C-N	950701160
			PNP	S41-2-C-P	950701010
		M8 Connector	NPN	S41-5-C-N	950701120
			PNP	S41-5-C-P	950701060
Fixed focus	Absent	2m Cable	NPN	S41-2-D-N	950701170
			PNP	S41-2-D-P	950701020
		M8 Connector	NPN	S41-5-D-N	950701230
			PNP	S41-5-D-P	950701070
Through beam receiver	Absent	2m Cable	NPN	S41-2-F-N	950701180
			PNP	S41-2-F-P	950701030
		M8 Connector	NPN	S41-5-F-N	950701240
			PNP	S41-5-F-P	950701080
Through beam emitter	Absent	2m Cable	-	S41-2-G	950701040
		M8 Connector	-	S41-5-G	950701090
Narrow Beam	Absent	Connector	-	S41-2-H	950701045
		Connector	-	S41-5-H	950701095
		2m Cable	NPN	S41-2-T-N	950701200
Retroreflective for transparent	Present	2m Cable	PNP	S41-2-T-P	950701130
			NPN	S41-5-T-N	950701260
		Connector	NPN	S41-5-T-N	950701260
			PNP	S41-5-T-P	950701140



MINIATURE SENSORS

S3Z

Advanced line of miniature Asian style of photoelectric sensors

- 50-250 mm background suppression
- 0.7 m proximity, 15 cm with narrow beam
- 4 m polarized retroreflective
- 15 m through beam
- Standard 3-wire output configuration



APPLICATIONS

- Processing and Packaging machinery
- Electronics assembling



S3Z		
Through beam		0...15 m 0...30 m (class 1 LASER)
Polarized retroreflective		0.05...4 m 0,3...10 m (class 1 LASER)
Retroreflective for transparent (on R2 reflector)		0...2 m
Diffuse proximity		0...70 cm 5...15 cm (narrow beam)
Background suppression		5...25 cm 40...300 mm (class 1 LASER)
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	
Output	PNP	▪
	NPN	▪
	NPN/PNP	
	relay	
	other	
Connection	cable	▪
	connector	▪
	pig-tail	
Approximate dimensions (mm)		11x31x19
Housing material		PC/PBT
Mechanical protection		IP67

OPTIC FUNCTION	EMISSION	CONNECTION	OUTPUT	MODEL	ORDER No.
Narrow beam diffuse proximity	LED	2 m Cable	PNP - LIGHT	S3Z-PR-2-C01-PL	95B010040
		M8 Connector	PNP - LIGHT	S3Z-PR-5-C01-PL	95B010050
		2 m Cable	PNP - DARK	S3Z-PR-2-C01-PD	95B010060
		M8 Connector	PNP - DARK	S3Z-PR-5-C01-PD	95B010070
		2 m Cable	NPN - LIGHT	S3Z-PR-2-C01-NL	95B010200
		M8 Connector	NPN - LIGHT	S3Z-PR-5-C01-NL	95B010210
		2 m Cable	NPN - DARK	S3Z-PR-2-C01-ND	95B010220
		M8 Connector	NPN - DARK	S3Z-PR-5-C01-ND	95B010230
Long diffuse proximity	LED	2 m Cable	PNP - LIGHT	S3Z-PR-2-C11-PL	95B010001
		M8 Connector	PNP - LIGHT	S3Z-PR-5-C11-PL	95B010011
		2 m Cable	PNP - DARK	S3Z-PR-2-C11-PD	95B010021
		M8 Connector	PNP - DARK	S3Z-PR-5-C11-PD	95B010031
		2 m Cable	NPN - LIGHT	S3Z-PR-2-C11-NL	95B010161
		M8 Connector	NPN - LIGHT	S3Z-PR-5-C11-NL	95B010171
		2 m Cable	NPN - DARK	S3Z-PR-2-C11-ND	95B010181
		M8 Connector	NPN - DARK	S3Z-PR-5-C11-ND	95B010191
Polarized retroreflective	LED	2 m Cable	PNP - LIGHT	S3Z-PR-2-B01-PL	95B010081
		M8 Connector	PNP - LIGHT	S3Z-PR-5-B01-PL	95B010091
		2 m Cable	PNP - DARK	S3Z-PR-2-B01-PD	95B010101
		M8 Connector	PNP - DARK	S3Z-PR-5-B01-PD	95B010111
		2 m Cable	NPN - LIGHT	S3Z-PR-2-B01-NL	95B010241
		M8 Connector	NPN - LIGHT	S3Z-PR-5-B01-NL	95B010251
		2 m Cable	NPN - DARK	S3Z-PR-2-B01-ND	95B010261
		M8 Connector	NPN - DARK	S3Z-PR-5-B01-ND	95B010271
	LASER	2 m Cable	PNP - DARK/LIGHT	S3Z-PH-2-B01-PP	95B010440
		M8 Connector	PNP - DARK/LIGHT	S3Z-PH-5-B01-PP	95B010460
		2 m Cable	NPN - DARK/LIGHT	S3Z-PH-2-B01-NN	95B010450
		M8 Connector	NPN - DARK/LIGHT	S3Z-PH-5-B01-NN	95B010470
Through beam	LED	2 m Cable	PNP - LIGHT	S3Z-PR-2-FG01-PL	95B010121
		M8 Connector	PNP - LIGHT	S3Z-PR-5-FG01-PL	95B010131
		2 m Cable	PNP - DARK	S3Z-PR-2-FG01-PD	95B010141
		M8 Connector	PNP - DARK	S3Z-PR-5-FG01-PD	95B010151
		2 m Cable	NPN - LIGHT	S3Z-PR-2-FG01-NL	95B010281
		M8 Connector	NPN - LIGHT	S3Z-PR-5-FG01-NL	95B010291
		2 m Cable	NPN - DARK	S3Z-PR-2-FG01-ND	95B010301
		M8 Connector	NPN - DARK	S3Z-PR-5-FG01-ND	95B010311
	LASER	2 m Cable	PNP - DARK/LIGHT	S3Z-PH-2-FG01-PP	95B010520
		M8 Connector	PNP - DARK/LIGHT	S3Z-PH-5-FG01-PP	95B010540
		2 m Cable	NPN - DARK/LIGHT	S3Z-PH-2-FG01-NN	95B010530
		M8 Connector	NPN - DARK/LIGHT	S3Z-PH-5-FG01-NN	95B010550
Background suppression	LED	2 m Cable	PNP - LIGHT	S3Z-PR-2-M01-PL	95B010330
		M8 Connector	PNP - LIGHT	S3Z-PR-5-M01-PL	95B010350
		2 m Cable	NPN - LIGHT	S3Z-PR-2-M01-NL	95B010320
		M8 Connector	NPN - LIGHT	S3Z-PR-5-M01-NL	95B010340
	LASER	2 m Cable	PNP - DARK/LIGHT	S3Z-PH-2-M01-PP	95B010480
		M8 Connector	PNP - DARK/LIGHT	S3Z-PH-5-M01-PP	95B010500
		2 m Cable	NPN - DARK/LIGHT	S3Z-PH-2-M01-NN	95B010490
		M8 Connector	NPN - DARK/LIGHT	S3Z-PH-5-M01-NN	95B010510
Polarized retroreflective for transparent	LED	2 m Cable	NPN - DARK	S3Z-PR-2-T51-ND	95B010390
		2 m Cable	PNP - DARK	S3Z-PR-2-T51-PD	95B010380
		M8 Connector	NPN - DARK	S3Z-PR-5-T51-ND	95B010370
		M8 Connector	PNP - DARK	S3Z-PR-5-T51-PD	95B010360

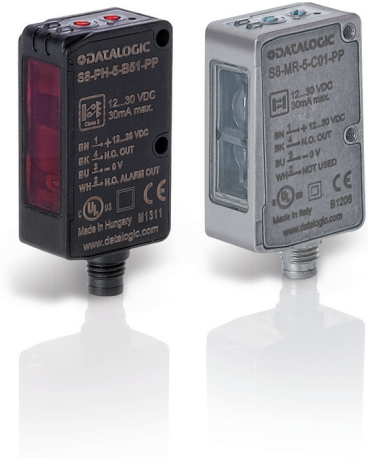
LIGHT= N.O.
DARK= N.C.

COMPACT SENSORS

S8

Compact size and high performance for the most challenging detection applications

- Compact dimensions (14x42x25 mm)
- Background suppression for transparent and shiny objects
- Contrast sensors up to 10 kHz switching frequency
- Extremely focused spot, under 1 mm (LASER model)
- Very high resolution LASER models
- INOX AISI 316L model



APPLICATIONS

- Processing and Packaging machinery
- Beverage/Food/ Cosmetics/ Pharmaceutical industries
- Electronics assembling



(*) Stainless steel models.
ATEX II 3DG

S8		
Through beam		0...25 m
Polarized retroreflective		0,1...5 m
Retroreflective for transparent (coaxial)		0...10 m (class 2 LASER)
Diffuse proximity		0...0,8 m (T51), 0...2 m (T53, T50)
Background suppression		0...500 mm
Background suppression (CLEAR DETECTION)		50...300 mm
Contrast sensor		20...200 mm (class 2 LASER)
		100...300 mm (LED)
		50...150 mm (class 2 LASER)
Power supply	Vdc	10 mm
	Vac	10...30 V
	Vac/dc	
Output	PNP	▪
	NPN	▪
	NPN/PNP	
	relay	
	other	
Connection	cable	▪
	connector	▪
	pig-tail	▪
Approximate dimensions (mm)		14x42x25
Housing material		ABS, Stainless Steel AISI 316L
Mechanical protection		IP69K (Stainless Steel vers.), IP67

OPTIC FUNCTION	HOUSING	CONNECTION	OUTPUT	MODEL	ORDER No.	
Polarized retroreflective (LASER)	Plastic	M8 Connector	NPN	S8-PH-5-B51-NN	950801010	
			PNP	S8-PH-5-B51-PP	950801000	
		Pig-tail	NPN	S8-PH-3-B51-NN	950801090	
			PNP	S8-PH-3-B51-PP	950801080	
	Stainless Steel	M8 Connector	NPN	S8-MH-5-B51-NN	950801490	
			PNP	S8-MH-5-B51-PP	950801480	
Polarized retroreflective (LED)	Plastic	M8 Connector	NPN	S8-PR-5-B01-NN	950801170	
			PNP	S8-PR-5-B01-PP	950801160	
		Pig-tail	NPN	S8-PR-3-B01-NN	950801190	
			PNP	S8-PR-3-B01-PP	950801180	
	Stainless Steel	M8 Connector	NPN	S8-MR-5-B01-NN	950801420	
			PNP	S8-MR-5-B01-PP	950801410	
Diffuse proximity	Stainless Steel	M8 Connector	NPN	S8-MR-5-C01-NN	950801440	
			PNP	S8-MR-5-C01-PP	950801430	
		Pig-tail	NPN	S8-PR-3-C01-NN	950801270	
	PNP		S8-PR-3-C01-PP	950801250		
	Plastic	M8 Connector	NPN	S8-PR-5-C01-NN	950801260	
			PNP	S8-PR-5-C01-PP	950801240	
Through beam emitter		Stainless Steel	M8 Connector	-	S8-MR-5-G00-XG	950801580
	Pig-tail			-	S8-PR-3-G00-XG	950801550
		Plastic	M8 Connector	-	S8-PR-5-G00-XG	950801540
Through beam receiver	Stainless Steel	M8 Connector	NPN	S8-MR-5-F01-NN	950801570	
			PNP	S8-MR-5-F01-PP	950801560	
		Pig-tail	NPN	S8-PR-3-F01-NN	950801530	
	PNP		S8-PR-3-F01-PP	950801520		
	Plastic	M8 Connector	NPN	S8-PR-5-F01-NN	950801510	
			PNP	S8-PR-5-F01-PP	950801500	
Background suppression (Clear Detection LASER)		Stainless Steel	M8 Connector	PNP	S8-MH-5-M53-PP	950801451
	PNP			S8-PH-5-M53-PP	950801381	
Background suppression (Clear Detection LED)	Stainless Steel	PNP		S8-MR-5-M53-PP	950801600	
		Plastic		PNP	S8-PR-5-M53-PP	950801590
Background suppression (LASER)	Stainless Steel			M8 Connector	NPN	S8-MH-5-M01-NN
		PNP			S8-MH-5-M01-PP	950801460
		Plastic	NPN		S8-PH-5-M01-NN	950801030
	PNP		S8-PH-5-M01-PP		950801020	
	Pig-tail		NPN		S8-PH-3-M01-NN	950801110
		PNP	S8-PH-3-M01-PP		950801100	
Background suppression (LED)	Stainless Steel	M8 Connector	NPN	S8-MR-5-M01-NN	950801400	
			PNP	S8-MR-5-M01-PP	950801390	
			Plastic	NPN	S8-PR-5-M01-NN	950801210
	PNP			S8-PR-5-M01-PP	950801200	
	Pig-tail			NPN	S8-PR-3-M01-NN	950801230
			PNP	S8-PR-3-M01-PP	950801220	
Retroreflective for transparent	Stainless Steel	M8 Connector	NPN	S8-MR-5-T50-NH	950801330	
			PNP	S8-MR-5-T50-PH	950801320	
			NPN	S8-MR-5-T53-NN	950801310	
			PNP	S8-MR-5-T53-PP	950801300	
	Plastic	Pig-tail	NPN	S8-PR-3-T51-NN	950801130	
			PNP	S8-PR-3-T51-PP	950801120	
		M8 Connector	NPN	S8-PR-5-T51-NN	950801050	
			PNP	S8-PR-5-T51-PP	950801040	
			NPN	S8-PR-5-T53-NN	950801290	
			PNP	S8-PR-5-T53-PP	950801280	
Contrast	Stainless Steel	M8 Connector	NPN	S8-MR-5-W00-NH	950801370	
			PNP	S8-MR-5-W00-PH	950801360	
			NPN	S8-MR-5-W03-NN	950801350	
			PNP	S8-MR-5-W03-PP	950801340	
	Plastic	Pig-tail	NPN	S8-PR-3-W03-NN	950801150	
			PNP	S8-PR-3-W03-PP	950801140	
		M8 Connector	NPN	S8-PR-5-W03-NN	950801070	
			PNP	S8-PR-5-W03-PP	950801060	

COMPACT SENSORS

S62

The most complete universal sensor in a compact 50x50 mm housing

- Sensors with red, infrared LED or LASER emission
- Background suppression from 3 cm to 2 m
- Polarized retroreflective up to 20 m
- Multivoltage 24-240Vac/24-60Vdc with Relay output
- NPN/PNP output NO-NC configuration



APPLICATIONS

- Processing and Packaging machinery
- Conveyor lines, material handling



S62		
Through beam		0...25 m
Retroreflective (on R2 reflector)		0,1...13 m
Polarized retroreflective		0,1...8 m
		0,3...20 m (class 2 LASER)
Diffuse proximity		short 0...900 mm, long 0...2000 mm
		0...900 mm (class 2 LASER)
Background suppression		short 30...300 mm
		medium 60...600 mm
		long 60...1200 mm
		very long 200...2000 mm
		short LASER 30...150 mm (class 2 LASER)
		long LASER 50...350 mm (class 2 LASER)
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	24/240 Vac/24...60 Vdc
	PNP	▪
Output	NPN	▪
	NPN/PNP	▪
	relay	▪
	other	
Connection	cable	▪
	connector	▪
	pig-tail	
Approximate dimensions (mm)		18x50x50
Housing material		ABS
Mechanical protection		IP67

OPTIC FUNCTION	EMISSION	CONNECTION	OUTPUT	MODEL	ORDER No.
Retroreflective	LED (red 640nm)	2m Cable	PNP/NPN	S62-PA-2-A01-PN	956211240
		M12 Connector	PNP/NPN	S62-PA-5-A01-PN	956211310
		Vac relay	Relay	S62-PA-1-A01-RX	956211180
Polarized retroreflective	LED (red 640nm)	2m Cable	PNP/NPN	S62-PA-2-B01-PN	956211250
		M12 Connector	PNP	S62-PA-2-B01-PP	956211010
			NPN	S62-PA-5-B01-NN	956211020
	Vac relay	PNP/NPN	S62-PA-5-B01-PN	956211320	
		Relay	S62-PA-1-B01-RX	956211000	
	LASER		NPN	S62-PA-1-B01-RX	956211190
PNP			S62-PL-5-B01-NN	956211100	
Short diffuse proximity	LED (red 640nm)	2m Cable	NPN	S62-PL-5-B01-PP	956211110
			PNP/NPN	S62-PA-2-C01-NN	956211420
			PNP	S62-PA-2-C01-PN	956211260
		M12 Connector	NPN	S62-PA-2-C01-PP	956211380
			PNP/NPN	S62-PA-5-C01-NN	956211500
	LASER	M12 Connector	PNP/NPN	S62-PA-5-C01-PN	956211330
			PNP	S62-PA-5-C01-PP	956211460
		Vac relay	Relay	S62-PA-1-C01-RX	956211200
		2m Cable	NPN	S62-PA-1-C01-RX	956211440
			PNP	S62-PL-2-C01-NN	956211400
Long diffuse proximity	LED (red 640nm)	2m Cable	NPN	S62-PL-2-C01-PP	956211520
			PNP	S62-PL-5-C01-NN	956211480
			PNP/NPN	S62-PL-5-C01-PP	956211430
		M12 Connector	NPN	S62-PA-2-C11-NN	956211430
			PNP/NPN	S62-PA-2-C11-PN	956211270
			PNP	S62-PA-2-C11-PP	956211390
		Vac relay	NPN	S62-PA-5-C11-NN	956211510
			PNP/NPN	S62-PA-5-C11-PN	956211340
			PNP	S62-PA-5-C11-PP	956211470
Through beam receiver	LED (red 640nm)	2m Cable	Relay	S62-PA-1-C11-RX	956211210
			NPN	S62-PA-2-F01-NN	956211450
			PNP/NPN	S62-PA-2-F01-PN	956211290
		M12 Connector	PNP	S62-PA-2-F01-PP	956211410
			NPN	S62-PA-5-F01-NN	956211530
			PNP/NPN	S62-PA-5-F01-PN	956211360
			PNP	S62-PA-5-F01-PP	956211490
Vac relay	Relay	S62-PA-1-F01-RX	956211220		
Through beam emitter	-	2m Cable	-	S62-PA-2-G00-XG	956211300
		M12 Connector	-	S62-PA-5-G00-XG	956211370
		Vac relay	-	S62-PA-1-G00-XX	956211230
Background suppression (short distance)	LED (red 640nm)	2m Cable	PNP/NPN	S62-PA-2-M01-PN	956211280
			PNP	S62-PA-2-M01-PP	956201841
		M12 Connector	NPN	S62-PA-5-M01-NN	956201811
			PNP/NPN	S62-PA-5-M01-PN	956211350
			PNP	S62-PA-5-M01-PP	956201831
	LASER	M12 Connector	NPN	S62-PA-5-M05-NN	956201801
			PNP	S62-PA-5-M05-PP	956201821
Background suppression (medium distance)	LED (red 640nm)	2m Cable	NPN	S62-PL-5-M01-NN	956211121
			PNP	S62-PL-5-M01-PP	956211131
		M12 Connector	PNP	S62-PA-2-M11-PP	956201891
			NPN	S62-PA-5-M11-NN	956201861
	LASER	M12 Connector	PNP	S62-PA-5-M11-PP	956201881
			NPN	S62-PA-5-M15-NN	956201851
Background suppression (long distance)	LED (infrared 880nm)	2m Cable	PNP	S62-PA-5-M15-PP	956201871
			NPN	S62-PL-5-M11-NN	956211141
		M12 Connector	PNP	S62-PL-5-M11-PP	956211151
			PNP	S62-PA-2-M21-PP	956201940
			NPN	S62-PA-5-M21-NN	956201910
Background suppression (very long distance)	LED (infrared 880nm)	2m Cable	PNP	S62-PA-5-M21-PP	956201900
			NPN	S62-PA-5-M25-NN	956201930
		M12 Connector	PNP	S62-PA-5-M25-PP	956201920
			NPN	S62-PA-2-M31-PP	956211050
		M12 Connector	NPN	S62-PA-5-M31-NN	956211060
			PNP	S62-PA-5-M31-PP	956211070
			NPN	S62-PA-5-M35-NN	956211080
			PNP	S62-PA-5-M35-PP	956211090

COMPACT SENSORS

S6

Multivoltage 50x50 mm compact sensors series

- 50x50 mm compact dimensions
- Free voltage Vac/Vdc models with relay output
- 10-30 Vdc model with transistor output
- Standard cable or M12 4-pole connection



APPLICATIONS

- Automatic machines
- Packaging lines
- Transportation lines
- Automatic warehouses



S6		
Through beam		0...20 m
Retroreflective (on R2 reflector)		0,1...6 m (on R2 reflector)
Polarized retroreflective		0,1...5 m (on R2 reflector)
Diffuse proximity		10...900 mm
		10...2000 mm
Background suppression		30...100 mm
		30...250 mm
		100...500 mm
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	15...264 Vac/Vdc
Output	PNP	▪
	NPN	▪
	NPN/PNP	▪
	relay	▪
	other	
Connection	cable	▪
	connector	▪
	pig-tail	
Approximate dimensions (mm)		18x50x50
Housing material		ABS
Mechanical protection		IP65

OPTIC FUNCTION	OPERATING	POWER SUPPLY	OUTPUT	MODELS	ORDER No.
Short diffuse proximity	10...900 mm	15...264 V A.C.	relay SPDT 250V/3A	S6-1-C90	S937530090
		10...30 V D.C.	NPN/PNP	S6-5-C90	S937530000
			PNP N.O./N.C.	S6R-5-C90-P	950201190
			PNP	S6T-5-C90-P	961031020
Long diffuse proximity	10...2000 mm	15...264 V A.C.	relay SPDT 250V/3A	S6-1-C200	950151140
		10...30 V D.C.	NPN/PNP	S6-5-C200	950201150
			PNP N.O./N.C.	S6R-5-C200-P	950201200
			NPN N.O./N.C.	S6R-5-C200-N	956101050
Retroreflective	0,1...6 m (on R2 reflector)	15...264 V A.C.	relay SPDT 250V/3A	S6-1-A6	S937330090
		10...30 V D.C.	NPN/PNP	S6-5-A6	S937330000
			PNP	S6T-5-A6-P	961031000
			PNP N.O./N.C.	S6R-5-A6-P	950201170
Polarized retroreflective	0,1...5 m (on R2 reflector)	15...264 V A.C.	relay SPDT 250V/3A	S6-1-B5	S937420090
		10...30 V D.C.	NPN/PNP	S6-5-B5	S937420000
			PNP N.O./N.C.	S6R-5-B5-P	950201180
			PNP	S6T-5-B5-P	961031010
Background suppression	30...100 mm	10...30 V D.C.	PNP N.O./N.C.	S6R-5-M10-P	950201230
	30...250 mm		NPN/PNP	S6-5-M25	S937830000
			PNP N.O./N.C.	S6R-5-M25-P	950201220
			NPN N.O./N.C.	S6R-5-M25-N	956101080
			PNP	S6T-5-M25-P	961041000
	100...500 mm		PNP N.O./N.C.	S6R-5-M50-P	950201250
Through beam (Receiver)	0...20 m	15...264 V A.C.	relay SPDT 250V/3A	S6-1-F20	S937200090
		10...30 V D.C.	NPN/PNP	S6-5-F20	S937200010
			PNP N.O./N.C.	S6R-5-F20-P	950201160
			PNP	S6T-5-F20-P	961211010
Through beam (Emitter)	-	15...264 V A.C.	-	S6-1-G20	S937130090
		10...30 V D.C.	-	S6-5-G20	S937130000
			-	S6T-5-G20	961211000



COMPACT SENSORS

S90

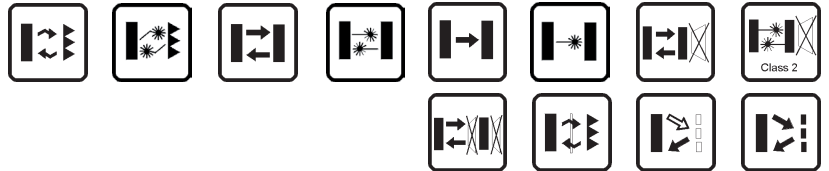
Extended range of compact photoelectric sensors in a metal housing

- Background suppression and polarized retroreflective
- Class 1 LASER models for long distance detection
- Contrast and UV Luminescence sensors
- Industrial IP67 metal housing
- Standard 4-wire NO-NC NPN or PNP output



APPLICATIONS

- Processing and Packaging machinery
- Conveyor lines, material handling
- Automotive assembling lines
- Automated warehousing



S90		
Through beam		0...20 m 0...60 m (class 1 LASER)
Polarized retroreflective		0...3,2 m (coaxial) 0,1...6,5 m 0,1...20 m (class 1 LASER)
Retroreflective for transparent (on R2 reflector)		0...1,7 m (coaxial)
Diffuse proximity		short 0,01...1 m long 0,05...2 m 0...600 mm (class 1 LASER)
Background suppression		70...200 mm 50...100 mm (class 1 LASER)
Foreground suppression		70...200 mm
Luminescence		0...40 mm
Contrast		19 ± 2 mm
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	
Output	PNP	▪
	NPN	▪
	NPN/PNP	
	relay	
	other	
Connection	cable	
	connector	▪
	pig-tail	
Approximate dimensions (mm)		15x50x41
Housing material		Zama
Mechanical protection		IP67

OPTIC FUNCTION	EMISSION	SETTING	OUTPUT	MODEL	ORDER No.
Polarized retroreflective	LASER	Trimmer	NPN	S90-ML-5-B01-NN	956301260
			PNP	S90-ML-5-B01-PP	956301090
	LED	Trimmer	NPN	S90-MA-5-B01-NN	956301160
			PNP	S90-MA-5-B01-PP	956301000
Coaxial polarized retroreflective	LED	Trimmer	NPN	S90-MA-5-B51-NN	956301170
			PNP	S90-MA-5-B51-PP	956301030
Short diffuse proximity	LASER	Trimmer	NPN	S90-ML-5-C01-NN	956301270
			PNP	S90-ML-5-C01-PP	956301100
	LED	Trimmer	NPN	S90-MA-5-C01-NN	956301190
			PNP	S90-MA-5-C01-PP	956301010
Long diffuse proximity	LED	Trimmer	NPN	S90-MA-5-C11-NN	956301200
			PNP	S90-MA-5-C11-PP	956301020
Through beam receiver	LASER	Trimmer	NPN	S90-ML-5-F01-NN	956301280
			PNP	S90-ML-5-F01-PP	956301110
	LED	Trimmer	NPN	S90-MA-5-F01-NN	956301210
			PNP	S90-MA-5-F01-PP	956301050
Through beam emitter	LASER	-	-	S90-ML-5-G00-XG	956301120
	LED	-	-	S90-MA-5-G00-XG	956301060
Background suppression	LASER	Teach-in, delay-off, remote	NPN	S90-ML-5-M08-NH	956301290
			PNP	S90-ML-5-M08-PH	956301130
	LED	Teach-in, delay-off, remote	NPN	S90-MA-5-M08-NH	956301220
			PNP	S90-MA-5-M08-PH	956301070
Background and foreground suppression	LED	Teach-in, remote	NPN	S90-MA-5-N03-NH	956301230
			PNP	S90-MA-5-N03-PH	956301080
RRX for transparent	LED	Trimmer	NPN	S90-MA-5-T51-NN	956301180
			PNP	S90-MA-5-T51-PP	956301040
Luminescence	LED	Teach-in, delay-off, remote	NPN	S90-MA-5-U08-NH	956301240
			PNP	S90-MA-5-U08-PH	956301140
Contrast	LED	Teach-in, delay-off, remote	NPN	S90-MA-5-W08-NH	956301250
			PNP	S90-MA-5-W08-PH	956301150



MAXI SENSORS

S300 PA

Advanced MAXI photoelectric multivoltage sensors

- Industrial plastic housing with IP67 mechanical protection
- Timing function from 0.6-16 s ON delay, OFF delay and ONE SHOT
- Terminal block for both Vdc and Vac/ Vdc free voltage
- Distance trimmer for mechanical background suppression models



APPLICATIONS

- Packaging end of line, palletizers
- Outdoor or indoor gates control
- Manufacturing plants



(*)DC models:
ATEX II 3DG

S300 PA		
Through beam		0...50 m
Retroreflective (on R2 reflector)		0,1...15 m
Polarized retroreflective		0,1...10 m
Diffuse proximity		0,05...2 m
Background suppression		0,2...2 m
Power supply	Vdc	12...30 V
	Vac	
	Vac/dc	24...240 Vac / 24...60 Vdc
Output	PNP	
	NPN	
	NPN/PNP	▪
	relay	▪
Connection	other	
	cable	
	connector	Terminal block
Approximate dimensions (mm)		25x100x70
Housing material		PBT
Mechanical protection		IP67

OPTIC FUNCTION	EMISSION	POWER SUPPLY	OUTPUT	MODEL	ORDER No.
Retroreflective	LED (infrared 880nm)	12..30 Vdc	NPN/PNP	S300-PA-2-A01-OC	951451500
			NPN/PNP	S300-PA-2-A06-OC	951451510
		24...240 Vac/24...60 Vdc	Relay	S300-PA-1-A01-RX	951451480
			Relay	S300-PA-1-A06-RX	951451490
Polarized retroreflective	LED (red 660nm)	12..30 Vdc	NPN/PNP	S300-PA-2-B01-OC	951451540
			NPN/PNP	S300-PA-2-B06-OC	951451550
		24...240 Vac/24...60 Vdc	Relay	S300-PA-1-B01-RX	951451520
			Relay	S300-PA-1-B06-RX	951451530
Diffuse proximity	LED (infrared 940nm)	12..30 Vdc	NPN/PNP	S300-PA-2-C01-OC	951451420
			NPN/PNP	S300-PA-2-C06-OC	951451430
		24...240 Vac/24...60 Vdc	Relay	S300-PA-1-C01-RX	951451400
			Relay	S300-PA-1-C06-RX	951451410
Through beam receiver	-	12..30 Vdc	NPN/PNP	S300-PA-2-F01-OC	951451600
			NPN/PNP	S300-PA-2-F06-OC	951451610
		24...240 Vac/24...60 Vdc	Relay	S300-PA-1-F01-RX	951451580
			Relay	S300-PA-1-F06-RX	951451590
Through beam emitter	LED (infrared 880nm)	12..30 Vdc	-	S300-PA-2-G00-EX	951451570
		24...240 Vac/24...60 Vdc	-	S300-PA-1-G00-EX	951451560
Background suppression	LED (infrared 880nm)	12..30 Vdc	NPN/PNP	S300-PA-2-M01-OC	951451460
			NPN/PNP	S300-PA-2-M06-OC	951451470
		24...240 Vac/24...60 Vdc	Relay	S300-PA-1-M01-RX	951451440
			Relay	S300-PA-1-M06-RX	951451450



MAXI SENSORS

S300 PR

Heavy duty sensor for outdoor applications and harsh environments

- Industrial plastic housing with IP67 mechanical protection
- Defogging system function
- Double independent timing functions with double time scale from 0-2s or 0-10s, One-Delay, Off Delay, ONE SHOT



APPLICATIONS

- Packaging end of line, palletizers
- Outdoor or indoor gates control
- Automotive plants
- Automated warehousing



(*)DC models:
ATEX II 3DG

S300 PA		
Through beam	0...60 m	
Polarized retroreflective	0,1...22 m	
Diffuse proximity	0,05...5 m	
Background suppression	0,4...2,5 m	
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	24...240 Vac / 24...60 Vdc
Output	PNP	
	NPN	
	NPN/PNP	▪
	relay	▪
	other	
Connection	cable	
	connector	M12 or terminal block
	pig-tail	
Approximate dimensions (mm)	25x100x70	
Housing material	PBT	
Mechanical protection	IP67	

OPTIC FUNCTION	HOUSING	CONNECTION	OUTPUT	MODEL	ORDER No.
Polarized retroreflective	Plastic (30% fiber-reinforced glass) IP67/NEMA Type1	Vdc - Terminal block	NPN/PNP	S300-PR-2-B01-OC	951451000
			NPN/PNP	S300-PR-2-B06-OC	951451010
		Vdc-M12	NPN/PNP	S300-PR-5-B01-OC	951451020
	Plastic (defogging function)	Vdc - Terminal block	NPN/PNP	S300-PR-5-B06-OC	951451030
			Relay	S300-PR-1-B01-RX	951451040
		Relay	S300-PR-1-B06-RX	951451050	
Diffuse proximity	Plastic (30% fiber-reinforced glass) IP67/NEMA Type1	Vdc - Terminal block	Relay	S300-PR-1-B06-RX-M	951451060
			NPN/PNP	S300-PR-2-C01-OC	951451070
		Vdc-M12	NPN/PNP	S300-PR-2-C06-OC	951451080
	Plastic (defogging function)	Vdc - Terminal block	NPN/PNP	S300-PR-5-C01-OC	951451090
			NPN/PNP	S300-PR-5-C06-OC	951451100
		Relay	S300-PR-1-C01-RX	951451110	
Through beam receiver	Plastic (30% fiber-reinforced glass) IP67/NEMA Type1	Vdc - Terminal block	Relay	S300-PR-1-C06-RX	951451120
			Relay	S300-PR-1-C06-RX-M	951451130
		Vdc-M12	NPN/PNP	S300-PR-2-F01-OC	951451210
	Plastic (defogging function)	Vdc - Terminal block	NPN/PNP	S300-PR-2-F06-OC	951451220
			NPN/PNP	S300-PR-5-F01-OC	951451230
		NPN/PNP	S300-PR-5-F06-OC	951451240	
Through beam emitter	Plastic (30% fiber-reinforced glass) IP67/NEMA Type1	Vac - Terminal block	Relay	S300-PR-1-F01-RX	951451250
		Relay	S300-PR-1-F06-RX	951451260	
		Relay	S300-PR-1-F06-RX-M	951451270	
	Plastic (defogging function)	Vdc - Terminal block	-	S300-PR-2-G00-EX	951451280
Background suppression	Plastic (30% fiber-reinforced glass) IP67/NEMA Type1	Vdc - Terminal block	-	S300-PR-5-G00-EX	951451290
		Vdc-M12	-	S300-PR-1-G00-EX	951451300
		Relay	-	S300-PR-1-G00-EX-M	951451310
	Plastic (defogging function)	Vdc - Terminal block	NPN/PNP	S300-PR-2-M01-OC	951451140
			NPN/PNP	S300-PR-2-M06-OC	951451150
		Vdc-M12	NPN/PNP	S300-PR-5-M01-OC	951451160
Plastic (defogging function)	Vdc - Terminal block	NPN/PNP	S300-PR-5-M06-OC	951451170	
		Relay	S300-PR-1-M01-RX	951451180	
	Relay	S300-PR-1-M06-RX	951451190		
Plastic (defogging function)	Vac - Terminal block	Relay	S300-PR-1-M06-RX-M	951451200	



S7

Fiber optic amplifiers in a DIN rail compatible format for small object detection in limited spaces

- High-resolution models with integrated display
- 12 bit resolution and 50 μ s response time
- Trimmer or teach-in models
- Wide range of accessory fiber optics
- 4 wire NO/NC output or Remote teach input

APPLICATIONS

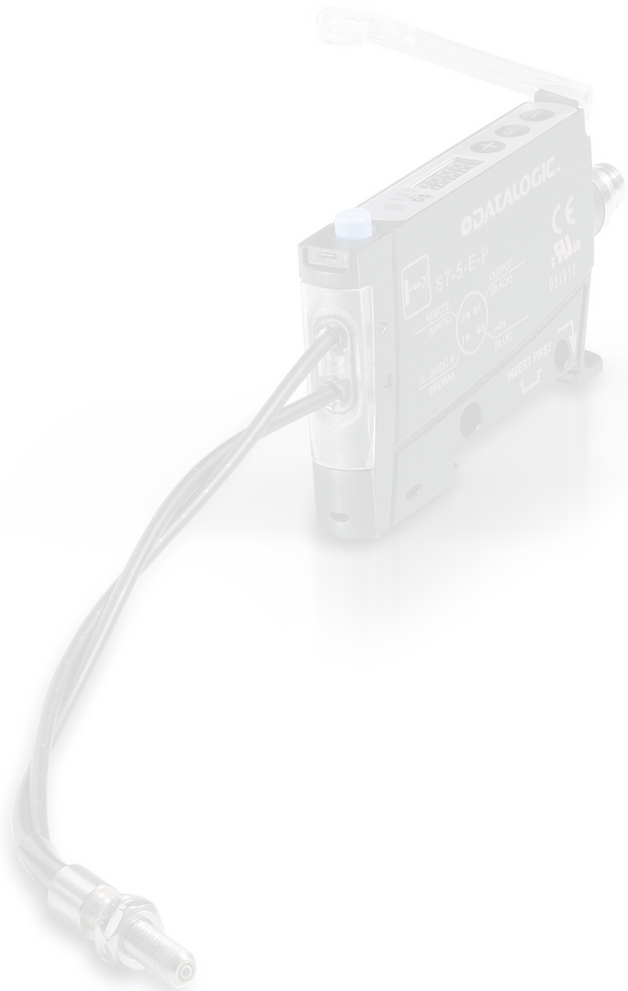
- Processing and Packaging machinery
- Electronics assembling
- Pharmaceutical industry



S7		
Through beam with fiber optic		0...300 mm
		0...150 mm
		0...75 mm
Diffuse proximity with fiber optic		0...100 mm
		0...50 mm
		0...25 mm
Power supply	Vdc	12...24 V
	Vac	
	Vac/dc	
Output	PNP	▪
	NPN	▪
	NPN/PNP	
	relay	
	other	
Connection	cable	▪
	connector	▪
	pig-tail	
Approximate dimensions (mm)		
Housing material		ABS
Mechanical protection		IP50 (trimmer vers.)

OPTIC FUNCTION	SETTING	CONNECTION	OUTPUT	MODEL	ORDER No.	
OPTIC FIBER (white LED)	display, push-button	2 m cable, 4-poles	PNP	S7-1-E-P	950551090	
			NPN	S7-1-E-N	950551080	
		m8 4-pole connector	PNP	S7-4-E-P	950551110	
			NPN	S7-4-E-N	950551100	
OPTIC FIBER (red LED)	display, push-button	2 m cable, 4-poles	PNP	S7-2-E-P	950551010	
			NPN	S7-2-E-N	950551000	
			push-buttons	PNP	S7-3-E-P	950551050
				NPN	S7-3-E-N	950551040
	display, push-buttons	m8 4-pole connector	PNP	S7-5-E-P	950551030	
			NPN	S7-5-E-N	950551020	
	push-buttons	m8 4-pole connector	PNP	S7-6-E-P	950551070	
			NPN	S7-6-E-N	950551060	
	trimmer	2 m cable, 4-poles	PNP	S7-7-E-P	950551120	
			NPN	S7-7-E-N	950551130	
			m8 4-pole connector	PNP	S7-8-E-P	950551140
				NPN	S7-8-E-N	950551150

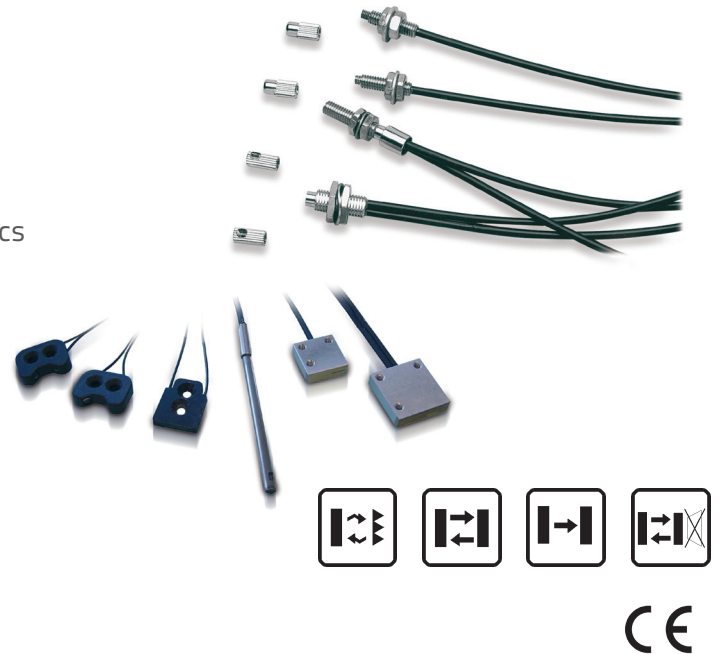
Datalogic Automation offers a wide range of fiber optic cables available in two different lines: **OF** series for standard applications and **OFA** series for specialistic applications, such as 90° optics as well as fixed focus optics. These accessories allow to carry out the diffuse proximity and through beam detection of small object in difficult point of the machine. Refer to the next page for the complete list.



OF/OFA series

Complete range of optic fibers: universal or advanced models

- Flexible models
- High temperature models (up to 125degC)
- Fiber array with parallel beams for proximity or through beam detection
- Fixed focus proximity with axial, radial or lateral optics
- Proximity with 90° optics self-contained
- Focusing, collimating and deviating lenses



OF/OFA	
Through beam	Mechanical characteristics, length, diameter of the optic fiber, as well as the switching frequencies, light emitted and resolution of the optic fiber amplifier, affect the operating distances. Refer to the manuals to find the proper operating distance.
Diffuse proximity	
Fixed focus	
OF diameter	M3, M4, M6
OFA number of emitted beams	1, 16, 32
Cable lengths	1, 2 m
Operating temperature	-40...+60 °C (OF) -40...125 °C (OF-...-HT) -30...+70 °C (OFA)
Core material	PMMA plastic
Sheath material	PE plastic
Terminal material	Nickel-plated brass (OF), Stainless steel, Aluminium, ABS (OFA)
Mechanical protection	IP67

OF series					
OPTIC FUNCTION	FIBER TYPE	LENGTH	TERMINAL	MODEL	ORDER No.
Through beam	standard	1 m	M4x0.7 mm	OF-19-ST-10	S76021901
	standard	2 m	M4x0.7 mm *	OF-23-ST-20	S76022300
	thin (Ø 1 mm)	1 m	M2x0.4 mm	OF-25-TN-10	S76022500
	standard	2 m	M4x0.7 mm	OF-43-ST-20	95A201350
	high-temperature	2 m	M4x0.7 mm	OF-43-HT-20	95A201280
	ultra-flexible	2 m	M4x0.7 mm	OF-43-UF-20	95A201290
	high-efficiency	2 m	M4x0.7 mm	OF-43-HP-20	95A201300
Proximity	standard	1 m	M6x1 mm	OF-18-ST-10	S76021801
	standard	2 m	M6x1 mm *	OF-22-ST-20	S76022200
	standard	2 m	M4x0.7 mm	OF-24-ST-20	S76022400
	thin (Ø 1 mm)	1 m	M3x0.5 mm	OF-26-TN-10	S76022600
	thin (Ø 1 mm)	1 m	M3x0.5 mm *	OF-28-TN-10	S76022800
	standard	2 m	Ø 3x15 mm	OF-38-ST-20	95A201070
	standard	2 m	M6x0.75 mm	OF-42-ST-20	95A201340
	high-temperature	2 m	M6x0.75 mm	OF-42-HT-20	95A201250
	ultra-flexible	2 m	M6x0.75 mm	OF-42-UF-20	95A201260
	high-efficiency	2 m	M6x0.75 mm	OF-42-HP-20	95A201270
Coaxial proximity	standard	2 m	M6x1 mm	OF-36-ST-20	95A201000
	extra-flexible	2 m	M6x1 mm	OF-36-XF-20	95A201330
	standard	2 m	M4x0.7 mm	OF-44-ST-20	95A201310
	extra-flexible	2 m	M4x0.7 mm	OF-44-XF-20	95A201320

* a bendable stainless steel extension 90mm long protrudes from the threaded optic head

OFA series					
OPTIC FUNCTION	FIBER TYPE	LENGTH	TERMINAL	MODEL	ORDER No.
Through beam	axial, 16 beam array	2 m	15x15 mm	OFA-1-AE-20	95A201170
	radial, 16 beam array	2 m	15x15 mm	OFA-1-AS-20	95A201180
Proximity	axial, 32 beam array	2 m	20x20 mm	OFA-2-AE-20	95A201150
	radial, 32 beam array	2 m	20x20 mm	OFA-2-AS-20	95A201160
	radial	2 m	5x65 mm	OFA-6-RA-20	95A201140
Fixed focus proximity	axial	2 m	15x20 mm	OFA-4-FE-20	95A201200
	lateral	2 m	15x20 mm	OFA-4-FF-20	95A201210
	radial	2 m	15x20 mm	OFA-4-FS-20	95A201190

OF Accessories				
DESCRIPTION	SUITABLE FIBRES	MODEL	CODE N°	
2 pcs 90° deviating lenses	OF-43-XX	AF-1	95ACC2690	
2 pcs long distance collimating lenses (x 4)	OF-43-XX	AF-2	95ACC2700	
1 pc focusing lens with 4 mm resolution	OF-44-XX	AF-3	95ACC2710	
1 pc focusing lens with 0.4 mm resolution	OF-44-XX	AF-4	95ACC2720	
2 pcs adapters Ø 2.2 mm for thin fibres	OF-XX-TN	AF-5	95ACC2730	
1 pc metal sheath for m6 x 0.75 fibres	OF-42-XX	AF-7	95ACC2750	
1 pc metal sheath for m4 x 07 fibres	OF-43-XX (*)	AF-9	95ACC2770	
fibre-cutting tool with Ø 2.2 mm and Ø 1.1 mm holes	ALL	AF-11	95ACC2780	

* 2 sheaths have to be ordered for both the emitter-receiver sections

SLOT SENSORS

SR21

2mm high-resolution slot sensors for labeling and packaging

- 25 kHz high switching frequency
- IR or red/green light models
- Detection of labels (SR21-IR) or print register mark on transparent films (SR21-RG)
- 4 wire NPN and PNP output



APPLICATIONS

- Packaging and labeling machinery
- Print and apply systems



SR21		
Slot width		2 mm
Slot depth		50 mm
Switching frequency		25 kHz
Light emission		IR LED red/green LED
Setting		AUTO-SET push button
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	
Output	PNP	▪
	NPN	▪
	NPN/PNP	
	relay	
	other	
Connection	cable	
	connector	▪
	pig-tail	
Approximate dimensions (mm)		20x90x26
Housing material		Zama
Mechanical protection		IP65

OPTIC FUNCTION	EMISSION	CONNECTION	OUTPUT	MODEL	ORDER No.
Slot sensor	Infrared LED	M8 Connector	PNP/NPN	SR21-IR	953151070
	Red/Green LED			SR21-RG	953151080



SRF

Ultimate precision using LED or LASER emissions for high resolution

- Visible red emission models
- High resolution LASER models
- Sensitivity adjustment trimmer and dark/light selectors
- Industrial metal housing with glass lenses



APPLICATIONS

- Packaging and labeling machinery
- Automotive
- Packaging lines



SRF-30/50/80/120		
Slot width		30 mm (SRF-30)
		50 mm (SRF-50)
		80 mm (SRF-80)
		120 mm (SRF-120)
Slot depth		34 mm (SRF-30)
		54 mm (SRF-50/80/120)
Switching frequency		1,5 kHz
		3 kHz (class 2 LASER)
Light emission		red LED
		red LASER (class 2)
Setting		trimmer
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	
Output	PNP	▪
	NPN	▪
	NPN/PNP	
	relay	
	other	
Connection	cable	
	connector	▪
	pig-tail	
Approximate dimensions (mm)		10x50x59 (SRF-30)
		10x70x79 (SRF-50)
		10x100x79 (SRF-80)
		10x140x84 (SRF-120)
Housing material		Aluminium
Mechanical protection		IP65

OPTIC FUNCTION	EMISSION	CONNECTION	OUTPUT	MODELLO	ORDER No.
Fork sensor (30 mm)	Red LED	M8 Connector	PNP	SRF-30-5-P	95B020050
	LASER		NPN	SRF-30-5-N	95B020090
			PNP	SRF-L-30-5-P	95B020130
Fork sensor (50 mm)	Red LED	M8 Connector	PNP	SRF-50-5-P	95B020060
	LASER		NPN	SRF-50-5-N	95B020100
			PNP	SRF-L-50-5-P	95B020140
Fork sensor (80 mm)	Red LED	M8 Connector	PNP	SRF-80-5-P	95B020070
	LASER		NPN	SRF-80-5-N	95B020110
			PNP	SRF-L-80-5-P	95B020150
Fork sensor (120 mm)	Red LED	M8 Connector	PNP	SRF-120-5-P	95B020080
	LASER		NPN	SRF-120-5-N	95B020120
			PNP	SRF-L-120-5-P	95B020160



CONTRAST SENSORS

TL μ

All registration mark detection applications

- Teach-in, Remote settings
- Red/green or white LED emission
- Various interchangeable lenses and fiber-optic models
- Metal housing with orientable optics and connector



APPLICATIONS

- Packaging and labeling machinery
- Beverage/Food/Cosmetic/
Pharmaceutical industries
- Printing machinery

TL μ		
Contrast sensor		6...12 mm (9 mm lens)
		14...22 mm (18 mm lens)
		22...34 mm (28 mm lens)
		40...60 mm (50 mm lens)
Contrast sensor with fiber optic		0...3 mm (proximity)
		0...10 mm (through beam)
Switching frequency		10 kHz
		20 kHz
Light emission		red/green LED
		white LED
Setting		push buttons (Teach-in)
		remote (2 wires)
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	
Output	PNP	▪
	NPN	▪
	NPN/PNP	
	relay	
	other	0...5V Analog Output
Connection	cable	▪
	connector	▪
	pig-tail	
Approximate dimensions (mm)		31x81x58
Housing material		Zama
Mechanical protection		IP67

OPTIC FUNCTION	EMISSION	OPTICS	CONNECTION	OUTPUT	MODEL	ORDER No.
Contrast sensor	Red/Green (Vertical spot)	9 mm	2m Cable	NPN	TLμ-011	964401000
	Red/Green (Horizontal spot)	9 mm	2m Cable	NPN	TLμ-011L	964401010
	Red/Green (Vertical spot)	9 mm	M12 Connector	NPN	TLμ-015	964401020
	Red/Green (Horizontal spot)	9 mm	M12 Connector	NPN	TLμ-015L	964401030
	Red/Green (Vertical spot)	18 mm	M12 Connector	NPN	TLμ-065	964401060
	Red/Green (Vertical spot)	9 mm	2m Cable	PNP	TLμ-111	964401080
	Red/Green (Horizontal spot)	9 mm	2m Cable	PNP	TLμ-111L	964401090
	Red/Green (Vertical spot)	9 mm	M12 Connector	PNP	TLμ-115	964401100
	Red/Green (Horizontal spot)	9 mm	M12 Connector	PNP	TLμ-115L	964401110
	Red/Green (Vertical spot)	18 mm	M12 Connector	PNP	TLμ-165	964401140
	White (Circular spot)	9 mm	M12 Connector	NPN	TLμ-415C	954151330
	White (Circular spot)	9 mm	2m Cable	NPN	TLμ-411C	954151410
	White (Circular spot)	9 mm	M12 Connector	PNP	TLμ-515C	954151360
	White (Circular spot)	9 mm	2m Cable	PNP	TLμ-511C	954151420
	Fiber optic contrast sensor	White	Fiber optics	M12 Connector	PNP	TLμ-545
	White	Fiber optics	M12 Connector	NPN	TLμ-445	954151350



CONTRAST SENSORS

TL46

High performance contrast sensor for colored registration mark detection

- Wide-spectrum RGB or white LED emission
- 3 different models: basic, standard and enhanced
- Automatic, manual and dynamic settings
- 15, 20 or 30 kHz switching frequencies
- NPN/PNP and analog outputs
- Standard mounting, M12 connector rotatable to 5 positions



APPLICATIONS

- Packaging and labeling machinery
- Beverage/Food/Cosmetic/Pharmaceutical industries
- Printing machinery



(*) ATEX II 3DG

TL46		
Contrast sensor		9 ±3 mm
		18 mm (Lens No.18 glass)
		22 mm (Lens No.22 glass)
		28 mm (Lens No.28 glass)
		40 mm (Lens No.40 glass)
Switching frequency		15 kHz
		20 kHz
		30 kHz
Light emission		RGB LED
		white LED
Setting		push buttons (Teach-in)
		trimmer
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	
Output	PNP	
	NPN	
	NPN/PNP	▪
	relay	
	other	0...5V Analog Output
Connection	cable	
	connector	▪
	pig-tail	
Approximate dimensions (mm)		31x81x58
Housing material		Aluminium
Mechanical protection		IP67

OPTIC FUNCTION	SETTING & INDICATORS	EMISSION	CONNECTION & OUTPUT	MODEL	ORDER No.
Contrast sensor	Trimmer 2 LEDs	WHITE vertical spot	M12 5-pole PNP	TL46-A-415	954601070
			M12 5-pole NPN	TL46-A-425	954601080
		RED vertical spot	M12 5-pole PNP	TL46-A-615	954601090
			M12 5-pole NPN	TL46-A-625	954601100
	Push-buttons 2 LEDs	R.G.B. vertical spot	M12 5-pole PNP/ NPN	TL46-W-815	954601000
		R.G.B. horizontal spot		TL46-W-815L	954601010
	Push buttons 4 LEDs bargraph	R.G.B. vertical spot		TL46-WL-815	954601020
		R.G.B. horizontal spot		TL46-WL-815L	954601030
	Push buttons 4 LEDs display	R.G.B. vertical spot		TL46-WLF-815	954601040
		R.G.B. horizontal spot		TL46-WLF-815L	954601050



LUMINESCENCE SENSORS

LD46

Luminescence sensor line in standard metal housing

- UV high power LED emission
- High sensitivity on fluorescent marks
- 10 - 50 mm detection distance
- 2 kHz switching frequency
- NPN/PNP and 0-5 V analog outputs



APPLICATIONS

- Packaging and labeling machinery
- Food, Cosmetic and Pharmaceutical
- Ceramic tiles selection and sorting



(*) ATEX II 3DG

LD46		
Luminescence sensor		10...20 mm (LD46-UL-715) 20...40 mm (LD46-UL-755) 30...50 mm (LD46-UL-735)
Spot dimension		2x8 mm at 10 mm 3x11 mm at 24 mm 4x15 mm at 50 mm
Switching frequency		2 kHz
Response Time		250 µs
Light emission		UV-HP LED
Setting		push buttons
Power supply	Vdc	15...30 V
	Vac	
	Vac/dc	
Output	PNP	
	NPN	
	NPN/PNP	▪
	relay	
	other	0...5 V Analog output
Connection	cable	▪
	connector	▪
	pig-tail	
Approximate dimensions (mm)		31x81x58
Housing material		aluminium
Mechanical protection		IP67

OPTIC FUNCTION	EMISSION	CONNECTION	OUTPUT	MODEL	ORDER No.
Luminescence sensor	10-20 mm Vertical spot	M12 5 poles connector	NPN/PNP	LD46-UL-715	955201000
	20-40 mm Vertical spot			LD46-UL-755	955201010
	30-50 mm Vertical spot			LD46-UL-735	955201020



COLOR & CONTRAST SENSORS

S65

Advanced color and contrast sensors in compact case

Color S65-V:

- 3 independent NPN or PNP outputs and RS 485 serial interface
- 3 channel color sensor with 10 tolerance levels
- Wide spectrum white light LED emission and RGB photo-receiver
- 2 push button setting with 4 digit display indicator

Contrast S65-W:

- High 12 bit resolution and 30 kHz switching frequency
- PNP or NPN output and RS 485 serial interface



APPLICATIONS

- Packaging lines
- Contrast reading
- Automatic machine



S65		
Contrast sensor		12...20 mm (S65-W)
Color sensor		5...45 mm (S65-V)
Switching frequency		30 kHz (S65-W)
		500 Hz (S65-V19 vers.) 1,5 kHz (S65-V09 vers.)
Light emission		white LED
Serial interface		RS485
Setting		push-buttons
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	
Output	PNP	▪
	NPN	▪
	NPN/PNP	
	relay	
	other	0...5 V Analog output (S65-W)
Connection	cable	
	connector	▪
	pig-tail	
Approximate dimensions (mm)		50x50x25
Housing material		ABS
Mechanical protection		IP67

OPTIC FUNCTION	HOUSING	CONNECTION	OUTPUT	MODEL	ORDER No.
Color sensor	Plastic	M12 8 poles Connector	PNP RS485	S65-PA-5-V09-PPPZ	956251000
			NPN RS485	S65-PA-5-V09-NNNZ	956251010
			PNP	S65-PA-5-V09-PPP	956251020
			NPN	S65-PA-5-V09-NNN	956251030
			PNP RS485	S65-PA-5-V19-PPPZ	956251080
			NPN RS485	S65-PA-5-V19-NNNZ	956251090
			PNP	S65-PA-5-V19-PPP	956251100
			NPN	S65-PA-5-V19-NNN	956251110
Contrast sensor	Plastic	M12 5 poles Connector	NPN	S65-PA-5-W09-NH	954201000
		M12 8 poles Connector	NPN RS485	S65-PA-5-W09-NHZ	954201010
		M12 5 poles Connector	PNP	S65-PA-5-W09-PH	954201020
		M12 8 poles Connector	PNP RS485	S65-PA-5-W09-PHZ	954201030



AS1

AREAscan™ high-resolution detection photoelectric light grids

- Crossed beam area sensors
- 100mm controlled height
- Adjustment trimmer
- Optical synchronism
- Scan Mode input

APPLICATIONS

- Processing lines
- Food, Cosmetic and Pharmaceutical
- Electronics and mechanical assembling
- Conveyor lines and sorting systems



AS1		
Area sensing		100 mm
Operating Distance		0,3...2,1 m (AS1-LD) 0,8...3 m (AS1-HD)
Resolution		Flat: 0,2x75mm Cylindrical: Ø 6mm (AS1-HR) Flat: 0,2x200mm Cylindrical: Ø18mm (AS1-SR)
Response Time		1,75 ms (AS1-SR) 2,75...8 ms (AS1-HR)
Light emission		IR LED
Power supply	Vdc	24 V
	Vac	
	Vac / dc	
Output	PNP	▪
	NPN	
	NPN / PNP	
	relay	
	other	
Connection	cable	
	connector	▪
	pig-tail	
Approximate dimensions (mm)		20x41x150
Housing material		aluminium
Mechanical protection		IP67

OPTIC FUNCTION	DISTANCE & RESOLUTION	OUTPUT & CONNECTION	SETTING	MODEL	ORDER No.
Area sensor	2m high resolution	PNP, M12 Connector: 5 pole (RX) 4 pole (TX)	n/a	AS1-LD-HR-010-J	958101000
			Adjustment Trimmer	AS1-LD-HR-010-P	958101040
	2m standard resolution		n/a	AS1-LD-SR-010-J	958101010
			Adjustment Trimmer	AS1-LD-SR-010-P	958101050
	3m high resolution		n/a	AS1-HD-HR-010-J	958101020
			n/a	AS1-HD-SR-010-J	958101030



DIMENSION LIGHT GRIDS

DS1

AREAscan™ detection and measurement light grids with analog output

- 4 mm resolution and 1 ms response time
- 100 to 300 mm controlled height
- Operating distance up to 4 m
- PNP digital and 0-10 V analog outputs
- Adjustment trimmer

APPLICATIONS

- Processing and Packaging machinery
- Food, Cosmetic, Pharmaceutical
- Electronics and mechanical assembling
- Conveyor lines and sorting systems



DS1		
Light array (controlled height)		100...300 mm
Resolution		4...7 mm
Number of beams		16...48
Light emission		infrared
Response time		1...2,75 ms
Setting		Trimmer
Operating distance		0,15...0,8 m (SD)
		0,15...2,1 m (LD)
		0,2...4 m (HD)
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	
Output	PNP	▪
	NPN	
	NPN/PNP	
	relay	
	other	0...10 V Analog output
	cable	
Connection	connector	M12: 4-poles for TX/5-poles for RX
	pig-tail	
Approximate dimensions (mm)		20x41x(150/350)
Housing material		aluminium
Mechanical protection		IP65

OPTIC FUNCTION	CONTROLLED HEIGHT & RESOLUTION	OUTPUT & CONNECTION	SETTING	MODEL	ORDER No.
Measurement light curtain	100 mm (res.: 7 mm)	Voltage Analog, PNP; M12 Connector 5 pole (RX) 4 pole (TX)	n/a	DS1-LD-SR-010-JV	957701130
	100 mm (res.: 4 mm)			DS1-LD-HR-010-JV	957701120
	150 mm (res.: 7 mm)			DS1-LD-SR-015-JV	957701150
	150 mm (res.: 4 mm)			DS1-LD-HR-015-JV	957701140
	300 mm (res.: 7 mm)			DS1-LD-SR-030-JV	957701160
	100 mm (res.: 7 mm)			DS1-LD-SR-010-PV	957701250
	150 mm (res.: 7 mm)		Adjustment trimmer	DS1-LD-SR-015-PV	957701260
	300 mm (res.: 7 mm)			DS1-LD-SR-030-PV	957701270
	100 mm (res.: 7 mm)			DS1-SD-SR-010-JV	957701170
	100 mm (res.: 4 mm)		n/a	DS1-SD-HR-010-JV	957701200
	150 mm (res.: 7 mm)			DS1-SD-SR-015-JV	957701180
	150 mm (res.: 4 mm)			DS1-SD-HR-015-JV	957701210
	300 mm (res.: 7 mm)			DS1-SD-SR-030-JV	957701190
	100 mm (res.: 7 mm)			DS1-HD-SR-010-JV	957701220
	150 mm (res.: 7 mm)			DS1-HD-SR-015-JV	957701230
	300 mm (res.: 7 mm)		DS1-HD-SR-030-JV	957701240	



DIMENSION LIGHT GRIDS

DS2

AREAscan™ detection and measurement light grids with serial or Ethernet interface

- 6 or 25 mm digital resolution
- Relative measurement precision ± 6 mm or ± 22.5 mm
- 150 - 1650 mm controlled heights
- Operating distance up to 10 m
- PNP and 0-10 V Analog output and RS485 or Ethernet interface



APPLICATIONS

- Processing and Packaging machinery
- Food, Cosmetic, Pharmaceutical
- Electronics and mechanical assembling
- Conveyor lines and sorting systems



DS2		
Light array (controlled height)		150...1650 mm
Resolution		6...25 mm
Number of beams		21...231 (res= 6mm) 6...66 (res= 25mm)
Light emission		infrared
Response time		5...90 ms
Interface		serial RS485 or Ethernet
Setting		Dip-switches Graphic interface
Operating distance		0,3...5 m (res= 6mm) 0,3...10 m (res=25mm)
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	
Output	PNP	▪
	NPN	
	NPN/PNP	
	relay	
	other	0...10 V Analog output
Connection	cable	
	connector	M12: 4-poles for TX/8-poles for RX serial vers. M12: 4-poles for TX/8+ 4 poles for RX ethernet vers.
Approximate dimensions (mm)		35x40x(256...1726)
Housing material		aluminium
Mechanical protection		IP65

OPTIC FUNCTION	CONTROLLED AREA (OPTICS INTERAXIS) [mm]	CONNECTION	OUTPUT	MODEL	ORDER No.	
Measurement light curtain (Advanced)	147 (6.75)	M12 Connector 8 pole (RX) 4 pole (TX)	Voltage Analog and RS485	DS2-05-07-015-JV	957501040	
	294 (6.75)			DS2-05-07-030-JV	957501050	
	441 (6.75)			DS2-05-07-045-JV	957501060	
	588 (6.75)			DS2-05-07-060-JV	957501000	
	735 (6.75)			DS2-05-07-075-JV	957501070	
	882 (6.75)			DS2-05-07-090-JV	957501010	
	1029 (6.75)			DS2-05-07-105-JV	957501080	
	1176 (6.75)			DS2-05-07-120-JV	957501020	
	1323 (6.75)			DS2-05-07-135-JV	957501090	
	1470 (6.75)			DS2-05-07-150-JV	957501100	
	1617 (6.75)			DS2-05-07-165-JV	957501030	
	453 (25)			DS2-05-25-045-JV	957501110	
	604 (25)			DS2-05-25-060-JV	957501140	
	755 (25)			DS2-05-25-075-JV	957501120	
	912 (25)			DS2-05-25-090-JV	957501130	
	588 (6.75)			DS2-05-07-060-JE	957501150	
	735 (6.75)			DS2-05-07-075-JE	957501160	
	882 (6.75)			DS2-05-07-090-JE	957501170	
	1176 (6.75)		DS2-05-07-120-JE	957501180		
	1470 (6.75)		DS2-05-07-150-JE	957501190		
	1617 (6.75)		DS2-05-07-165-JE	957501200		
				Voltage Analog and Ethernet		



DISTANCE SENSORS

S80

Time Of Flight measurement LASER distance sensor

- Class 2 visible red LASER emission
- Direct proximity measurement from 4 m to 7 m
- 20m to 100m retroflex measurement
- High precision and measurement speed
- PNP/NPN, 4-20mA analog output and RS 485 serial interface



APPLICATIONS

- Automated warehousing
- Trans-elevator and crane positioning
- Automotive assembling lines
- Non-LFT measurement in logistics



S80		
Distance sensor		0,3...4 m (S80-Y0) 0,3...7 m (S80-YL0) 0,3...20,3 m (S80-Y1) 0,3...100,3 m (S80-Y2)
Repeatability		< 5mm (S80-Y0) 7 mm @ 7m (S80-YL0) 10 mm @20m (S80-Y1) 10 mm @100m (S80-Y2)
Switching frequency		100 Hz (Normal), 500 Hz(Fast)
Light emission		red LASER (class 2)
Response time		5 ms (Normal), 1 ms(Fast)
Serial interface		RS485
Setting		Teach-in
Power supply	Vdc	15...30 V
	Vac	
	Vac/dc	
Output	PNP	▪
	NPN	
	NPN/PNP	
	relay	
	other	4...20 mA Analog output , RS485 serial interface
Connection	cable	
	connector	M12 8-poles
	pig-tail	
Approximate dimensions (mm)		34x90x73
Housing material		aluminiumm
Mechanical protection		IP67

OPTIC FUNCTION	HOUSING	CONNECTION	OUTPUT	MODEL	ORDER No.
Distance sensor (4 m)	Aluminum	M12 8 poles Connector	PNP, Analog 4...20 mA, RS485	S80-MH-5-Y09-PPIZ	951501080
		M12 8 poles Connector	NPN, Analog 4...20 mA, RS485	S80-MH-5-Y09-NNIZ	951501010
Distance sensor (7 m)		M12 8 poles Connector	PNP, Analog 4...20 mA, RS485	S80-MH-5-YL09-PPIZ	951501060
		M12 8 poles Connector	NPN, Analog 4...20 mA, RS485	S80-MH-5-YL09-NNIZ	951501070
Distance sensor (20 m)		M12 8 poles Connector	PNP, Analog 4...20 mA, RS485	S80-MH-5-Y19-PPIZ	951501020
		M12 8 poles Connector	NPN, Analog 4...20 mA, RS485	S80-MH-5-Y19-NNIZ	951501030
Distance sensor (100 m)		M12 8 poles Connector	PNP, Analog 4...20 mA, RS485	S80-MH-5-Y29-PPIZ	951501040
		M12 8 poles Connector	NPN, Analog 4...20 mA, RS485	S80-MH-5-Y29-NNIZ	951501050



DISTANCE SENSORS

S81

Cost effective T.O.F. LASER distance sensor

- Class 2 visible red LASER emission
- Plastic housing and optics
- 2 PNP/NPN digital outputs
- 0-10V analog output or alarm output



APPLICATIONS

- Packaging end of lines
- Carton stacking control
- Paper reel unwinding control
- Automotive assembling line



S81		
Distance sensor		0,3...4 m
Repeatability		± 4 mm
Switching frequency		80 Hz
Light emission		red LASER (class 2)
Response time		5 ms
Setting		push buttons
Power supply	Vdc	15...30 V
	Vac	
	Vac/dc	
Output	PNP	▪
	NPN	
	NPN/PNP	
	relay	
	other	4...20 mA Analog output
Connection	cable	
	connector	M12 5-poles
	pig-tail	
Approximate dimensions (mm)		31x53x80
Housing material		ABS
Mechanical protection		IP67

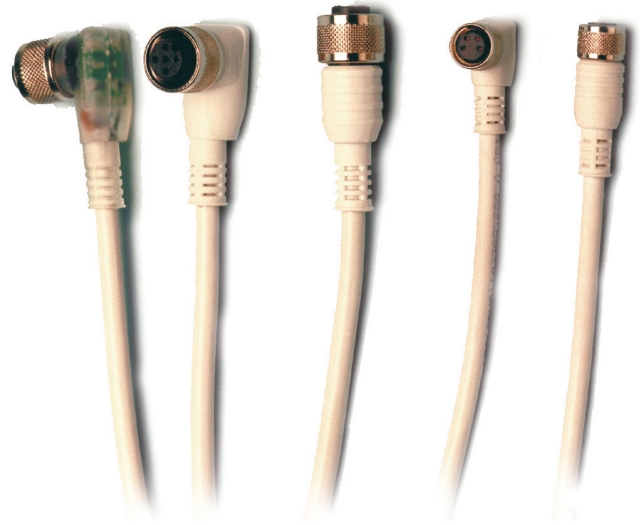
OPTIC FUNCTION	HOUSING	CONNECTION	OUTPUT	MODEL	ORDER No.
Background suppression	Plastic	M12 5 poles Connector	NPN, Alarm	S81-PL-5-M03-NNC	951551000
			PNP, Alarm	S81-PL-5-M03-PPC	951551110
NPN, Analog 0...10V			S81-PL-5-Y03-NNV	951551120	
PNP, Analog 0...10V			S81-PL-5-Y03-PPV	951551030	
Distance			PNP, Analog 0...10V, Scalable	S81-PL-5-Y03-PPVK	951551040



CS series – Cables & Connectors

The right connection for your photoelectric sensors

- M8 and M12, axial or radial female connectors
- Standard length cables: 3, 5, 7, 10, 15 or 25 m
- 3, 4, 5 or 8 poles
- Shielded or unshielded models
- P.U.R. coated models for use in harsh environments
- P.V.C. coated models for standard use
- Standard M12 4 pole non-cabled connectors



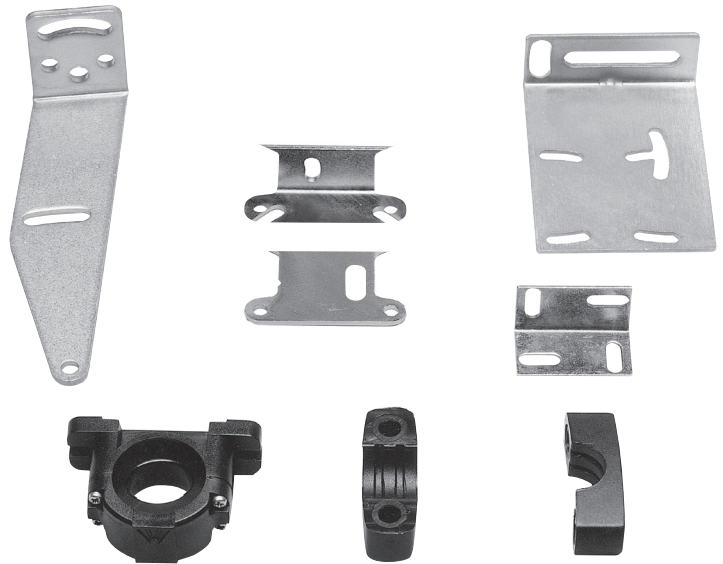
CS	
Connectors	M8 axial or radial(90°) 3 poles M12 axial or radial(90°) 3 poles M8 axial or radial(90°) 4 poles M12 axial or radial(90°) 4 poles M12 axial 5 poles M12 axial 8 poles
Cable lengths	3, 5, 7, 10, 15, 25 m
Conductor diameter	42 x 0.10 mm - 0.35 mm≈ (m12 3-pole) 32 x 0.10 mm - 0.25 mm≈ (m12 4-pole) 32 x 0.10 mm - 0.25 mm≈ (m8 4-pole)
Conductor material	annealed non-tinned electrolytic copper
Flammability class	CEI 20-22, IEC 332/3 flame-retardant and non-propagate
Housing material	P.U.R., P.V.C.
Mechanical protection	IP67, with locked ring

CONNECTOR & DIRECTION	POLES	STYLE	CABLE LENGTH	MODEL	ORDER No.	
M12 Connector (Axial)	3-pole	Grey, P.V.C.	3 m	CS-A1-01-G-03	95A251290	
			5 m	CS-A1-01-G-05	95A251300	
			7 m	CS-A1-01-G-07	95A251320	
			10 m	CS-A1-01-G-10	95A251340	
	4-pole	Grey, P.V.C.	3 m	CS-A1-02-G-03	95A251380	
			5 m	CS-A1-02-G-05	95A251270	
			7 m	CS-A1-02-G-07	95A251280	
		P.U.R.	10 m	CS-A1-02-G-10	95A251390	
			2 m	CS-A1-02-R-02	95A252700	
			5 m	CS-A1-02-R-05	95A252710	
M12 Connector (Radial 90°)	3-pole	Grey, P.V.C.	3 m	CS-A2-01-G-03	95A251200	
			5 m	CS-A2-01-G-05	95A251210	
			7 m	CS-A2-01-G-07	95A251220	
			10 m	CS-A2-01-G-10	95A251230	
	3-pole	Grey, P.V.C.	5 m	CS-A2-11-G-05	95A251310	
			10 m	CS-A2-11-G-10	95A251330	
	4-pole	Grey, P.V.C.	3 m	CS-A2-02-G-03	95A251360	
			5 m	CS-A2-02-G-05	95A251240	
			7 m	CS-A2-02-G-07	95A251245	
		P.U.R.	10 m	CS-A2-02-G-10	95A251260	
			2 m	CS-A2-02-R-02	95A251310	
			5 m	CS-A2-02-R-05	95A251330	
	M12 Connector with LED (Radial 90°)	4-pole PNP	Grey, P.V.C.	3 m	CS-A2-12-G-03	95A251400
				5 m	CS-A2-12-G-05	95A251350
10 m				CS-A2-12-G-10	95A251370	
3 m				CS-B1-01-G-03	95A251490	
M8 Connector (Axial)	3-pole	Grey, P.V.C.	5 m	CS-B1-01-G-05	95A251510	
			2 m	CS-B1-01-R-02	95A251420	
		4-pole	Grey, P.V.C.	5 m	CS-B1-01-R-05	95A251430
	3 m			CS-B1-02-G-03	95A251420	
	5 m			CS-B1-02-G-05	95A251430	
	P.U.R.		7 m	CS-B1-02-G-07	95A251440	
			10 m	CS-B1-02-G-10	95A251480	
			2 m	CS-B1-02-R-02	95A251500	
			5 m	CS-B1-02-R-05	95A251520	
	M8 Connector (Radial 90°)	4-pole	Grey, P.V.C.	3 m	CS-B2-02-G-03	95A251450
5 m				CS-B2-02-G-05	95A251460	
P.U.R.			7 m	CS-B2-02-G-07	95A251470	
			5 m	CS-B2-02-R-05	95ACC2110	
Shielded M12 Connector (Axial)	3-pole	Grey, P.V.C.	10 m	CV-A1-21-G-10	95ACC2060	
	4-pole	Black, P.V.C.	3 m	CV-A1-22-B-03	95ACC1480	
			5 m	CV-A1-22-B-05	95ACC1490	
			10 m	CV-A1-22-B-10	95ACC1500	
Shielded M12 Connector (Radial 90°)	4-pole	Black, P.V.C.	3 m	CV-A2-22-B-03	95ACC1540	
			5 m	CV-A2-22-B-05	95ACC1550	
			10 m	CV-A2-22-B-10	95ACC1560	
	8-pole	Black, P.V.C.	3 m	CV-A2-26-B-03	95ACC1600	
			5 m	CV-A2-26-B-05	95ACC1610	
			10 m	CV-A2-26-B-10	95ACC1620	
Shielded M12 Connector (Axial)	8-pole	Black, P.V.C.	3 m	CV-A1-26-B-03	95ACC1510	
			5 m	CV-A1-26-B-05	95ACC1520	
			10 m	CV-A1-26-B-10	95ACC1530	
Shielded M12 Connector (Axial)	8-pole	Black, P.V.C.	15 m	CV-A1-22-B-15	95ACC2070	
			25 m	CV-A1-22-B-25	95ACC2090	
	4-pole	Black, P.V.C.	15 m	CV-A1-26-B-15	95ACC2080	
			25 m	CV-A1-26-B-25	95ACC2100	
M12 Connector	5-pole	Grey, P.V.C.	3 m	CS-A1-03-G-03	95ACC2110	
			5 m	CS-A1-03-G-05	95ACC2120	
			10 m	CS-A1-03-G-10	95ACC2140	
	8-pole	Black, P.V.C.	3 m	CS-A1-06-B-03	95ACC2230	
			5 m	CS-A1-06-B-05	95ACC2240	
			10 m	CS-A1-06-B-10	95ACC2250	
			3 m	CS-A1-02-U-03	95ASE1120	
			5 m	CS-A1-02-U-05	95ASE1130	
M12 Connector (Axial)	4-pole	U.L., Black, P.V.C.	10 m	CS-A1-02-U-10	95ASE1140	
			15 m	CS-A1-02-U-15	95ASE1150	
			25 m	CS-A1-02-U-25	95ASE1160	
			3 m	CS-A1-03-U-03	95ASE1170	
			5 m	CS-A1-03-U-05	95ASE1180	
	5-pole	U.L., Black, P.V.C.	10 m	CS-A1-03-U-10	95ASE1190	
			15 m	CS-A1-03-U-15	95ASE1200	
			25 m	CS-A1-03-U-25	95ASE1210	
			50 m	CS-A1-03-U-50	95A252700	
			8-pole	U.L., Black, P.V.C.	3 m	CS-A1-06-U-03
	5 m	CS-A1-06-U-05			95ASE1230	
	10 m	CS-A1-06-U-10			95ASE1240	
	15 m	CS-A1-06-U-15			95ASE1250	
	25 m	CS-A1-06-U-25			95ASE1260	
M12 Connector (Axial)	4-pole	Black	Connector- not cabled	CS-A1-02-B-NC	G5085002	
	8-pole	Black	Connector- not cabled	CS-A1-06-B-NC	95ACC2550	
M12 Connector (Radial 90°)	4-pole	Black	Connector- not cabled	CS-A2-02-B-NC	G5085003	

ST series – MOUNTING BRACKETS

All formats and dimensions for mounting brackets, protective brackets and supports for photoelectric sensors

- Mounting brackets for universal sensors
- Fixed support for tubular M18
- Supports with optic axis adjustment
- Good shock and vibration resistance

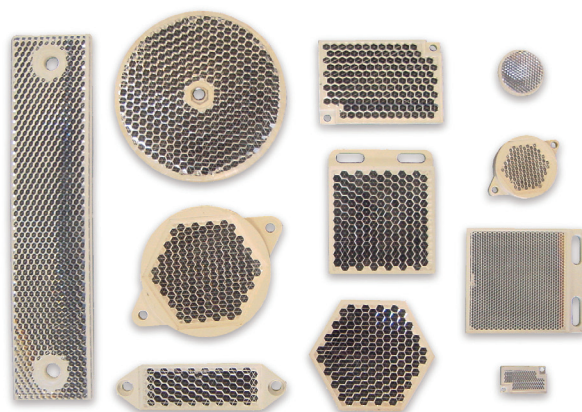


MOUNTING BRACKET & SUPPORTS	
A Mounting bracket models	L-shaped brackets Sides protective brackets Dove-tail brackets M18 tubular mounting brackets Plastic nuts Metal nuts Easy-in M18 support Plastic M18 support
Metal material	yellow zinc-plated steel
Plastic material	black dilamid, black durethan
Characteristics	Good shock and vibration resistance

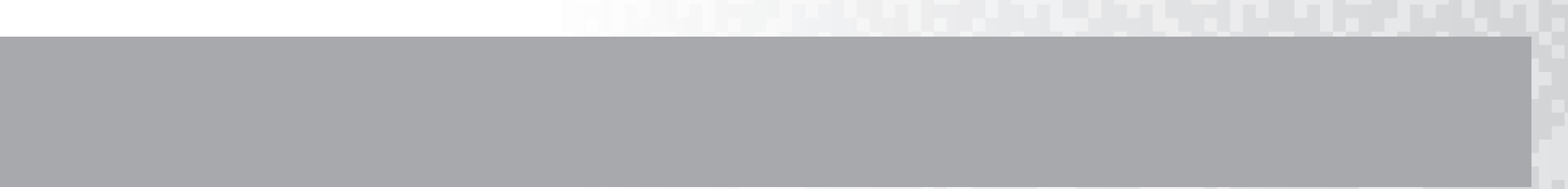
R series – REFLECTORS

Excellent performance with infrared, red light and polarized emission

- Prismatic reflectors for retroreflective sensors
- High efficiency models for long operating distances
- Microprism reflectors for sensors with LASER emission
- Self-adhesive reflectors and reflector tape



REFLECTORS	
R1	Ø 23 mm with Ø 31 mm support
R2	Ø 48 mm with Ø 63 mm support
R3	18 x 54 mm with 22 x 82 mm support
R4	47x 47 mm with 51.5 x 61 mm support
R4K	51X61 mm IP69K protection
R5	Ø 75 mm with Ø 82 mm support
R6	36 x 55 mm with 40.5 x 60 mm support
R7	47x47 mm microprism reflector with 51 x 61 mm support
R8	9.7 x 19 mm microprism reflector with 13.8 x 23 mm support
R9	Ø 23 mm with Ø 25 mm self-adhesive support
R10	36 x 176 mm with 41 x 181 mm support
R11	146 x 15 mm with 150 x 18 mm support
R20	Ø 48 mm microprism reflector with Ø 63 mm support
S12	Ø 48 mm with ch.52 mm hexagon support
RT3870	200 x 300 mm self-adhesive reflective tape
RT3970	200 x 300 mm self-adhesive reflective tape for polarized light
RT3970	60 x 40 mm self-adhesive reflective tape for polarized light
Prismatic reflector material	Reflector in PMMA plastic
Support material	Support in ABS
Mechanical protection	IP67, IP69K (R4K)
Operating temperature	-30 ... +70°C



2025 RELEASE UNDER E.O. 14176



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