


# FIRST-CLASS PERFORMANCE FOR GENERAL USE

# STANDARD

## PHOTOELECTRIC SENSORS

### KEY ADVANTAGES


- ✓ First-class sensing ranges
- ✓ Outstanding background suppression characteristics
- ✓ Cubic sizes : C23 (20 x 30 x 10 mm), 3030 (30 x 30 x 15 mm), 4050 (40 x 50 x 15 mm) and C55 (50 x 50 x 23)
- ✓ Cylindrical M12 and M18 series with metal housing
- ✓ M18P series with short, plastic housing
- ✓ 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

RANGE OVERVIEW	Series	Diffuse	Background suppression	Reflex	Through-beam
<b>STANDARD</b>	1120 (M12)	p. 191		p. 192	p. 192-193
	M18P (M18)	p. 196	p. 195	p. 197	p. 197
	1180 (M18)	p. 200-201, 205	p. 199-200	p. 202-203	p. 203-204, 206
	C23 (20x30x10)	p. 210	p. 209	p. 211	p. 211
	3030 (30x30x15)	p. 215-216	p. 213-214	p. 217-218	p. 219
	4050 (40x50x15)	p. 221	p. 221	p. 222	p. 222
	C55 (50x50x23)		p. 225		

# STANDARD 1120

## PHOTOELECTRIC SENSORS

### ADVANTAGES

- ✓ M12 sensor series
- ✓ 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
- ✓  IO-Link in 2019

### WIRING DIAGRAM

PNP or NPN, 1 output



OVERVIEW	1120	1121L
Housing material	Chrome-plated brass	Stainless steel V2A
Degree of protection	IP 67	IP 67
Laser protection class	--	2
Supply voltage range	10...36 VDC	10 ... 36 VDC
Ambient temperature range	-25...+55 °C / -13...+131 °F	-10...+50 °C / +14...+122 °F
Output current	≤ 200 mA	≤ 200 mA
Switching frequency	≤ 1000 Hz	≤ 5000 Hz

# 1120 SERIES



1120

## PHOTOELECTRIC

HOUSING SIZE MM	M12	M12
OPERATING PRINCIPLE	DIFFUSE SENSOR	DIFFUSE SENSOR
SENSING RANGE MM	300	300

Inductive



Photoelectric

Safety

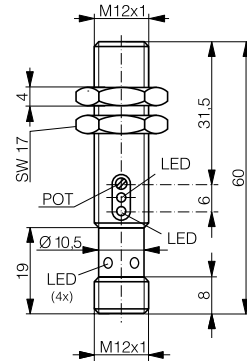
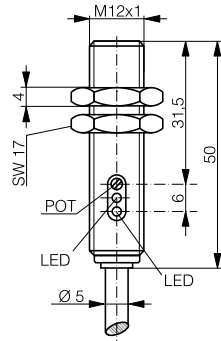
RFID

Connectivity

Accessories

Glossary

Index

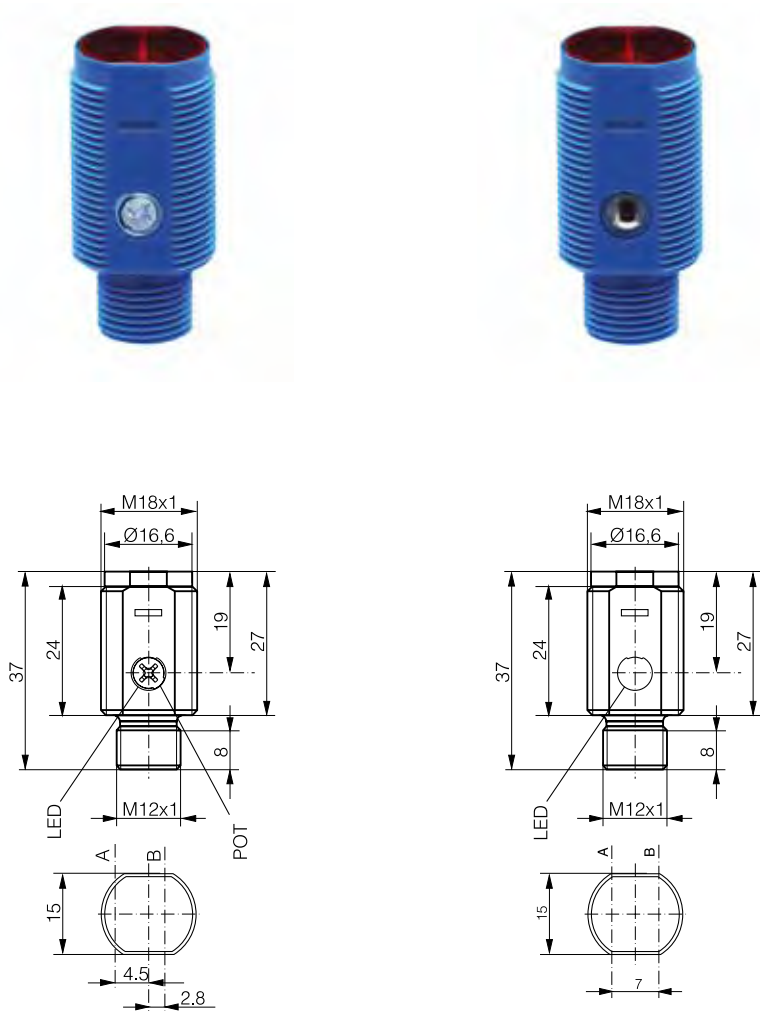


DATA	IO-Link 2019	IO-Link 2019
Light source	LED red 660 nm	LED red 660 nm
Setup	Potentiometer	Potentiometer
PNP Light-ON	<b>LTK-1120-303</b>	
NPN Light-ON	<b>LTK-1120-301</b>	<b>LTS-1120-301</b>
Other types available		

# STANDARD

## PHOTOELECTRIC

HOUSING SIZE MM	M18	M18
OPERATING PRINCIPLE	DIFFUSE SENSOR	DIFFUSE SENSOR
SENSING RANGE MM	1200	1200



DATA	IO-Link	IO-Link
Light source	LED red 630 nm	LED red 630 nm
Switching frequency (normal mode)	≤ 1500 Hz	≤ 1500 Hz
Setup	Potentiometer	IO-Link
PNP Light-ON	<b>LTR-M18PA-PMS-403</b>	<b>LTR-M18PA-NMS-403</b>
PNP Light-ON + Dark-ON	<b>LTR-M18PA-PMS-603</b>	
PNP Light-ON + stability alarm	<b>LTR-M18PA-PMS-60C</b>	
NPN Light-ON	<b>LTR-M18PA-PMS-301</b>	
NPN Light-ON + Dark-ON	<b>LTR-M18PA-PMS-101</b>	
NPN Light-ON + stability alarm	<b>LTR-M18PA-PMS-104</b>	
Other types available	Cable version	Cable version

# STANDARD

HOUSING SIZE

M18

M18

OPERATING PRINCIPLE

DIFFUSE SENSOR WITH  
BACKGROUND SUPPRESSION

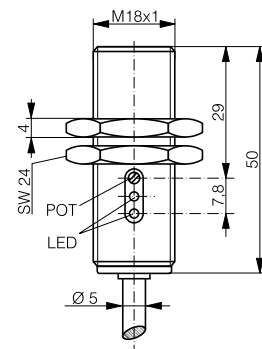
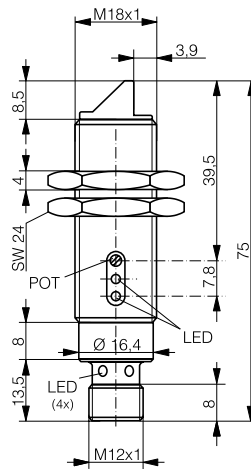
DIFFUSE SENSOR

SENSING RANGE MM

120

600

## PHOTOELECTRIC



DATA

IO-Link 2019

IO-Link 2019

Light source

LED red 680 nm

LED red 630 nm

Setup

Potentiometer

Potentiometer

PNP Light-ON

**LHS-1180W-303**

NPN Light-ON

**LHS-1180W-301**

PNP Light-ON + Dark-ON

**LTK-1180-103**

NPN Light-ON + Dark-ON

**LTK-1180-101**

Other types available

Cable version

# 1180 SERIES



1180

M18	M18
DIFFUSE SENSOR	DIFFUSE SENSOR
600	600

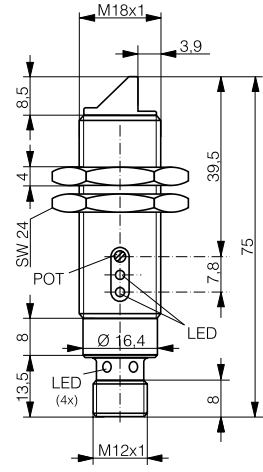
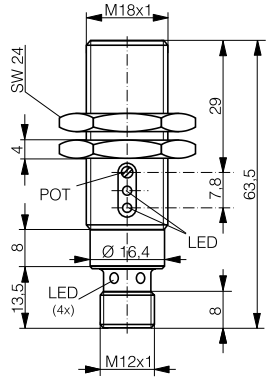
Inductive



Photoelectric

Safety

RFID



Connectivity

Accessories

IO-Link 2019	IO-Link 2019
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Glossary

LED red 630 nm	LED red 630 nm
Potentiometer	Potentiometer
LTS-1180-103	LTS-1180W-103
LTS-1180-101	LTS-1180W-101
	Cable version

Index

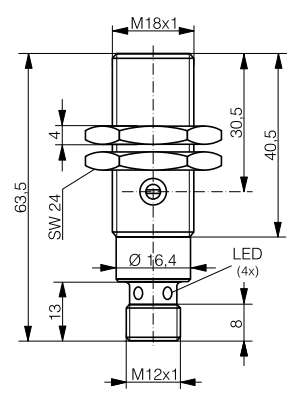
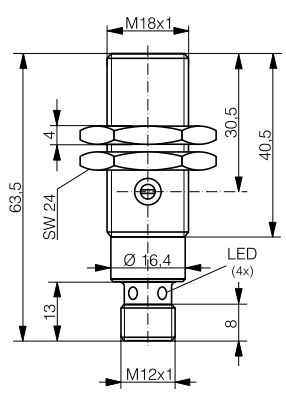
# 1180 SERIES



1180

M18	M18
DIFFUSE SENSOR	DIFFUSE SENSOR
250	600

- Inductive
- Photoelectric
- Safety
- RFID
- Connectivity
- Accessories
- Glossary
- Index



Laser red pulsed 660 nm
Potentiometer
LTS-1180L-103-516
LTS-1180L-101-516
Cable version

Laser red pulsed 660 nm
Potentiometer
LTS-1180L-103
LTS-1180L-101
Cable version

# STANDARD

HOUSING SIZE MM

□ 20 X 30 X 10

□ 20 X 30 X 10

OPERATING PRINCIPLE

DIFFUSE SENSOR

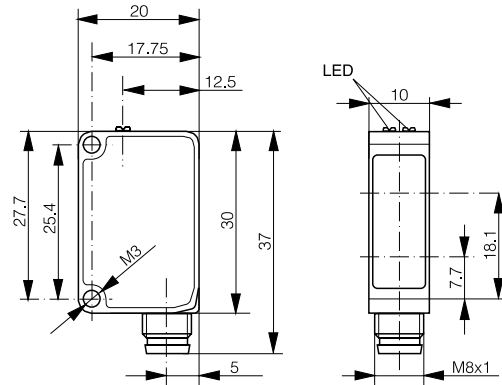
DIFFUSE SENSOR

SENSING RANGE MM

1500

1500

PHOTOELECTRIC



DATA

IO-Link

IO-Link

Light source

Red LED 630 nm

Red LED 630 nm

Switching frequency (normal mode)

≤ 1500 Hz

≤ 1500 Hz

Setup

Potentiometer

IO-Link

PNP Light-ON

LTR-C23PA-PMS-403

LTR-C23PA-NMS-403

PNP Light-ON + Dark-ON

LTR-C23PA-PMS-603

PNP Light-ON + stability alarm

LTR-C23PA-PMS-60C

NPN Light-ON

LTR-C23PA-PMS-301

NPN Light-ON + Dark-ON

LTR-C23PA-PMS-101

NPN Light-ON + stability alarm

LTR-C23PA-PMS-104

Other types available

Cable version

Cable version



# 3030 SERIES



3030

□ 30 X 30 X 15
DIFFUSE SENSOR
600

□ 30 X 30 X 15
DIFFUSE SENSOR
600

Inductive



Photoelectric

Safety

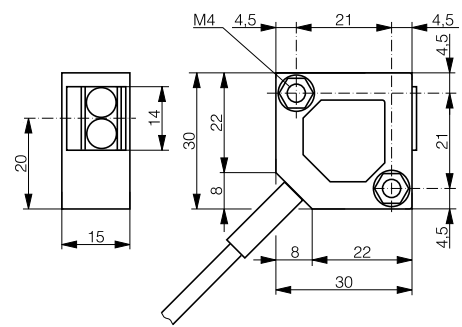
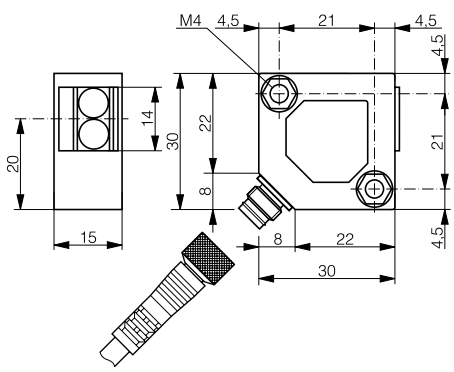
RFID

Connectivity

Accessories

Glossary

Index



IR LED 880 nm
1000 Hz
Potentiometer
LTS-3031-303
LTS-3031-301

IR LED 880 nm
1000 Hz
Potentiometer
LTK-3031-303
LTK-3031-301

# STANDARD

HOUSING SIZE MM

□ 30 X 30 X 15

□ 30 X 30 X 15

OPERATING PRINCIPLE

DIFFUSE SENSOR

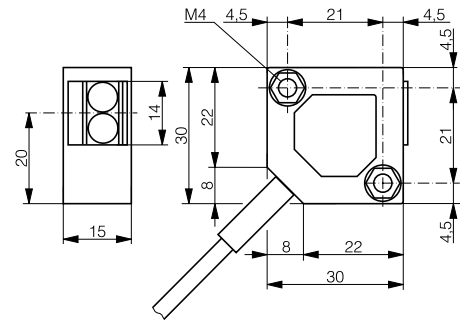
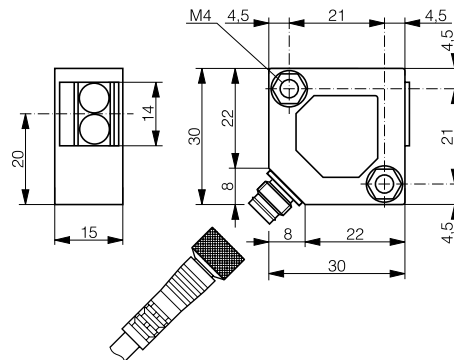
DIFFUSE SENSOR

SENSING RANGE MM

1200

1200

## PHOTOELECTRIC



### DATA

Light source

IR LED 880 nm

IR LED 880 nm

Max. switching frequency

1000 Hz

1000 Hz

Setup

Potentiometer

Potentiometer

PNP Light-ON + Dark-ON

**LTS-3030-103**

**LTK-3030-103**

NPN Light-ON + Dark-ON

**LTS-3030-101**

**LTK-3030-101**

PNP Dark-ON

NPN Dark-ON

Other types available

# 4050 SERIES



4050

HOUSING SIZE MM	□ 40 X 50 X 15	□ 40 X 50 X 15
OPERATING PRINCIPLE	DIFFUSE SENSOR WITH BACKGROUND SUPPRESSION	DIFFUSE SENSOR
SENSING RANGE MM	500	1200

Inductive

Photoelectric

Safety

RFID

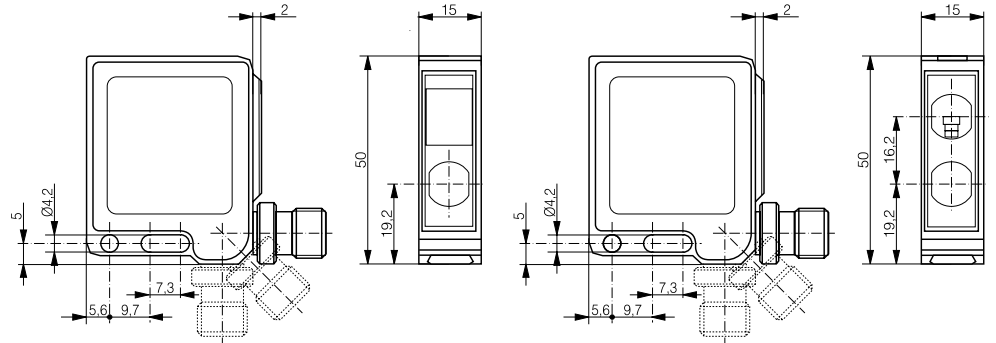
Connectivity

Accessories

Glossary

Index

## PHOTOELECTRIC



DATA		
Light source	LED red 630 nm	LED red 630 nm
Max. switching frequency	500 Hz	1500 Hz
Setup	Potentiometer	Potentiometer
PNP Light-ON + Dark-ON	<b>LHS-4150-103</b>	<b>LTS-4150-103</b>
NPN Light-ON + Dark-ON	<b>LHS-4150-101</b>	<b>LTS-4150-101</b>
Other types available	Cable version	Cable version