

APPLICATION

Miniature photoelectric sensor detects fill level during secondary packaging operations

During secondary packaging of bags of confectionery, manufacturers arrange bags in overlapping layers. Multi-axis pick-and-place packing robots align and pack layers of bags in preformed cardboard cartons. The filled cartons are conveyed to case-sealing stations. A highly reliable photoelectric sensor, mounted directly above the conveyor, senses the height of the top layer of bags in each carton before sealing and rejects insufficiently filled cartons. Rugged photoelectric sensors with background suppression from the Contrinex C23 range are ideal for this application. A pinpoint red LED with a 10 mm-diameter light spot at the maximum sensing range of 300 mm ensures highly reliable detection of objects of almost any color against light or dark backgrounds. These sensors are well suited to both the task and the environment.

INDUSTRIES

Automotive production and supply, machine tool, packaging, logistics, materials handling, food and beverage, textile



Textile spinning machine automation



Beverage filling machines



Conveyor systems



Automotive part sensing

STANDARD PHOTOELECTRIC SENSORS

FIRST-CLASS PERFORMANCE FOR GENERAL USE

Contrinex **Standard** photoelectric sensors are ideal for general position- and presence-detection in almost any industry. With first-class sensing ranges and outstanding background suppression characteristics, the Standard range of sensors delivers very high accuracy and reliability. Light sources include infrared, laser and pinpoint LED.

KEY ADVANTAGES

- ✓ First-class sensing ranges
- ✓ Outstanding background suppression characteristics
- ✓ C23 and M18P series: high quality ASIC sensors with an integral **IO-Link** interface in PNP types
- ✓ Light sources: red, infrared, laser and pinpoint LED

C23 Series

- ✓ Excellent background suppression characteristics with pinpoint LED
- ✓ Mutual interference immunity
- ✓ Versions available with stability alarm as second output
- ✓ Enclosure rating IP67, Ecolab approved

M18P Series

- ✓ Short housing: 37 mm with connector (cable types 33 mm)
- ✓ Excellent background suppression characteristics with pinpoint LED
- ✓ Mutual interference immunity
- ✓ Easy flush mounting
- ✓ Easy-to-mount special accessories for right-angle emission

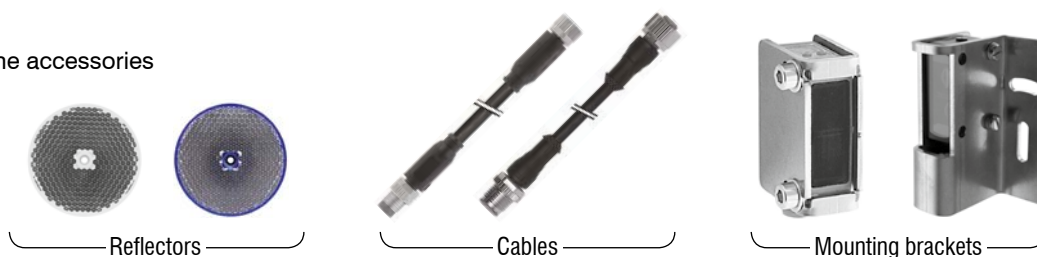


PRODUCT OVERVIEW

		IO-Link								
SERIES Housing size mm		M12M M12	1120 M12	M18P M18	M18M M18	1180 M18	C23 □20×30×10	3030 □30×30×15	4050 □40×50×15	C55 □50×50×23
s _n mm	Diffuse	800	300	1,200	1,200	250/600	1,500	600/1,200	1,200	–
	Reflex	4,000	1,500	7,000	7,000	2,000	8,000	2,000/4,000	4,000	–
	Through-beam	10,000	10,000/50,000	30,000	30,000	20,000/50,000	30,000	6,000/12,000	50,000	–
	Background suppression	–	–	250	250	120	300	200	500	5,000

ACCESSORIES

Go to page 298 to see all the accessories



PHOTOELECTRIC SENSORS STANDARD

COMMON FEATURES

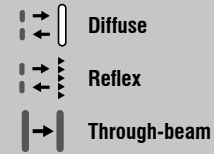
Supply Voltage range 10 ... 30 VDC

OUTPUT

Sensor type
 [LL] Through-beam [LR] Reflex [LT] Diffuse
 [xx][x]-M12MA-[xxx]-[xxx] — see p. 196
 Emission type
 [R] Red — see p. 196

Reference key on page 196

OPERATING PRINCIPLE



ACCESSORIES

- A** Group A: M8 3-pin
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
 - B** Group B: M8 4-pin
Sub-group: Field attachable connectors
 - C** Group C: M12 4-pin
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
 - D** Group D: M12 AC/DC 3-pin
 - E** Group E: Universal mounting brackets
Sub-group: Mechanical stops
 - F** Group F: Photoelectric mounting brackets
 - G** Group G: Photoelectric reflectors
 - H** Group H: Sensor tester
- Go to page 298 for details

CABLES
 Cable lengths available:
 2 m, 5 m, 10 m
 other customised lengths possible

CYLINDRICAL M12 M12M SERIES

FAMILY	OPERATING PRINCIPLE	SENSING RANGE (mm)	HOUSING SIZE (mm)	LIGHT SOURCE
CYLINDRICAL M12 – M12M SERIES		800	M12	LED, red 645 nm
		800	M12	LED, red 645 nm
		800	M12	LED, red 645 nm
		800	M12	LED, red 645 nm
		4,000	M12	LED, red 645 nm
		4,000	M12	LED, red 645 nm
		4,000	M12	LED, red 645 nm
		4,000	M12	LED, red 645 nm
		10,000	M12	LED, red 630 nm
		10,000	M12	LED, red 630 nm
		10,000	M12	LED, red 630 nm
		10,000	M12	LED, red 630 nm
		10,000	M12	LED, red 630 nm
		10,000	M12	LED, red 630 nm
		10,000	M12	LED, red 630 nm



KEY ADVANTAGES

- ✓ M12 metal housing
- ✓ Sensitivity adjustment via potentiometer or IO-Link
- ✓ Focused RED light source
- ✓ Calibrated range
- ✓ Immune to mutual interference
- ✓ IO-Link v1.0



	HOUSING MATERIAL	CABLE	CONNECTOR	IO-Link	SWITCHING FREQUENCY	AMBIENT TEMPERATURE	DEGREE OF PROTECTION	PART REFERENCE	ACCESSORIES (SEE PAGE 126)
	Chrome-plated brass		M12	IO-Link	1,500	-25 ... +65°C	IP67	LTR-M12MA-PMS-603	C E G H
	Chrome-plated brass		M12		1,500	-25 ... +65°C	IP67	LTR-M12MA-PMS-101	C E G H
	Chrome-plated brass			IO-Link	1,500	-25 ... +65°C	IP67	LTR-M12MA-PMK-603	E H
	Chrome-plated brass				1,500	-25 ... +65°C	IP67	LTR-M12MA-PMK-101	E H
	Chrome-plated brass		M12	IO-Link	1,500	-25 ... +65°C	IP67	LRR-M12MA-NMS-603	C E G H
	Chrome-plated brass		M12		1,500	-25 ... +65°C	IP67	LRR-M12MA-NMS-101	C E G H
	Chrome-plated brass			IO-Link	1,500	-25 ... +65°C	IP67	LRR-M12MA-NMK-603	E H
	Chrome-plated brass				1,500	-25 ... +65°C	IP67	LRR-M12MA-NMK-101	E H
	Chrome-plated brass		M12	IO-Link	1,000	-25 ... +65°C	IP67	LLR-M12MA-NMS-400	C E G H
	Chrome-plated brass			IO-Link	1,000	-25 ... +65°C	IP67	LLR-M12MA-NMK-400	E H
	Chrome-plated brass		M12	IO-Link	1,000	-25 ... +65°C	IP67	LLR-M12MA-NMS-603	C E G H
	Chrome-plated brass		M12		1,000	-25 ... +65°C	IP67	LLR-M12MA-NMS-101	C E G H
	Chrome-plated brass			IO-Link	1,000	-25 ... +65°C	IP67	LLR-M12MA-NMK-603	E H
	Chrome-plated brass				1,000	-25 ... +65°C	IP67	LLR-M12MA-NMK-101	E H

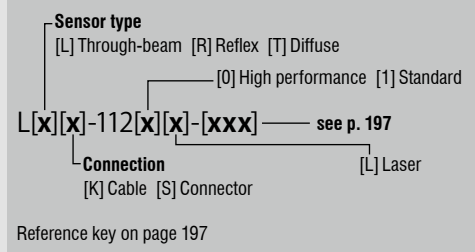
PHOTOELECTRIC SENSORS STANDARD

COMMON FEATURES

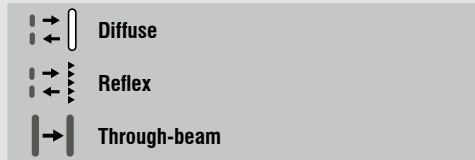
Supply Voltage range	10 ... 30 VDC
Output	PNP Light-ON*

* Other types available: PNP, NPN, Light-ON/Dark-ON

OUTPUT



OPERATING PRINCIPLE



ACCESSORIES

A Group A: M8 3-pin
 Sub-group: Field attachable connectors
 Sub-group: Distribution boxes

B Group B: M8 4-pin
 Sub-group: Field attachable connectors

C Group C: M12 4-pin
 Sub-group: Field attachable connectors
 Sub-group: Distribution boxes

D Group D: M12 AC/DC 3-pin

E Group E: Universal mounting brackets
 Sub-group: Mechanical stops

F Group F: Photoelectric mounting brackets

G Group G: Photoelectric reflectors

H Group H: Sensor tester

Go to page 298 for details

CABLES
 Cable lengths available:
 2 m, 5 m, 10 m
 other customised lengths possible

CYLINDRICAL M12 1120 SERIES

FAMILY	OPERATING PRINCIPLE	SENSING RANGE (mm)	HOUSING SIZE (mm)	LIGHT SOURCE
CYLINDRICAL M12 – 1120 SERIES		300	M12	LED, red 660 nm
		300	M12	LED, red 660 nm
		1,500	M12	LED, red 660 nm
		1,500	M12	LED, red 660 nm
		10,000	M12	LED, red 660 nm
		10,000	M12	LED, red 660 nm
		50,000	M12	⚠ Laser class 2, red 660 nm
		50,000	M12	⚠ Laser class 2, red 660 nm

CYLINDRICAL M12 – 1120 SERIES





KEY ADVANTAGES

- ✓ M12 sensor series
- ✓ Rugged metal housing
- ✓ Shock and vibration resistant due to fully potted electronics
- ✓ Laser types (protection class 2) for accurate detection of smallest targets
- ✓ Sensing range up to 50 m



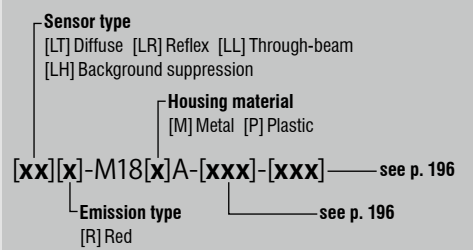
	HOUSING MATERIAL	CABLE	CONNECTOR	IO-Link	SWITCHING FREQUENCY	AMBIENT TEMPERATURE	DEGREE OF PROTECTION	PART REFERENCE*	ACCESSORIES (SEE PAGE 128)
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LTK-1120-303	E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LTS-1120-303	C E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LRK-1120-303	E G H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LRS-1120-303	C E G H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LLK-1120-203	E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LLS-1120-203	C E H
	Stainless steel V2A				5,000	-10 ... +50°C	IP67	LLK-1121L-203	E H
	Stainless steel V2A				5,000	-10 ... +50°C	IP67	LLS-1121L-203	C E H

COMMON FEATURES

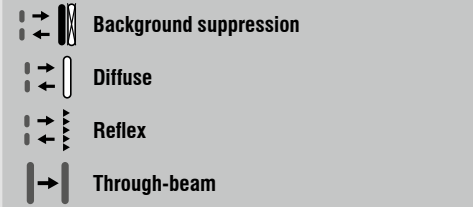
Supply Voltage range	10 ... 30 VDC
Output	PNP Light-ON*

*Other types available: PNP NPN, Dark-ON, Light-ON/
Dark-ON, Light-ON + stability alarm, Dark-ON + stability alarm

OUTPUT



OPERATING PRINCIPLE



ACCESSORIES

- A** Group A: M8 3-pin
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
- B** Group B: M8 4-pin
Sub-group: Field attachable connectors
- C** Group C: M12 4-pin
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
- D** Group D: M12 AC/DC 3-pin
- E** Group E: Universal mounting brackets
Sub-group: Mechanical stops
- F** Group F: Photoelectric mounting brackets
- G** Group G: Photoelectric reflectors
- H** Group H: Sensor tester

Go to page 298 for details


CABLES
Cable lengths available:
2 m, 5 m, 10 m
other customised lengths possible

CYLINDRICAL M18 M18P/M18M SERIES


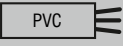


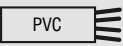














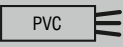


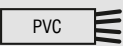














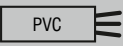


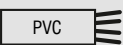


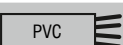











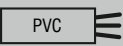





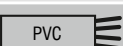





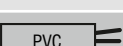


FAMILY	OPERATING PRINCIPLE	SENSING RANGE (mm)	HOUSING SIZE (mm)	LIGHT SOURCE
CYLINDRICAL M18 – M18P/M18M SERIES		250	M18	Pinpoint LED, red 640 nm
		250	M18	Pinpoint LED, red 640 nm
		250	M18	Pinpoint LED, red 640 nm
		250	M18	Pinpoint LED, red 640 nm
		250	M18	Pinpoint LED, red 640 nm
		250	M18	Pinpoint LED, red 640 nm
		250	M18	Pinpoint LED, red 640 nm
		250	M18	Pinpoint LED, red 640 nm
		250	M18	Pinpoint LED, red 640 nm
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		250	M18	Pinpoint LED, red 640 nm
		250	M18	Pinpoint LED, red 640 nm
		250	M18	Pinpoint LED, red 640 nm
		250	M18	Pinpoint LED, red 640 nm
		250	M18	Pinpoint LED, red 640 nm
		250	M18	Pinpoint LED, red 640 nm
		250	M18	Pinpoint LED, red 640 nm
		1,200	M18	LED, red 630 nm
	1,200	M18	LED, red 630 nm	
	1,200	M18	LED, red 630 nm	
	1,200	M18	LED, red 630 nm	
	1,200	M18	LED, red 630 nm	
	1,200	M18	LED, red 630 nm	
	1,200	M18	LED, red 630 nm	
	1,200	M18	LED, red 630 nm	
	1,200	M18	LED, red 630 nm	
	1,200	M18	LED, red 630 nm	
	7,000	M18	LED, red 630 nm	
	7,000	M18	LED, red 630 nm	
	30,000	M18	LED, red 630 nm	



KEY ADVANTAGES

- ✓ First-class sensing ranges
- ✓ Short housing: M18 × 33 mm (cable version), M18 × 37 mm (connector version)
- ✓ Excellent background suppression characteristics with pinpoint LED
- ✓ Mutual interference immunity
- ✓  IO-Link on all PNP sensors
- ✓ Easy flush mounting
- ✓ Easy-to-mount special accessories for right-angle emission



	HOUSING MATERIAL	CABLE	CONNECTOR	 IO-Link	SWITCHING FREQUENCY	AMBIENT TEMPERATURE	DEGREE OF PROTECTION	PART REFERENCE*	ACCESSORIES (SEE PAGE 130)
	ABS			 IO-Link	700	-25 ... +65°C	IP67	LHR-M18PA-PMK-403	
	ABS			 IO-Link	700	-25 ... +65°C	IP67	LHR-M18PA-PMK-603	
	ABS			 IO-Link	700	-25 ... +65°C	IP67	LHR-M18PA-PMK-60C	
	ABS		 M12	 IO-Link	700	-25 ... +65°C	IP67	LHR-M18PA-PMS-403	
	ABS		 M12	 IO-Link	700	-25 ... +65°C	IP67	LHR-M18PA-PMS-603	
	ABS		 M12	 IO-Link	700	-25 ... +65°C	IP67	LHR-M18PA-PMS-60C	
	ABS			 IO-Link	700	-25 ... +65°C	IP67	LHR-M18PA-TMK-403	
	ABS			 IO-Link	700	-25 ... +65°C	IP67	LHR-M18PA-TMK-603	
	ABS			 IO-Link	700	-25 ... +65°C	IP67	LHR-M18PA-TMK-60C	
	ABS		 M12	 IO-Link	700	-25 ... +65°C	IP67	LHR-M18PA-TMS-403	
	ABS		 M12	 IO-Link	700	-25 ... +65°C	IP67	LHR-M18PA-TMS-603	
	ABS		 M12	 IO-Link	700	-25 ... +65°C	IP67	LHR-M18PA-TMS-60C	
	ABS			 IO-Link	1,500	-25 ... +65°C	IP67	LTR-M18PA-PMK-403	
	ABS			 IO-Link	1,500	-25 ... +65°C	IP67	LTR-M18PA-PMK-603	
	ABS			 IO-Link	1,500	-25 ... +65°C	IP67	LTR-M18PA-PMK-60C	
	ABS		 M12	 IO-Link	1,500	-25 ... +65°C	IP67	LTR-M18PA-PMS-403	
	ABS		 M12	 IO-Link	1,500	-25 ... +65°C	IP67	LTR-M18PA-PMS-603	
	ABS		 M12	 IO-Link	1,500	-25 ... +65°C	IP67	LTR-M18PA-PMS-60C	
	ABS			 IO-Link	1,500	-25 ... +65°C	IP67	LTR-M18PA-NMK-403	
	ABS		 M12	 IO-Link	1,500	-25 ... +65°C	IP67	LTR-M18PA-NMS-403	
	ABS			 IO-Link	1,500	-25 ... +65°C	IP67	LRR-M18PA-NMK-603	
	ABS		 M12	 IO-Link	1,500	-25 ... +65°C	IP67	LRR-M18PA-NMS-603	
	ABS			 IO-Link	1,000	-25 ... +65°C	IP67	LLR-M18PA-NMK-400	

PHOTOELECTRIC SENSORS STANDARD

COMMON FEATURES

Supply Voltage range	10 ... 30 VDC
Output	PNP Light-ON*

*Other types available: PNP NPN, Dark-ON, Light-ON/
Dark-ON, Light-ON + stability alarm, Dark-ON + stability alarm

OUTPUT

Sensor type
[LT] Diffuse [LR] Reflex [LL] Through-beam
[LH] Background suppression

Housing material
[M] Metal [P] Plastic

Emission type
[R] Red

Reference key on page 196

[xx][x]-M18[x]A-[xxx]-[xxx] — see p. 196

OPERATING PRINCIPLE

- Background suppression
- Diffuse
- Reflex
- Through-beam

ACCESSORIES

- A** Group A: M8 3-pin
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
- B** Group B: M8 4-pin
Sub-group: Field attachable connectors
- C** Group C: M12 4-pin
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
- D** Group D: M12 AC/DC 3-pin
- E** Group E: Universal mounting brackets
Sub-group: Mechanical stops
- F** Group F: Photoelectric mounting brackets
- G** Group G: Photoelectric reflectors
- H** Group H: Sensor tester

Go to page 298 for details

CABLES
Cable lengths available:
2 m, 5 m, 10 m
other customised lengths possible

CYLINDRICAL M18 M18P/M18M SERIES


FAMILY	OPERATING PRINCIPLE	SENSING RANGE (mm)	HOUSING SIZE (mm)	LIGHT SOURCE
CYLINDRICAL M18 – M18P/M18M SERIES		30,000	M18	LED, red 630 nm
		30,000	M18	LED, red 630 nm
		30,000	M18	LED, red 630 nm
		250	M18	Pinpoint LED, red 640 nm
		250	M18	Pinpoint LED, red 640 nm
		1,200	M18	LED, red 630 nm
		7,000	M18	LED, red 630 nm
		30,000	M18	LED, red 630 nm
		30,000	M18	LED, red 630 nm

CYLINDRICAL M18 – M18P/M18M SERIES








KEY ADVANTAGES

- ✓ First-class sensing ranges
- ✓ Short housing: M18 × 33 mm (cable version), M18 × 37 mm (connector version)
- ✓ Excellent background suppression characteristics with pinpoint LED
- ✓ Mutual interference immunity
- ✓  IO-Link on all PNP sensors
- ✓ Easy flush mounting
- ✓ Easy-to-mount special accessories for right-angle emission



	HOUSING MATERIAL	CABLE	CONNECTOR	 IO-Link	SWITCHING FREQUENCY	AMBIENT TEMPERATURE	DEGREE OF PROTECTION	PART REFERENCE*	ACCESSORIES (SEE PAGE 132)
	ABS		 M12	 IO-Link	1,000	–25 ... +65°C	IP67	LLR-M18PA-NMS-400	C F H
	ABS			 IO-Link	1,000	–25 ... +65°C	IP67	LLR-M18PA-NMK-603	F H
	ABS		 M12	 IO-Link	1,000	–25 ... +65°C	IP67	LLR-M18PA-NMS-603	C F H
	Stainless steel		 M12	 IO-Link	700	–25 ... +65°C	IP67	LHR-M18MA-PMS-603	C F H
	Stainless steel		 M12	 IO-Link	700	–25 ... +65°C	IP67	LHR-M18MA-TMS-603	C F H
	Stainless steel		 M12	 IO-Link	1,500	–25 ... +65°C	IP67	LTR-M18MA-PMS-603	C F H
	Stainless steel		 M12	 IO-Link	1,500	–25 ... +65°C	IP67	LRR-M18MA-NMS-603	C F G H
	Stainless steel		 M12	 IO-Link	1,000	–25 ... +65°C	IP67	LLR-M18MA-NMS-400	C F H
	Stainless steel		 M12	 IO-Link	1,000	–25 ... +65°C	IP67	LLR-M18MA-NMS-603	C F H

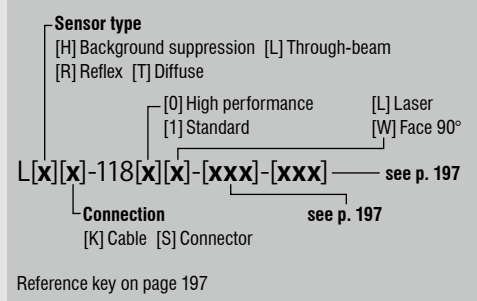
PHOTOELECTRIC SENSORS STANDARD

COMMON FEATURES

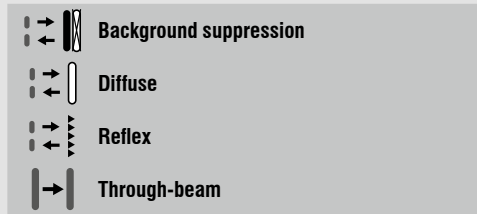
Supply Voltage range	10 ... 30 VDC
Output	PNP Light-ON*

* Other types available: PNP, NPN, Light-ON/Dark-ON

OUTPUT



OPERATING PRINCIPLE



ACCESSORIES

- A** Group A: M8 3-pin
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
- B** Group B: M8 4-pin
Sub-group: Field attachable connectors
- C** Group C: M12 4-pin
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
- D** Group D: M12 AC/DC 3-pin
- E** Group E: Universal mounting brackets
Sub-group: Mechanical stops
- F** Group F: Photoelectric mounting brackets
- G** Group G: Photoelectric reflectors
- H** Group H: Sensor tester

Go to page 298 for details

CABLES
 Cable lengths available:
 2 m, 5 m, 10 m
 other customised lengths possible

CYLINDRICAL M18 1180 SERIES

FAMILY	OPERATING PRINCIPLE	SENSING RANGE (mm)	HOUSING SIZE (mm)	LIGHT SOURCE
CYLINDRICAL M18 – 1180 SERIES		120	M18	LED, red 660 nm
		120	M18	LED, red 660 nm
		120	M18	LED, red 660 nm
		120	M18	LED, red 660 nm
		250	M18	⚠ Laser class 2, red 660 nm
		250	M18	⚠ Laser class 2, red 660 nm
		250	M18	⚠ Laser class 2, red 660 nm
		250	M18	⚠ Laser class 2, red 660 nm
		600	M18	LED, red 660 nm
		600	M18	LED, red 660 nm
		600	M18	LED, red 660 nm
		600	M18	LED, red 660 nm
		600	M18	LED, red 660 nm
		600	M18	LED, red 660 nm
		600	M18	LED, red 660 nm
		600	M18	LED, red 660 nm
		600	M18	LED, red 660 nm
		600	M18	⚠ Laser class 2, red 660 nm
		600	M18	⚠ Laser class 2, red 660 nm
		600	M18	⚠ Laser class 2, red 660 nm
		2,000	M18	LED, red 660 nm
	2,000	M18	LED, red 660 nm	



KEY ADVANTAGES

- ✓ Models for lateral sensing
- ✓ Rugged metal housing
- ✓ Shock & vibration resistant due to fully potted electronics
- ✓ Laser types (protection class 2) for accurate detection of smallest targets
- ✓ Sensing range up to 50 m



	HOUSING MATERIAL	CABLE	CONNECTOR	IO-Link	SWITCHING FREQUENCY	AMBIENT TEMPERATURE	DEGREE OF PROTECTION	PART REFERENCE*	ACCESSORIES (SEE PAGE 134)
	Chrome-plated brass				500	-25 ... +55°C	IP67	LHK-1180-303	E H
	Chrome-plated brass				500	-25 ... +55°C	IP67	LHS-1180-303	C E H
	Chrome-plated brass				500	-25 ... +55°C	IP67	LHK-1180W-303	E H
	Chrome-plated brass				500	-25 ... +55°C	IP67	LHS-1180W-303	C E H
	Stainless steel V2A				5,000	-10 ... +50°C	IP67	LTK-1180L-103-516	E H
	Stainless steel V2A				5,000	-10 ... +50°C	IP67	LTK-1180L-104-516	E H
	Stainless steel V2A				5,000	-10 ... +50°C	IP67	LTS-1180L-103-516	C E H
	Stainless steel V2A				5,000	-10 ... +50°C	IP67	LTS-1180L-104-516	C E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LTS-1180W-303	C E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LTK-1180-103	E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LTK-1180-104	E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LTS-1180-103	C E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LTS-1180-104	C E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LTK-1180W-103	E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LTK-1180W-104	E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LTS-1180W-103	C E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LTS-1180W-104	C E H
	Stainless steel V2A				1,000	-10 ... +50°C	IP67	LTK-1180L-103	E H
	Stainless steel V2A				1,000	-10 ... +50°C	IP67	LTK-1180L-104	E H
	Stainless steel V2A				1,000	-10 ... +50°C	IP67	LTS-1180L-103	C E H
	Stainless steel V2A				1,000	-10 ... +50°C	IP67	LTS-1180L-104	C E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LTK-1180-303	E G H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LRS-1180-303	C E G H

PHOTOELECTRIC SENSORS STANDARD

COMMON FEATURES

Supply Voltage range	10 ... 30 VDC
Output	PNP Light-ON*

* Other types available: PNP, NPN, Light-ON/Dark-ON

OUTPUT

Sensor type
 [H] Background suppression [L] Through-beam
 [R] Reflex [T] Diffuse

[0] High performance [L] Laser
 [1] Standard [W] Face 90°

L[X][X]-118[X][X]-[XXX]-[XXX] — see p. 197

Connection
 [K] Cable [S] Connector — see p. 197

Reference key on page 197

OPERATING PRINCIPLE

- Background suppression
- Diffuse
- Reflex
- Through-beam

ACCESSORIES

- A** Group A: M8 3-pin
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
- B** Group B: M8 4-pin
Sub-group: Field attachable connectors
- C** Group C: M12 4-pin
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
- D** Group D: M12 AC/DC 3-pin
- E** Group E: Universal mounting brackets
Sub-group: Mechanical stops
- F** Group F: Photoelectric mounting brackets
- G** Group G: Photoelectric reflectors
- H** Group H: Sensor tester

Go to page 298 for details

CABLES
 Cable lengths available:
 2 m, 5 m, 10 m
 other customised lengths possible

CYLINDRICAL M18 1180 SERIES

FAMILY	OPERATING PRINCIPLE	SENSING RANGE (mm)	HOUSING SIZE (mm)	LIGHT SOURCE
CYLINDRICAL M18 – 1180 SERIES		2,000	M18	LED, red 660 nm
		2,000	M18	LED, red 660 nm
		20,000	M18	LED, red 660 nm
		20,000	M18	LED, red 660 nm
		20,000	M18	LED, red 660 nm
		20,000	M18	LED, red 660 nm
		20,000	M18	LED, red 660 nm
		20,000	M18	LED, red 660 nm
		20,000	M18	LED, red 660 nm
		20,000	M18	LED, red 660 nm
		20,000	M18	LED, red 660 nm
		50,000	M18	⚠ Laser class 2, red 660 nm
		50,000	M18	⚠ Laser class 2, red 660 nm



KEY ADVANTAGES

- ✓ Models for lateral sensing
- ✓ Rugged metal housing
- ✓ Shock & vibration resistant due to fully potted electronics
- ✓ Laser types (protection class 2) for accurate detection of smallest targets
- ✓ Sensing range up to 50 m



	HOUSING MATERIAL	CABLE	CONNECTOR	IO-Link	SWITCHING FREQUENCY	AMBIENT TEMPERATURE	DEGREE OF PROTECTION	PART REFERENCE *	ACCESSORIES (SEE PAGE 136)
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LRK-1180W-303	E G H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LRS-1180W-303	C E G H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LLK-1180W-003	E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LLK-1180W-004	E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LLS-1180W-003	C E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LLS-1180W-004	C E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LLK-1180-003	E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LLK-1180-004	E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LLS-1180-003	C E H
	Chrome-plated brass				1,000	-25 ... +55°C	IP67	LLS-1180-004	C E H
	Stainless steel V2A				5,000	-10 ... +50°C	IP67	LLK-1181L-003	E H
	Stainless steel V2A				5,000	-10 ... +50°C	IP67	LLS-1181L-003	C E H

PHOTOELECTRIC SENSORS STANDARD

COMMON FEATURES

Supply Voltage range	10 ... 30 VDC
Output	PNP Light-ON*

* Other types available: PNP NPN, Dark-ON, Light-ON/
Dark-ON, Light-ON + stability alarm, Dark-ON + stability alarm
** Pigtail versions available

OUTPUT

Sensor type
[LH] Background suppression [LL] Through-beam
[LR] Reflex [LT] Diffuse

Emission type
[R] Red

[xx][x]-C23PA-[xxx]-[xxx] — see p. 196

Reference key on page 196

OPERATING PRINCIPLE

- Background suppression
- Diffuse
- Reflex
- Through-beam

ACCESSORIES

- A** Group A: M8 3-pin
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
- B** Group B: M8 4-pin
Sub-group: Field attachable connectors
- C** Group C: M12 4-pin
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
- D** Group D: M12 AC/DC 3-pin
- E** Group E: Universal mounting brackets
Sub-group: Mechanical stops
- F** Group F: Photoelectric mounting brackets
- G** Group G: Photoelectric reflectors
- H** Group H: Sensor tester

Go to page 298 for details

CABLES
Cable lengths available:
2 m, 5 m, 10 m
other customised lengths possible



FAMILY	OPERATING PRINCIPLE	SENSING RANGE (mm)	HOUSING SIZE (mm)	LIGHT SOURCE
CUBIC C23 – C23 SERIES		300	20 × 30 (C23)	Pinpoint LED, red 640 nm
		300	20 × 30 (C23)	Pinpoint LED, red 640 nm
		300	20 × 30 (C23)	Pinpoint LED, red 640 nm
		300	20 × 30 (C23)	Pinpoint LED, red 640 nm
		300	20 × 30 (C23)	Pinpoint LED, red 640 nm
		300	20 × 30 (C23)	Pinpoint LED, red 640 nm
		300	20 × 30 (C23)	Pinpoint LED, red 640 nm
		300	20 × 30 (C23)	Pinpoint LED, red 640 nm
		300	20 × 30 (C23)	Pinpoint LED, red 640 nm
		300	20 × 30 (C23)	Pinpoint LED, red 640 nm
		300	20 × 30 (C23)	Pinpoint LED, red 640 nm
		300	20 × 30 (C23)	Pinpoint LED, red 640 nm
		300	20 × 30 (C23)	Pinpoint LED, red 640 nm
		300	20 × 30 (C23)	Pinpoint LED, red 640 nm
		300	20 × 30 (C23)	Pinpoint LED, red 640 nm
		300	20 × 30 (C23)	Pinpoint LED, red 640 nm
		1,500	20 × 30 (C23)	LED, red 630 nm
		1,500	20 × 30 (C23)	LED, red 630 nm
		1,500	20 × 30 (C23)	LED, red 630 nm
		1,500	20 × 30 (C23)	LED, red 630 nm
	1,500	20 × 30 (C23)	LED, red 630 nm	
	1,500	20 × 30 (C23)	LED, red 630 nm	
	1,500	20 × 30 (C23)	LED, red 630 nm	
	1,500	20 × 30 (C23)	LED, red 630 nm	



KEY ADVANTAGES

- ✓ First-class sensing ranges
- ✓ Small plastic housing, 20 × 30 × 10 mm
- ✓ Excellent background suppression characteristics with pinpoint LED
- ✓ IO-Link interface available on PNP types
- ✓ Mutual interference immunity
- ✓ Versions available with stability alarm as second output
- ✓ Enclosure rating IP67, Ecolab approved
- ✓ Versatile mounting brackets for ease of installation



	HOUSING MATERIAL	CABLE**	CONNECTOR**	IO-Link	SWITCHING FREQUENCY	AMBIENT TEMPERATURE	DEGREE OF PROTECTION	PART REFERENCE *	ACCESSORIES (SEE PAGE 138)
	ABS			IO-Link	1,000	-25 ... +65°C	IP67	LHR-C23PA-PMK-403	F H
	ABS			IO-Link	1,000	-25 ... +65°C	IP67	LHR-C23PA-PMK-603	F H
	ABS			IO-Link	1,000	-25 ... +65°C	IP67	LHR-C23PA-PMK-60C	F H
	ABS			IO-Link	1,000	-25 ... +65°C	IP67	LHR-C23PA-PMS-403	A F H
	ABS			IO-Link	1,000	-25 ... +65°C	IP67	LHR-C23PA-PMS-603	B F H
	ABS			IO-Link	1,000	-25 ... +65°C	IP67	LHR-C23PA-PMS-60C	B F H
	ABS			IO-Link	1,000	-25 ... +65°C	IP67	LHR-C23PA-TMK-403	F H
	ABS			IO-Link	1,000	-25 ... +65°C	IP67	LHR-C23PA-TMK-603	F H
	ABS			IO-Link	1,000	-25 ... +65°C	IP67	LHR-C23PA-TMK-60C	F H
	ABS			IO-Link	1,000	-25 ... +65°C	IP67	LHR-C23PA-TMS-403	A F H
	ABS			IO-Link	1,000	-25 ... +65°C	IP67	LHR-C23PA-TMS-603	B F H
	ABS			IO-Link	1,000	-25 ... +65°C	IP67	LHR-C23PA-TMS-60C	B F H
	ABS			IO-Link	1,000	-25 ... +65°C	IP67	LHR-C23PA-PMV-603-324	C F H
	ABS			IO-Link	1,000	-25 ... +65°C	IP67	LHR-C23PA-TMV-603-324	C F H
	ABS			IO-Link	1,000	-25 ... +65°C	IP67	LHR-C23PA-PMV-403-326	A F H
	ABS			IO-Link	1,000	-25 ... +65°C	IP67	LHR-C23PA-TMV-403-326	A F H
	ABS			IO-Link	1,500	-25 ... +65°C	IP67	LTR-C23PA-PMK-403	F H
	ABS			IO-Link	1,500	-25 ... +65°C	IP67	LTR-C23PA-PMK-603	F H
	ABS			IO-Link	1,500	-25 ... +65°C	IP67	LTR-C23PA-PMK-60C	F H
	ABS			IO-Link	1,500	-25 ... +65°C	IP67	LTR-C23PA-PMS-403	A F H
	ABS			IO-Link	1,500	-25 ... +65°C	IP67	LTR-C23PA-PMS-603	B F H
	ABS			IO-Link	1,500	-25 ... +65°C	IP67	LTR-C23PA-PMS-60C	B F H
	ABS			IO-Link	1,500	-25 ... +65°C	IP67	LTR-C23PA-NMK-403	F H

PHOTOELECTRIC SENSORS STANDARD

COMMON FEATURES

Supply Voltage range	10 ... 30 VDC
Output	PNP Light-ON*

* Other types available: PNP NPN, Dark-ON, Light-ON/
Dark-ON, Light-ON + stability alarm, Dark-ON + stability alarm
** Pigtail versions available

OUTPUT

Sensor type
[LH] Background suppression [LL] Through-beam
[LR] Reflex [LT] Diffuse

Emission type
[R] Red

Reference key on page 196

Product Code: [xx][x]-C23PA-[xxx]-[xxx] — see p. 196

OPERATING PRINCIPLE

- Background suppression
- Diffuse
- Reflex
- Through-beam

ACCESSORIES

- A Group A: M8 3-pin**
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
- B Group B: M8 4-pin**
Sub-group: Field attachable connectors
- C Group C: M12 4-pin**
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
- D Group D: M12 AC/DC 3-pin**
- E Group E: Universal mounting brackets**
Sub-group: Mechanical stops
- F Group F: Photoelectric mounting brackets**
- G Group G: Photoelectric reflectors**
- H Group H: Sensor tester**

Go to page 298 for details

CABLES
Cable lengths available:
2 m, 5 m, 10 m
other customised lengths possible



FAMILY	OPERATING PRINCIPLE	SENSING RANGE (mm)	HOUSING SIZE (mm)	LIGHT SOURCE
CUBIC C23 – C23 SERIES		1,500	20 × 30 (C23)	LED, red 630 nm
		1,500	20 × 30 (C23)	LED, red 630 nm
		1,500	20 × 30 (C23)	LED, red 630 nm
		8,000	20 × 30 (C23)	LED, red 630 nm
		8,000	20 × 30 (C23)	LED, red 630 nm
		8,000	20 × 30 (C23)	LED, red 630 nm
		30,000	20 × 30 (C23)	LED, red 630 nm
		30,000	20 × 30 (C23)	LED, red 630 nm
		30,000	20 × 30 (C23)	LED, red 630 nm
		30,000	20 × 30 (C23)	LED, red 630 nm
		30,000	20 × 30 (C23)	LED, red 630 nm
		30,000	20 × 30 (C23)	LED, red 630 nm
		30,000	20 × 30 (C23)	LED, red 630 nm
		30,000	20 × 30 (C23)	LED, red 630 nm



KEY ADVANTAGES

- ✓ First-class sensing ranges
- ✓ Small plastic housing, 20 × 30 × 10 mm
- ✓ Excellent background suppression characteristics with pinpoint LED
- ✓ IO-Link interface available on PNP types
- ✓ Mutual interference immunity
- ✓ Versions available with stability alarm as second output
- ✓ Enclosure rating IP67, Ecolab approved
- ✓ Versatile mounting brackets for ease of installation



	HOUSING MATERIAL	CABLE**	CONNECTOR**	IO-Link	SWITCHING FREQUENCY	AMBIENT TEMPERATURE	DEGREE OF PROTECTION	PART REFERENCE *	ACCESSORIES (SEE PAGE 140)
	ABS		M8	IO-Link	1,500	-25 ... +65°C	IP67	LTR-C23PA-NMS-403	
	ABS	0.2 m PVC	M12	IO-Link	1,500	-25 ... +65°C	IP67	LTR-C23PA-PMV-603-324	
	ABS	0.2 m PUR	M8	IO-Link	1,500	-25 ... +65°C	IP67	LTR-C23PA-PMV-403-326	
	ABS	PVC		IO-Link	1,500	-25 ... +65°C	IP67	LRR-C23PA-NMK-603	
	ABS		M8	IO-Link	1,500	-25 ... +65°C	IP67	LRR-C23PA-NMS-603	
	ABS	0.2 m PVC	M12	IO-Link	1,500	-25 ... +65°C	IP67	LRR-C23PA-NMV-603-324	
	ABS	PVC		IO-Link	1,000	-25 ... +65°C	IP67	LLR-C23PA-NMK-400	
	ABS		M8	IO-Link	1,000	-25 ... +65°C	IP67	LLR-C23PA-NMS-400	
	ABS	PVC		IO-Link	1,000	-25 ... +65°C	IP67	LLR-C23PA-NMK-603	
	ABS		M8	IO-Link	1,000	-25 ... +65°C	IP67	LLR-C23PA-NMS-603	
	ABS	0.2 m PVC	M12	IO-Link	1,000	-25 ... +65°C	IP67	LLR-C23PA-NMV-400-324	
	ABS	0.2 m PVC	M12	IO-Link	1,000	-25 ... +65°C	IP67	LLR-C23PA-NMV-603-324	

PHOTOELECTRIC SENSORS STANDARD

COMMON FEATURES

Supply Voltage range	10 ... 30 VDC
Output	PNP Light-ON*

* Other types available: PNP, NPN, Light-ON/Dark-ON

OUTPUT





Sensor type
 [H] Background suppression [L] Through-beam
 [R] Reflex [T] Diffuse

L[x][x]-303[x]-[xxx] — see p. 197









Connection
 [K] Cable [S] Connector [0] High performance
 [1] Standard

Reference key on page 197


OPERATING PRINCIPLE

-  **Background suppression**
-  **Diffuse**
-  **Reflex**
-  **Through-beam**















ACCESSORIES

-  **A Group A: M8 3-pin**
 Sub-group: Field attachable connectors
 Sub-group: Distribution boxes
-  **B Group B: M8 4-pin**
 Sub-group: Field attachable connectors
-  **C Group C: M12 4-pin**
 Sub-group: Field attachable connectors
 Sub-group: Distribution boxes
-  **D Group D: M12 AC/DC 3-pin**
-  **E Group E: Universal mounting brackets**
 Sub-group: Mechanical stops
-  **F Group F: Photoelectric mounting brackets**
-  **G Group G: Photoelectric reflectors**
-  **H Group H: Sensor tester**

Go to page 298 for details

 **CABLES**
 Cable lengths available:
 2 m, 5 m, 10 m
 other customised lengths possible

CUBIC 3030 3030 SERIES

FAMILY	OPERATING PRINCIPLE	SENSING RANGE (mm)	HOUSING SIZE (mm)	LIGHT SOURCE
CUBIC 3030 – 3030 SERIES		150	30 × 30	LED, red 660 nm
		150	30 × 30	LED, red 660 nm
		600	30 × 30	LED, infrared 880 nm
		600	30 × 30	LED, infrared 880 nm
		1,200	30 × 30	LED, infrared 880 nm
		1,200	30 × 30	LED, infrared 880 nm
		2,000	30 × 30	LED, red 660 nm
		2,000	30 × 30	LED, red 660 nm
		4,000	30 × 30	LED, red 660 nm
		4,000	30 × 30	LED, red 660 nm
		4,000	30 × 30	LED, red 660 nm
		6,000	30 × 30	LED, infrared 880 nm
		6,000	30 × 30	LED, infrared 880 nm
		12,000	30 × 30	LED, infrared 880 nm



KEY ADVANTAGES

- ✓ Complete miniature sensor series 30 × 30 × 15 mm in rugged Crastin housings
- ✓ Sensing range up to 12,000 mm for through-beam type
- ✓ Shock & vibration resistant due to fully potted electronics
- ✓ Diffuse sensors with precise background suppression
- ✓ Polarizing filter (reflex sensors)
- ✓ High system reserves (excess gain)
- ✓ Pre-failure warning (pollution monitoring)
- ✓ Changeover outputs



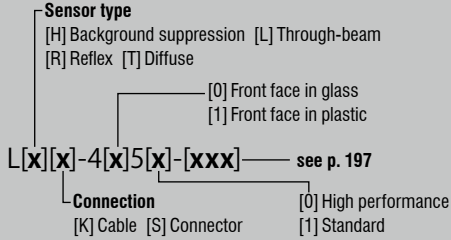
	HOUSING MATERIAL	CABLE	CONNECTOR	IO-Link	SWITCHING FREQUENCY	AMBIENT TEMPERATURE	DEGREE OF PROTECTION	PART REFERENCE*	ACCESSORIES (SEE PAGE 142)
	PBTP (Crastin)	PVC			500	-25 ... +55°C	IP67	LHK-3031-303	F H
	PBTP (Crastin)		M8		500	-25 ... +55°C	IP67	LHS-3031-303	A F H
	PBTP (Crastin)	PVC			1,000	-25 ... +55°C	IP67	LTK-3031-303	F H
	PBTP (Crastin)		M8		1,000	-25 ... +55°C	IP67	LTS-3031-303	A F H
	PBTP (Crastin)	PVC			1,000	-25 ... +55°C	IP67	LTK-3030-103	F H
	PBTP (Crastin)		M8		1,000	-25 ... +55°C	IP67	LTS-3030-103	B F H
	PBTP (Crastin)	PVC			1,000	-25 ... +55°C	IP67	LRK-3031-303	F G H
	PBTP (Crastin)		M8		1,000	-25 ... +55°C	IP67	LRS-3031-303	A F G H
	PBTP (Crastin)	PVC			1,000	-25 ... +55°C	IP67	LRK-3030-103	F G H
	PBTP (Crastin)		M8		1,000	-25 ... +55°C	IP67	LRS-3030-103	B F G H
	PBTP (Crastin)		M8		1,000	-25 ... +55°C	IP67	LRS-3030-104	B F G H
	PBTP (Crastin)	PVC			1,000	-25 ... +55°C	IP67	LLK-3031-203	F H
	PBTP (Crastin)		M8		1,000	-25 ... +55°C	IP67	LLS-3031-203	A F H
	PBTP (Crastin)		M8		1,000	-25 ... +55°C	IP67	LLS-3030-003	B F H

PHOTOELECTRIC SENSORS STANDARD

COMMON FEATURES

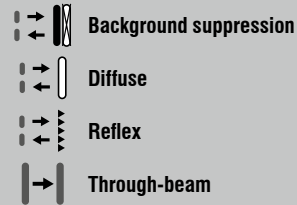
Supply Voltage range 10 ... 30 VDC

OUTPUT



Reference key on page 197

OPERATING PRINCIPLE



ACCESSORIES

- A** Group A: M8 3-pin
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
- B** Group B: M8 4-pin
Sub-group: Field attachable connectors
- C** Group C: M12 4-pin
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
- D** Group D: M12 AC/DC 3-pin
- E** Group E: Universal mounting brackets
Sub-group: Mechanical stops
- F** Group F: Photoelectric mounting brackets
- G** Group G: Photoelectric reflectors
- H** Group H: Sensor tester

Go to page 298 for details

CABLES
 Cable lengths available:
 2 m, 5 m, 10 m
 other customised lengths possible

CUBIC 4050 4050 SERIES

FAMILY	OPERATING PRINCIPLE	SENSING RANGE (mm)	HOUSING SIZE (mm)	LIGHT SOURCE
CUBIC 4050 – 4050 SERIES		500	40 × 50	LED, red 660 nm
		500	40 × 50	LED, red 660 nm
		500	40 × 50	LED, red 660 nm
		500	40 × 50	LED, red 660 nm
		1,200	40 × 50	LED, white
		1,200	40 × 50	LED, white
		1,200	40 × 50	LED, white
		1,200	40 × 50	LED, white
		4,000	40 × 50	LED, red 680 nm
		4,000	40 × 50	LED, red 680 nm
		4,000	40 × 50	LED, red 680 nm
		4,000	40 × 50	LED, red 680 nm
		50,000	40 × 50	LED, red 640 nm
		50,000	40 × 50	LED, red 640 nm
		50,000	40 × 50	LED, red 640 nm
		50,000	40 × 50	LED, red 640 nm



KEY ADVANTAGES

- ✓ Compact plastic housing, 40 × 50 × 15 mm
- ✓ Excellent background suppression characteristics
- ✓ Reflex types with special autocollimation optics
- ✓ Adjustable connector



	HOUSING MATERIAL	CABLE	CONNECTOR	IO-Link	SWITCHING FREQUENCY	AMBIENT TEMPERATURE	DEGREE OF PROTECTION	PART REFERENCE	ACCESSORIES (SEE PAGE 144)
	PBTP	PVC			500	-5 ... +55°C	IP67	LHK-4150-101	F H
	PBTP	PVC			500	-5 ... +55°C	IP67	LHK-4150-103	F H
	PBTP		M12		500	-5 ... +55°C	IP67	LHS-4150-101	C F H
	PBTP		M12		500	-5 ... +55°C	IP67	LHS-4150-103	C F H
	PBTP	PVC			4,000	-5 ... +55°C	IP67	LTK-4150-101	F H
	PBTP	PVC			4,000	-5 ... +55°C	IP67	LTK-4150-103	F H
	PBTP		M12		4,000	-5 ... +55°C	IP67	LTS-4150-101	C F H
	PBTP		M12		4,000	-5 ... +55°C	IP67	LTS-4150-103	C F H
	PBTP	PVC			1,500	-5 ... +55°C	IP67	LRK-4150-101	F G H
	PBTP	PVC			1,500	-5 ... +55°C	IP67	LRK-4150-103	F G H
	PBTP		M12		1,500	-5 ... +55°C	IP67	LRS-4150-101	C F G H
	PBTP		M12		1,500	-5 ... +55°C	IP67	LRS-4150-103	C F G H
	PBTP	PVC			1,500	-5 ... +55°C	IP67	LLK-4150-001	F H
	PBTP	PVC			1,500	-5 ... +55°C	IP67	LLK-4150-003	F H
	PBTP		M12		1,500	-5 ... +55°C	IP67	LLS-4150-001	C F H
	PBTP		M12		1,500	-5 ... +55°C	IP67	LLS-4150-003	C F H
	PBTP	PVC			1,500	-5 ... +55°C	IP67	LLK-4150-000	F H
	PBTP		M12		1,500	-5 ... +55°C	IP67	LLS-4150-000	C F H

PHOTOELECTRIC SENSORS STANDARD

COMMON FEATURES

Supply Voltage range 10 ... 30 VDC

OUTPUT









Sensor type
 [LH] Background suppression — see p. 196
 [xx][x]-C55PA-[xxx]-[xxx]-[xxx] — see p. 196
Emission type
 [L] Laser — see p. 196

Reference key on page 196


OPERATING PRINCIPLE

 Background suppression

ACCESSORIES



-  **A** Group A: M8 3-pin
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
-  **B** Group B: M8 4-pin
Sub-group: Field attachable connectors
-  **C** Group C: M12 4-pin
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
-  **D** Group D: M12 AC/DC 3-pin
-  **E** Group E: Universal mounting brackets
Sub-group: Mechanical stops
-  **F** Group F: Photoelectric mounting brackets
-  **G** Group G: Photoelectric reflectors
-  **H** Group H: Sensor tester

Go to page 298 for details

 **CABLES**
 Cable lengths available:
 2 m, 5 m, 10 m
 other customised lengths possible

CUBIC C55 C55 SERIES

FAMILY	OPERATING PRINCIPLE	SENSING RANGE (mm)	HOUSING SIZE (mm)	LIGHT SOURCE
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CUBIC C55 – C55 SERIES		5,000	50 × 50 (C55)	⚠ Laser class 1, red 650 nm
		5,000	50 × 50 (C55)	⚠ Laser class 1, red 650 nm





KEY ADVANTAGES

- ✓ Compact plastic housing 50 × 50 × 23 mm, IP67 & IP69K, Ecolab certified
- ✓ Time-Of-Flight principle for background suppression
- ✓ Laser class 1 emission
- ✓ Range up to 5,000 mm
- ✓ Reliable detection of tilted objects
- ✓ Ecolab tested and approved



	HOUSING MATERIAL	CABLE	CONNECTOR	IO-Link	SWITCHING FREQUENCY	AMBIENT TEMPERATURE	DEGREE OF PROTECTION	PART REFERENCE	ACCESSORIES (SEE PAGE 146)
	ABS		M12		500	-40 ... +60°C	IP67 / IP69K	LHL-C55PA-TMS-107-501	C F H
	ABS		M12	IO-Link	500	-40 ... +60°C	IP67 / IP69K	LHL-C55PA-TMS-607-501	C F H