

OS10S-L SERIES

ARTICLE PROPERTIES

SENSOR TYPE	Photoelectric sensor	CONNECTION TYPES (see table)	
SIZE	See dimensions	• Cable	PVC, 0.14 mm ² , 2 m**
OPERATING DISTANCE	See table	• M8 connector 3-pin, A-coded	
DETECTION MODE	Opposed, Polarized retro-reflective, BGS	• M8 connector 4-pin, A-coded	

** Other cable lengths are available on request

TECHNICAL DATA

OPERATING VOLTAGE	10 ... 30 V DC	VOLTAGE WITHSTANDING	1000 V/AC, 50/60 Hz, 60 s
RIPPLE VOLTAGE	≤ 10 %	REVERSE POLARITY PROTECTION	Yes
LASER CLASS	Red laser (650 nm) / class 1	OVERLOAD RESISTANCE	Yes
LIGHT SPOT SIZE	See beam pattern	SHORT CIRCUIT PROTECTION	Yes
OUTPUT	PNP / NPN	MTTF	
FREQUENCY	See table	• Emitter	329 years
CURRENT CONSUMPTION	24 V 25 mA	• Receiver	433 years
LOAD CURRENT	≤ 100 mA	• Retro-reflective	116 years
HOUSING MATERIAL	PC + PBT	• BGS diffused	191 years

ENVIRONMENTAL CONDITIONS

OPERATING ENVIRONMENT HUMIDITY	35 % to 85 % RH (no condensation)	INSULATION IMPEDENCE	≥ 50 MΩ (500 V DC)
PROTECTION CLASS	IP67	SHOCK RESISTANCE (EN 60068-2-27)	500 m/s ² (50 G) 3 times X, Y, Z respectively
STORAGE TEMPERATURE	-40 ... +70 °C	IMPACT RESISTANCE (EN 60068-2-6)	Complex amplitude 1.5 mm 10 ... 50 Hz (2hr X, Y, Z respectively)
AMBIENT TEMPERATURE	-20 ... +60 °C	ANTI-AMBIENT LIGHT	≤ 5000 Lux

STANDARDS AND DIRECTIVES

EMC DIRECTIVE 2014/30/EU	EN IEC 60947-5-2	ROHS DIRECTIVE 2011/65/EU	EN IEC 63000
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APPROVALS



DETECTION MODE OPPOSED, SENSITIVITY ADJUSTMENT

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OS10S-SL6	30 m	Red laser	— —	— — (WD1)	— —	2 m cable	see Fig. 1
OS10S-ELCN6/AP	30 m	— —	800 Hz	NPN (WD2)	L.O / D.O	2 m cable	see Fig. 2
OS10S-ELCP6/AP	30 m	— —	800 Hz	PNP (WD3)	L.O / D.O	2 m cable	see Fig. 2
OS10S-SL6Q8	30 m	Red laser	— —	— — (WD4)	— —	M8 connector, 4-pin	see Fig. 4
OS10S-ELCN6Q8/AP	30 m	— —	800 Hz	NPN (WD5)	L.O / D.O	M8 connector, 4-pin	see Fig. 5
OS10S-ELCP6Q8/AP	30 m	— —	800 Hz	PNP (WD6)	L.O / D.O	M8 connector, 4-pin	see Fig. 5
OS10S-SL6Q8.3	30 m	Red laser	— —	— — (WD7)	— —	M8 connector, 3-pin	see Fig. 4
OS10S-ELCN6Q8.3/AP	30 m	— —	800 Hz	NPN (WD8)	L.O / D.O	M8 connector, 3-pin	see Fig. 5
OS10S-ELCP6Q8.3/AP	30 m	— —	800 Hz	PNP (WD9)	L.O / D.O	M8 connector, 3-pin	see Fig. 5

DETECTION MODE POLARIZED RETRO-REFLECTIVE, SENSITIVITY ADJUSTMENT

(The detection distance corresponds to the reflector RB50*50-1)

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OS10S-RPLCN6/AP	5 m	Red laser	800 Hz	NPN (WD2)	L.O / D.O	2 m cable	see Fig. 2
OS10S-RPLCP6/AP	5 m	Red laser	800 Hz	PNP (WD3)	L.O / D.O	2 m cable	see Fig. 2
OS10S-RPLCN6Q8/AP	5 m	Red laser	800 Hz	NPN (WD5)	L.O / D.O	M8 connector, 4-pin	see Fig. 5
OS10S-RPLCP6Q8/AP	5 m	Red laser	800 Hz	PNP (WD6)	L.O / D.O	M8 connector, 4-pin	see Fig. 5
OS10S-RPLCN6Q8.3/AP	5 m	Red laser	800 Hz	NPN (WD8)	L.O / D.O	M8 connector, 3-pin	see Fig. 5
OS10S-RPLCP6Q8.3/AP	5 m	Red laser	800 Hz	PNP (WD9)	L.O / D.O	M8 connector, 3-pin	see Fig. 5

OS10S-L SERIES

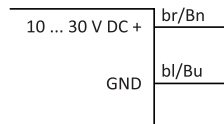
DETECTION MODE BGS

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OS10S-AKL150CN6	6 ... 150 mm	Red laser	300 Hz	NPN (WD2)	L.O / D.O	2 m cable	<i>see Fig. 3</i>
OS10S-AKL150CP6	6 ... 150 mm	Red laser	300 Hz	PNP (WD3)	L.O / D.O	2 m cable	<i>see Fig. 3</i>
OS10S-AKL150CN6Q8	6 ... 150 mm	Red laser	300 Hz	NPN (WD5)	L.O / D.O	M8 connector, 4-pin	<i>see Fig. 6</i>
OS10S-AKL150CP6Q8	6 ... 150 mm	Red laser	300 Hz	PNP (WD6)	L.O / D.O	M8 connector, 4-pin	<i>see Fig. 6</i>
OS10S-AKL150CN6Q8.3	6 ... 150 mm	Red laser	300 Hz	NPN (WD8)	L.O / D.O	M8 connector, 3-pin	<i>see Fig. 6</i>
OS10S-AKL150CP6Q8.3	6 ... 150 mm	Red laser	300 Hz	PNP (WD9)	L.O / D.O	M8 connector, 3-pin	<i>see Fig. 6</i>
OS10S-AKL350CN6	6 ... 350 mm	Red laser	300 Hz	NPN (WD2)	L.O / D.O	2 m cable	<i>see Fig. 3</i>
OS10S-AKL350CP6	6 ... 350 mm	Red laser	300 Hz	PNP (WD3)	L.O / D.O	2 m cable	<i>see Fig. 3</i>
OS10S-AKL350CN6Q8	6 ... 350 mm	Red laser	300 Hz	NPN (WD5)	L.O / D.O	M8 connector, 4-pin	<i>see Fig. 6</i>
OS10S-AKL350CP6Q8	6 ... 350 mm	Red laser	300 Hz	PNP (WD6)	L.O / D.O	M8 connector, 4-pin	<i>see Fig. 6</i>
OS10S-AKL350CN6Q8.3	6 ... 350 mm	Red laser	300 Hz	NPN (WD8)	L.O / D.O	M8 connector, 3-pin	<i>see Fig. 6</i>
OS10S-AKL350CP6Q8.3	6 ... 350 mm	Red laser	300 Hz	PNP (WD9)	L.O / D.O	M8 connector, 3-pin	<i>see Fig. 6</i>

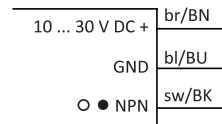
OS10S-L SERIES

WIRING DIAGRAMS cable

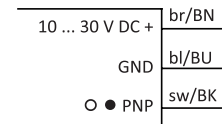
WD1 Emitter



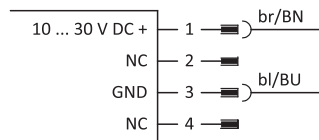
WD2 NPN / Light on | Dark on



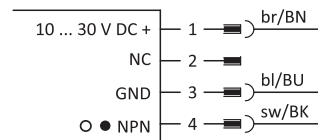
WD3 PNP / Light on | Dark on



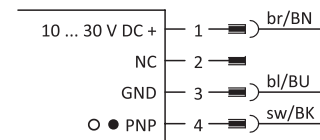
WD4 Emitter



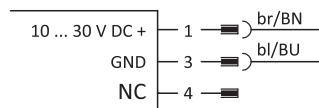
WD5 NPN / Light on | Dark on



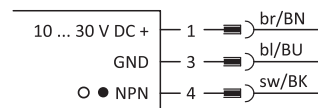
WD6 PNP / Light on | Dark on



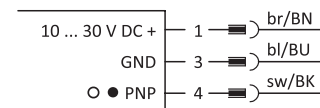
WD7 Emitter



WD8 NPN / Light on | Dark on



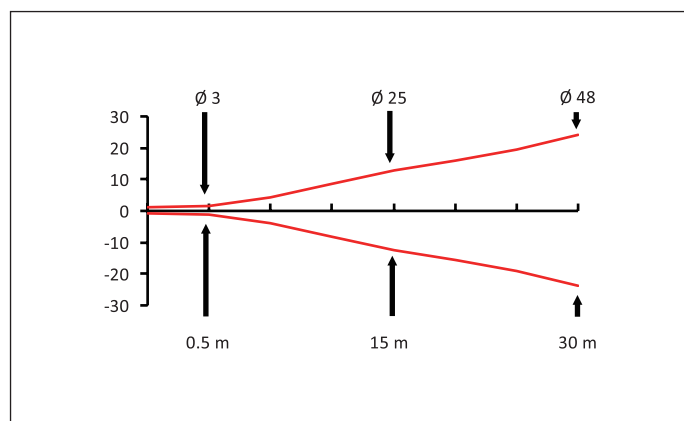
WD9 PNP / Light on | Dark on



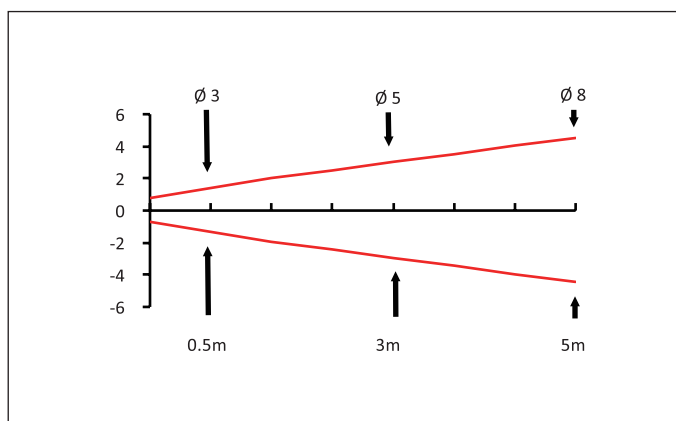
OS10S-L SERIES

BEAM PATTERN

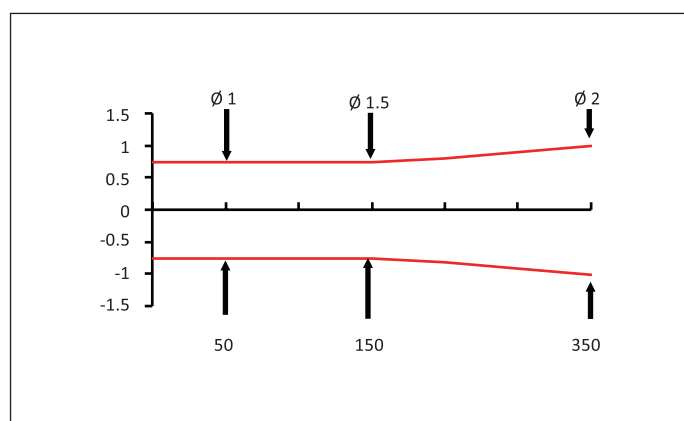
OS10S-SL (mm)



OS10S-RPL (mm)



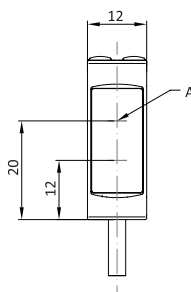
OS10S-AKL (mm)



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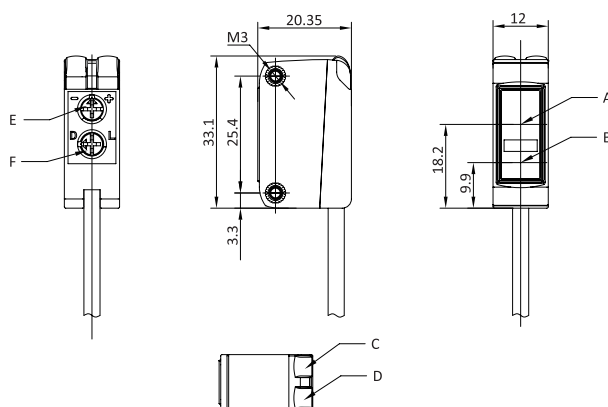
DIMENSIONS (mm)

Fig. 1 Cable, opposed, Sensitivity Adjustment



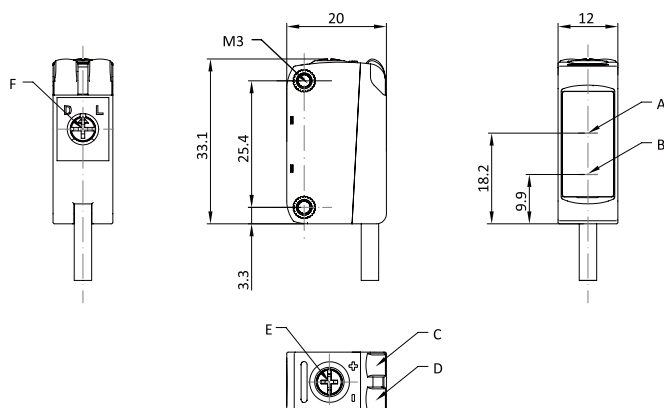
A: Receiver, emitter
C: Output indicator
D: Steady state indicator
F: Adjustor for LO/DO

Fig. 2 Cable, polarized Retro-reflective, Sensitivity Adjustment



A: Receiver
B: Emitter
C: Output indicator
D: Steady state indicator
E: Distance adjustment knob
F: Adjustor for LO/DO

Fig. 3 Cable, BGS

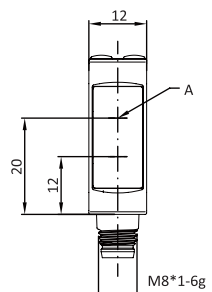


A: Receiver
B: Emitter
C: Output indicator
D: Steady state indicator
E: Adjustor for distance
F: Adjustor for LO/DO

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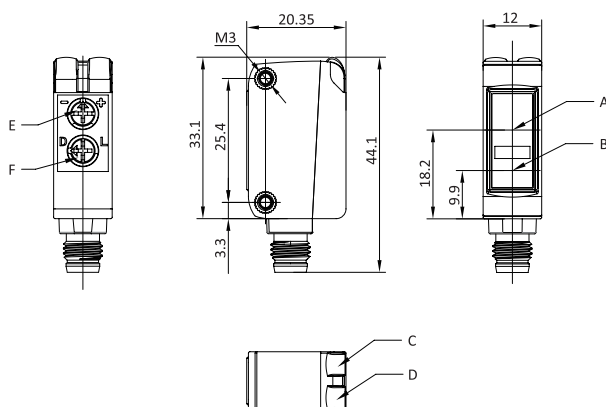
DIMENSIONS (mm)

Fig. 4 M8 connector, opposed, Sensitivity Adjustment



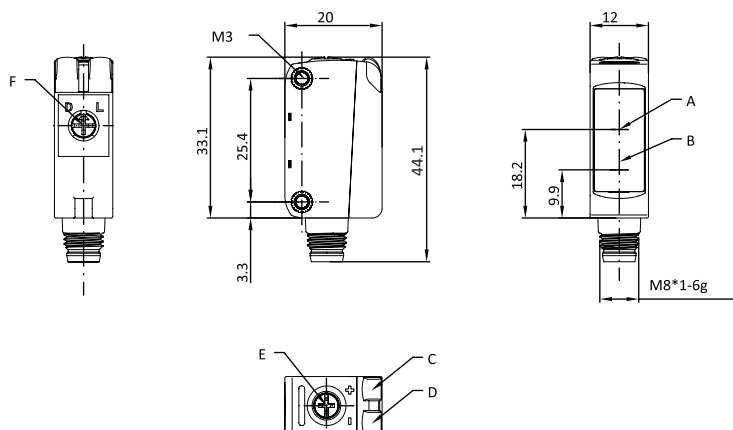
A: Receiver, emitter
C: Output indicator
D: Steady state indicator
F: Adjustor for LO/DO

Fig. 5 M8 connector, polarized Retro-reflective, Sensitivity Adjustment



A: Receiver
B: Emitter
C: Output indicator
D: Steady state indicator
E: Distance adjustment knob
F: Adjustor for LO/DO

Fig. 6 M8 connector, BGS

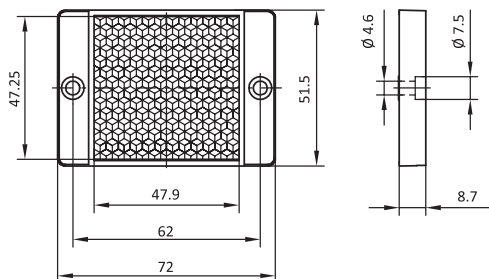


A: Receiver
B: Emitter
C: Output indicator
D: Steady state indicator
E: Adjustor for distance
F: Adjustor for LO/DO

OS10S-L SERIES

REFLECTOR

RB50x50-1



OS10S-L SERIES

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