

OS10S-R SERIES

ARTICLE PROPERTIES

SENSOR TYPE	Photoelectric sensor
SIZE	See dimensions
OPERATING DISTANCE	See table
DETECTION MODE	Opposed, Polarized retro-reflective, BGS, Diffused

CONNECTION TYPES (see table)

- M12 connector, 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 beam 630 nm	OVERLOAD RESISTANCE	Yes
LIGHT SPOT SIZE	See beam pattern	SHORT CIRCUIT PROTECTION	Yes
OUTPUT	PNP / NPN	MTTF	
FREQUENCY	See table	• Emitter	554 years
CURRENT CONSUMPTION	24 V 25 mA	• Receiver	460 years
LOAD CURRENT	≤ 100 mA	• Retro-reflective	436 years
HOUSING MATERIAL	PC + PBT	• BGS, Diffused	268 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



OS10S-R SERIES

DETECTION MODE OPPOSED

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OS10S-S6-0.3-Q12	10 m	Red	— —	— — (WD1)	— —	0.3 m cable + M12, 4-pin	<i>see Fig. 1</i>
OS10S-ECN6-0.3-Q12	10 m	— —	800 Hz	NPN (WD2)	L.O / D.O	0.3 m cable + M12, 4-pin	<i>see Fig. 1</i>
OS10S-ECP6-0.3-Q12	10 m	— —	800 Hz	PNP (WD3)	L.O / D.O	0.3 m cable + M12, 4-pin	<i>see Fig. 1</i>

DETECTION MODE POLARIZED RETROREFLECTIVE

(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-RPCN6-0.3-Q12	3 m	Red	800 Hz	NPN (WD2)	L.O / D.O	0.3 m cable + M12, 4-pin	<i>see Fig. 2</i>
OS10S-RPCP6-0.3-Q12	3 m	Red	800 Hz	PNP (WD3)	L.O / D.O	0.3 m cable + M12, 4-pin	<i>see Fig. 2</i>

DETECTION MODE BGS

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OS10S-AK150CN6-0.3-Q12	6 ... 150 mm	Red	400 Hz	NPN (WD2)	L.O / D.O	0.3 m cable + M12, 4-pin	<i>see Fig. 3</i>
OS10S-AK150CP6-0.3-Q12	6 ... 150 mm	Red	400 Hz	PNP (WD3)	L.O / D.O	0.3 m cable + M12, 4-pin	<i>see Fig. 3</i>
OS10S-AK350CN6-0.3-Q12	6 ... 350 mm	Red	400 Hz	NPN (WD2)	L.O / D.O	0.3 m cable + M12, 4-pin	<i>see Fig. 3</i>
OS10S-AK350CP6-0.3-Q12	6 ... 350 mm	Red	400 Hz	PNP (WD3)	L.O / D.O	0.3 m cable + M12, 4-pin	<i>see Fig. 3</i>

DETECTION MODE POLARIZED RETROREFLECTIVE, 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-RPCN6-0.3-Q12/AP	3 m	Red	800 Hz	NPN (WD2)	L.O / D.O	0.3 m cable + M12, 4-pin	<i>see Fig. 2</i>
OS10S-RPCP6-0.3-Q12/AP	3 m	Red	800 Hz	PNP (WD3)	L.O / D.O	0.3 m cable + M12, 4-pin	<i>see Fig. 2</i>

OS10S-R SERIES

DETECTION MODE

POLARIZED RETROREFLECTIVE, SENSITIVITY IS NOT ADJUSTABLE, NO REFLECTOR IS INCLUDED

(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-RPCN6-0.3-Q12/N	3 m	Red	800 Hz	NPN (WD2)	L.O / D.O	0.3 m cable + M12, 4-pin	see Fig. 2
OS10S-RPCP6-0.3-Q12/N	3 m	Red	800 Hz	PNP (WD3)	L.O / D.O	0.3 m cable + M12, 4-pin	see Fig. 2

DETECTION MODE

POLARIZED RETROREFLECTIVE, NO BLIND SPOTS, SENSITIVITY ADJUSTMENT

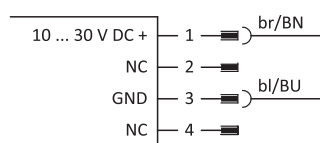
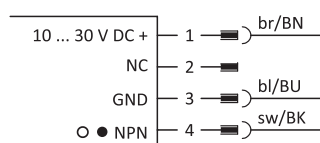
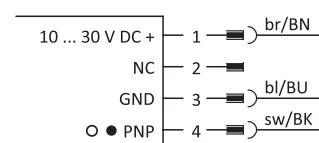
(The detection distance corresponds to the reflector RB50*50-1)

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OS10S-RPCN6-0.3-Q12/ND	2 m	Red	800 Hz	NPN (WD2)	L.O / D.O	0.3 m cable + M12, 4-pin	see Fig. 2
OS10S-RPCP6-0.3-Q12/ND	2 m	Red	800 Hz	PNP (WD3)	L.O / D.O	0.3 m cable + M12, 4-pin	see Fig. 2

DETECTION MODE DIFFUSED

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OS10S-K1000CN6-0.3-Q12	1000 mm	Red	200 Hz	NPN (WD2)	L.O / D.O	0.3 m cable + M12, 4-pin	see Fig. 3
OS10S-K1000CP6-0.3-Q12	1000 mm	Red	200 Hz	PNP (WD3)	L.O / D.O	0.3 m cable + M12, 4-pin	see Fig. 3

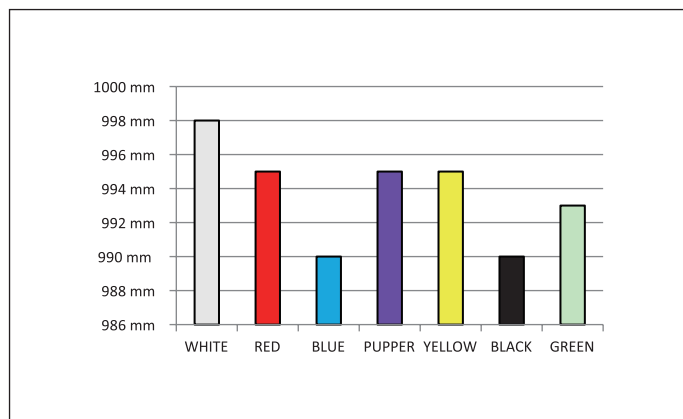
WIRING DIAGRAMS

WD1 Emitter**WD2 NPN / Light on | Dark on****WD3 PNP / Light on | Dark on**

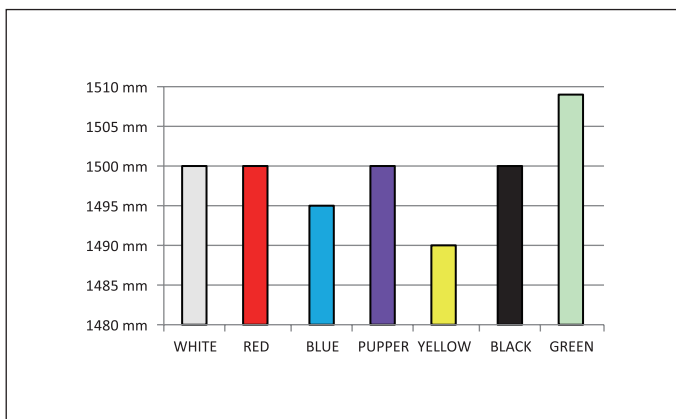
OS10S-R SERIES

ATTENUATION FIGURE

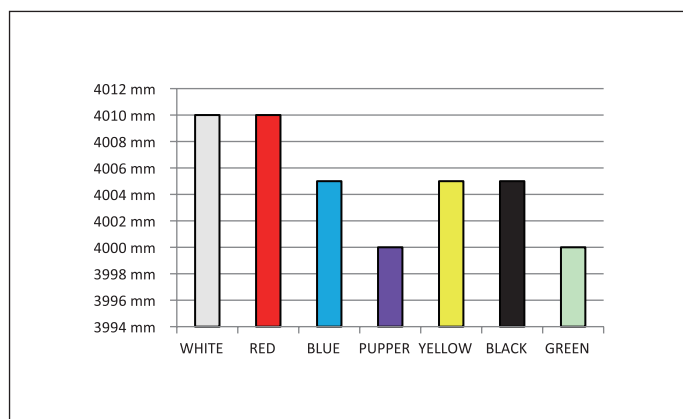
OS10S-AK1000



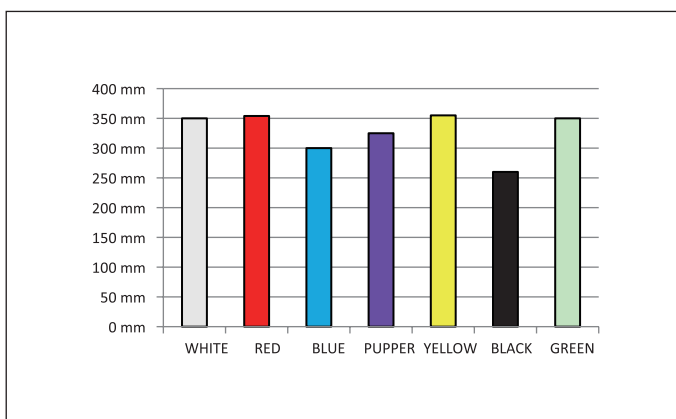
OS10S-AK1500



OS10S-AK4000

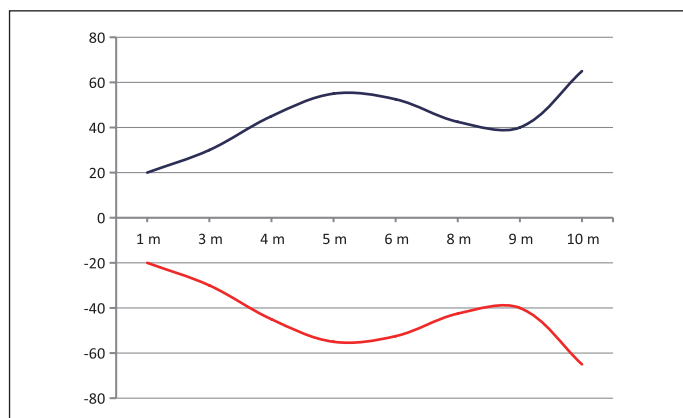


OS10S-AK350

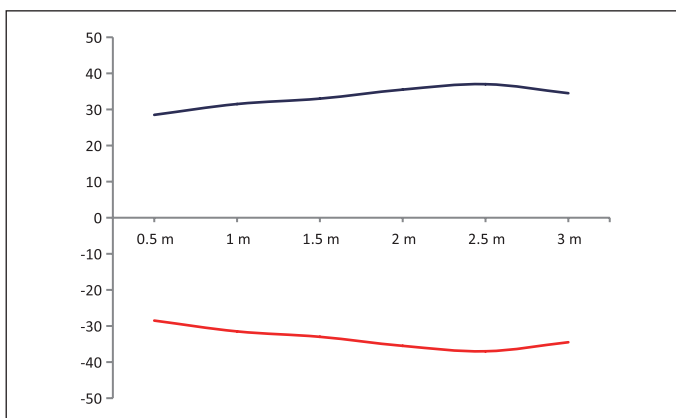


TRANSLATION CHARACTERISTIC CURVE

OS10S-S6 (mm)



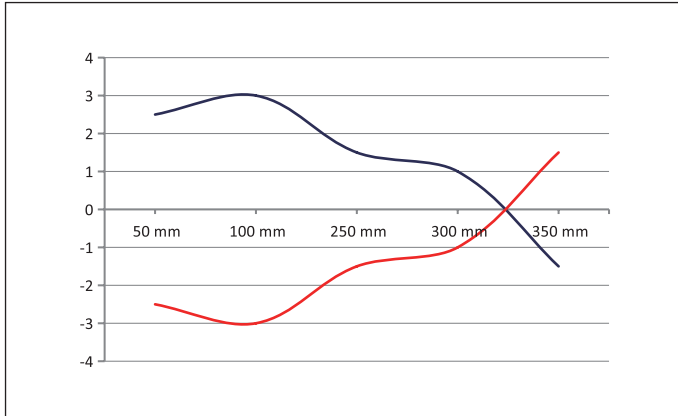
OS10S-RPCP6 (mm)



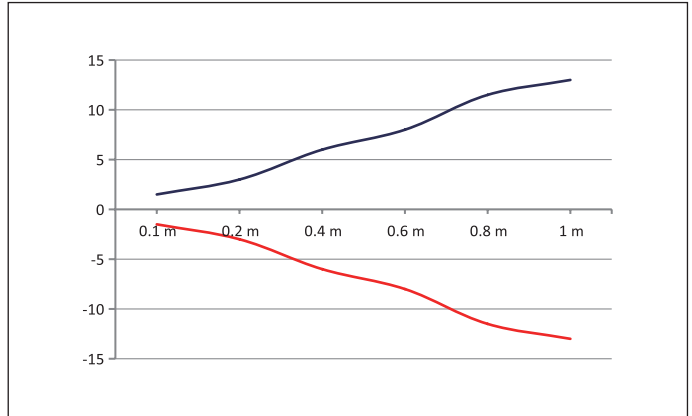
OS10S-R SERIES

TRANSLATION CHARACTERISTIC CURVE

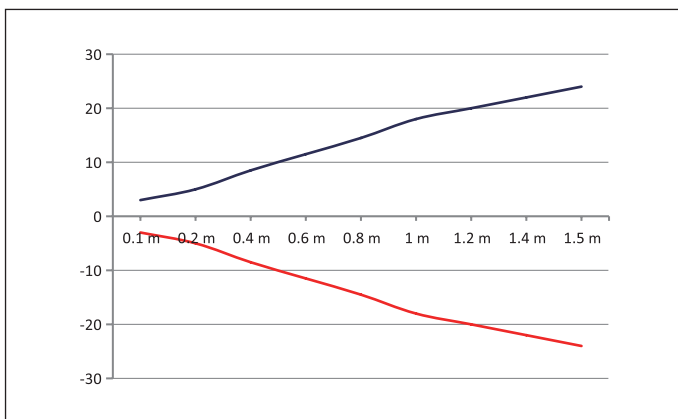
OS10S-AK350 (mm)



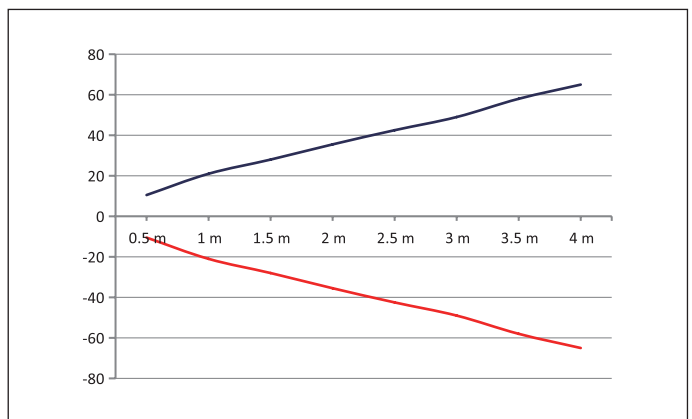
OS10S-AK1000 (mm)



OS10S-AK1500 (mm)

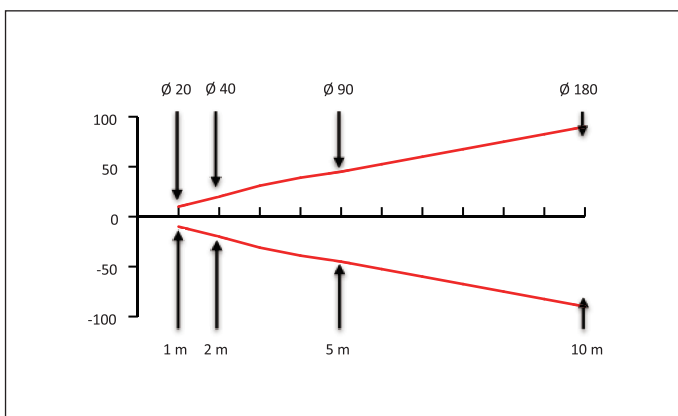


OS10S-AK4000 (mm)

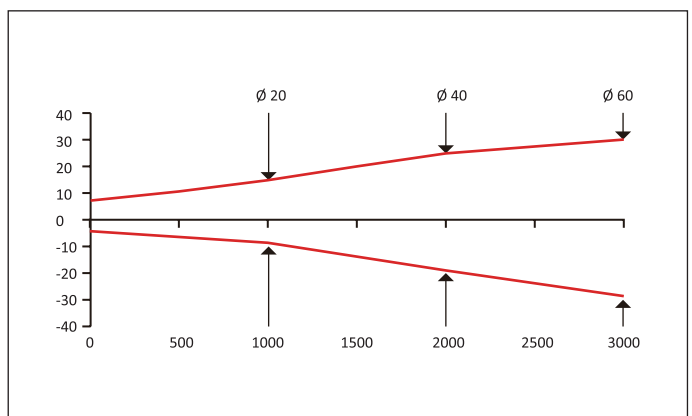


TRANSLATION CHARACTERISTIC CURVE

Beam Pattern



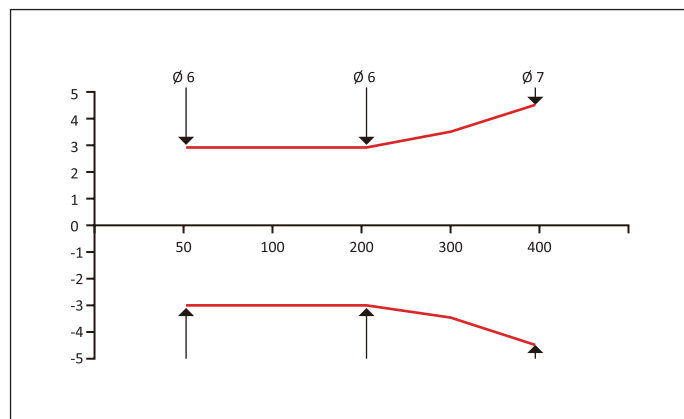
OS10S-PR (mm)



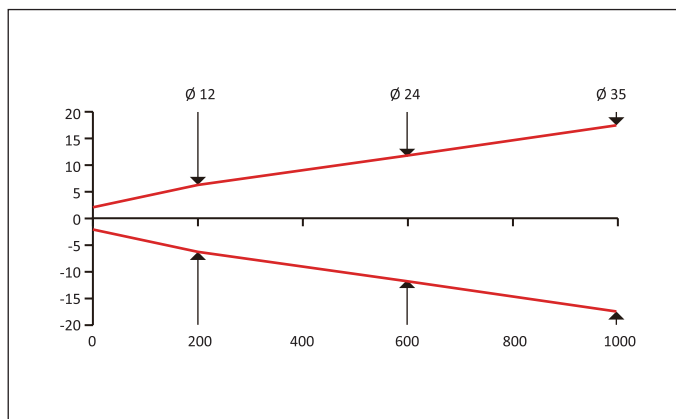
OS10S-R SERIES

BEAM PATTERN

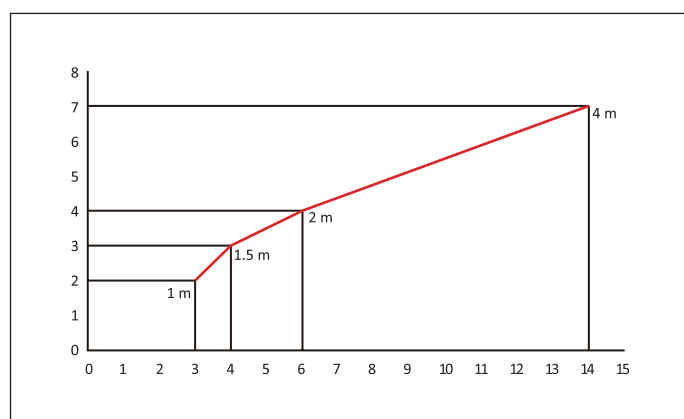
OS10S-AK350 (mm)



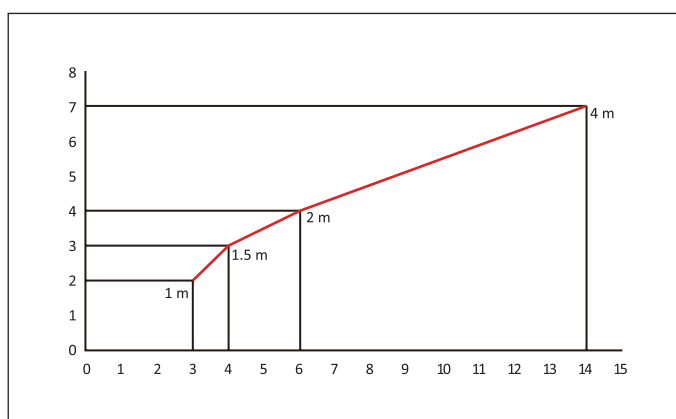
OS10S-AK1000 (mm)



OS10S-AK1500 (mm)



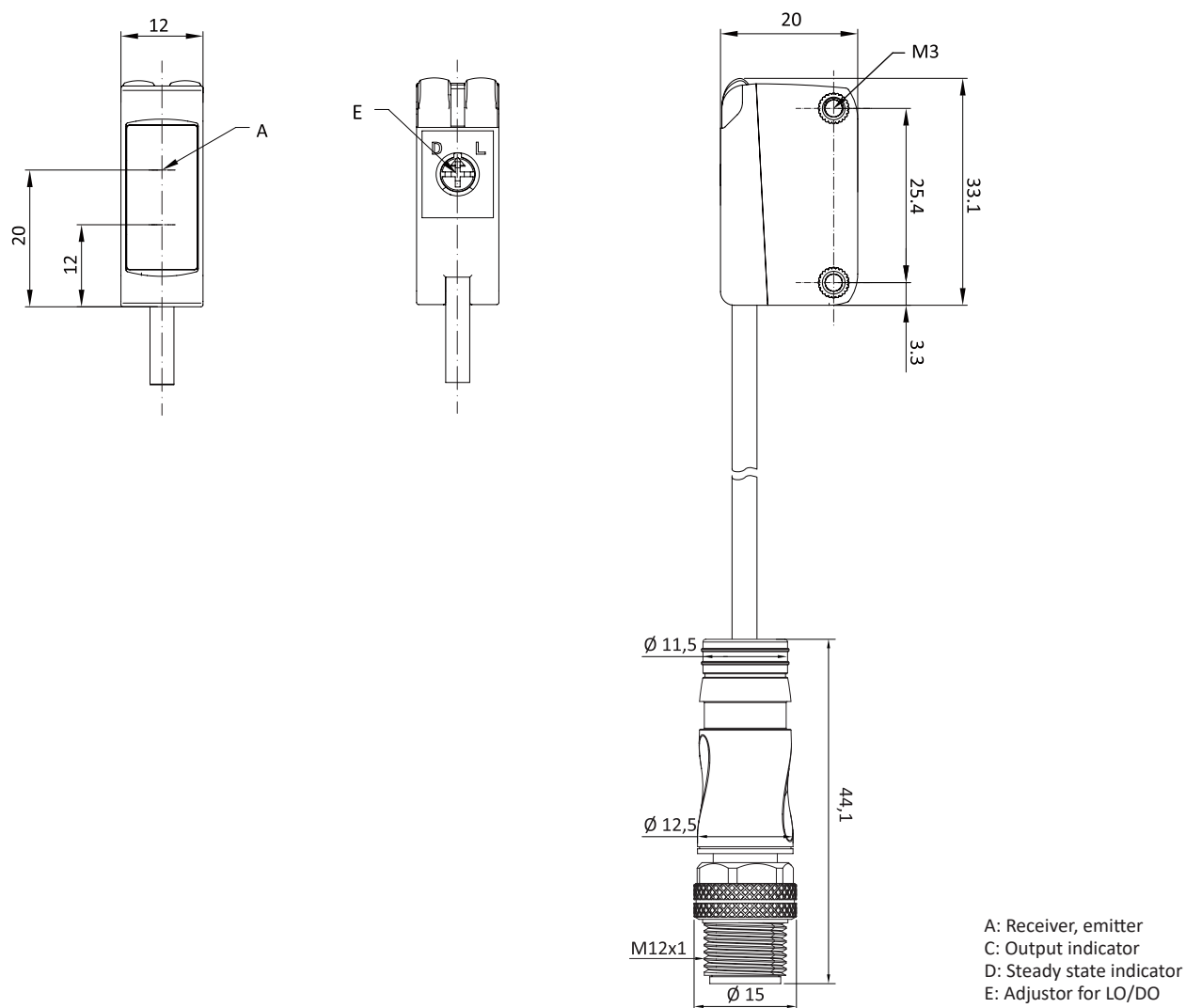
OS10S-AK4000 (mm)



OS10S-R SERIES

DIMENSIONS (mm)

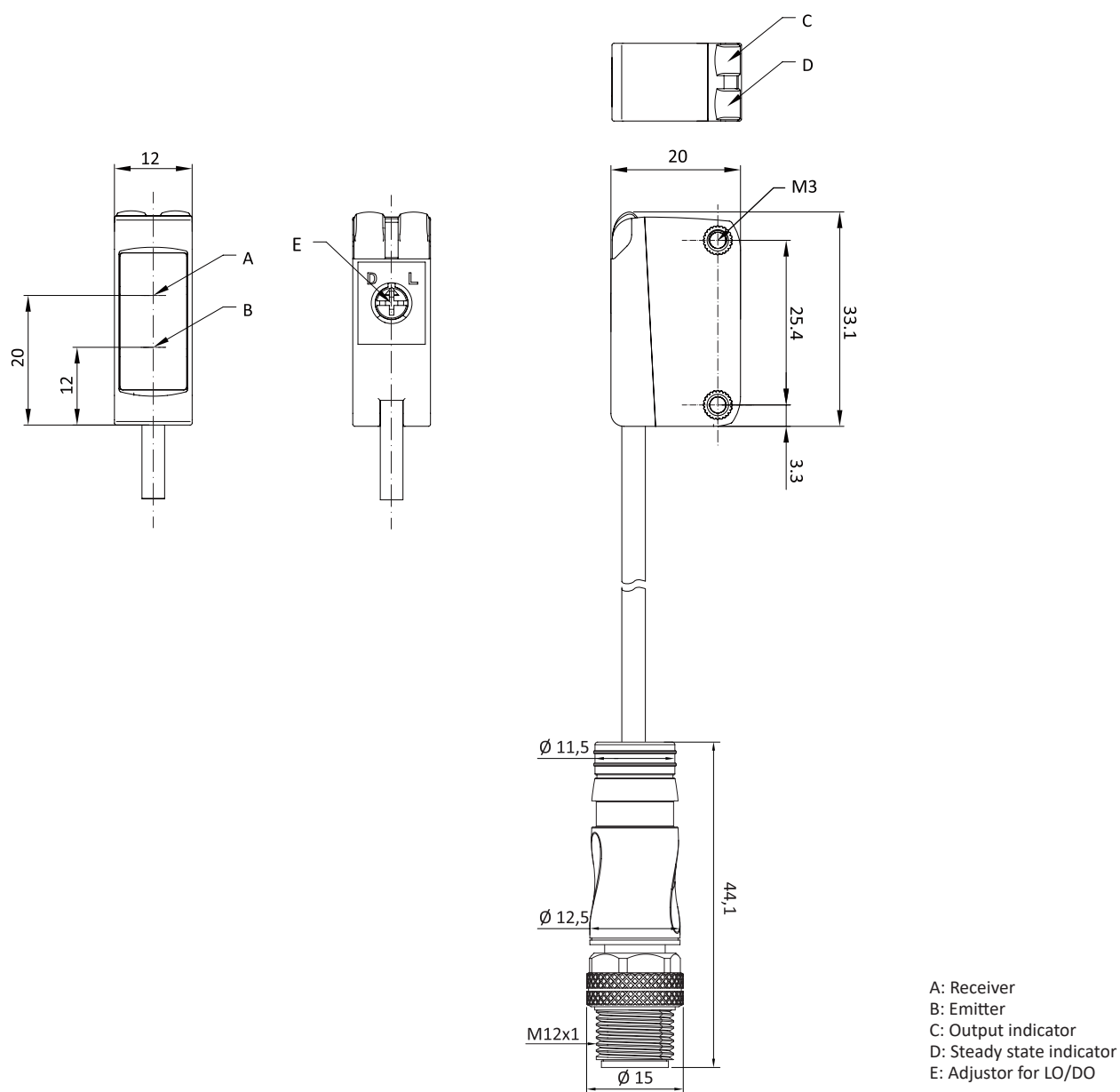
Fig. 1 Opposed



OS10S-R SERIES

DIMENSIONS (mm)

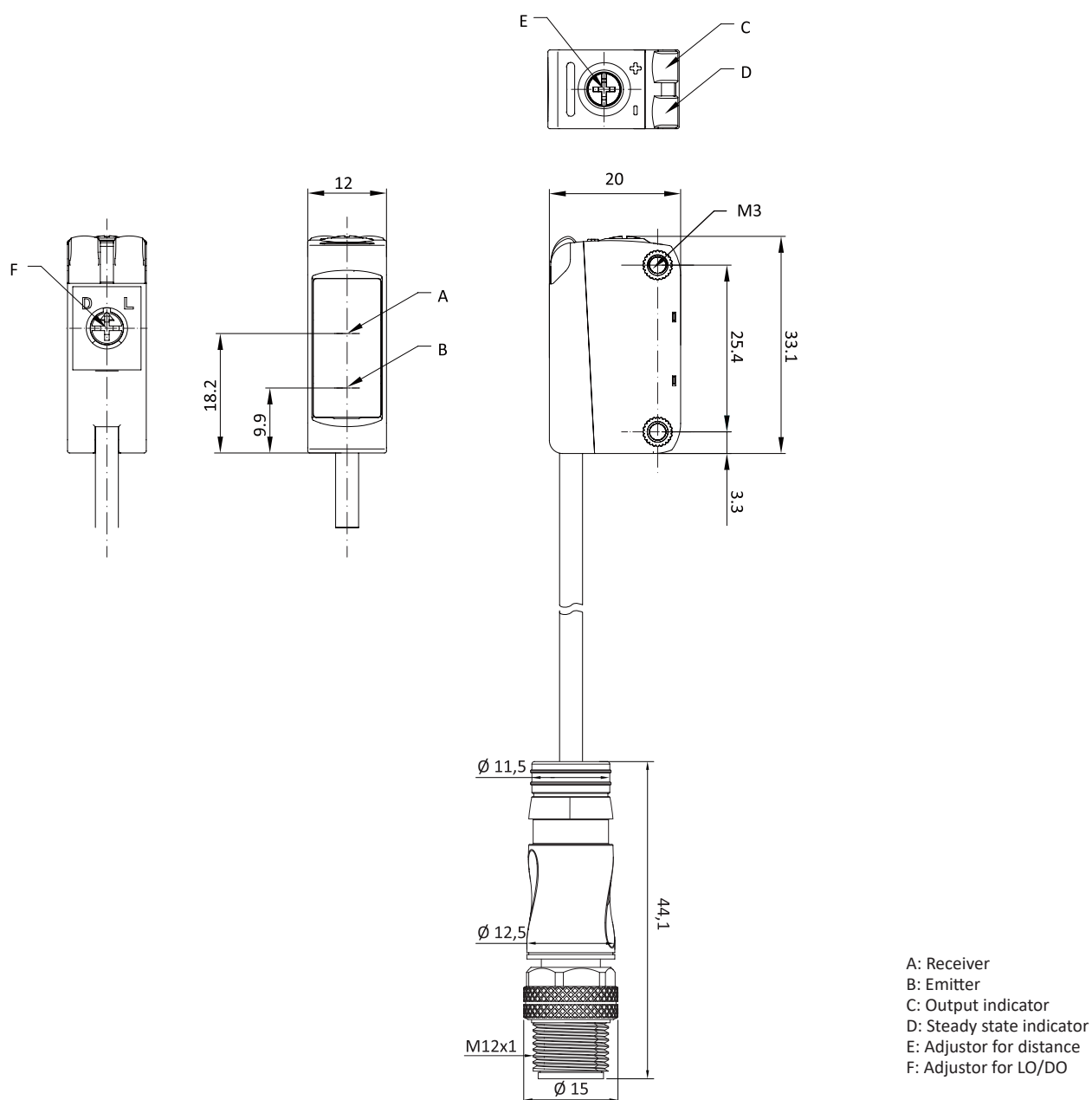
Fig. 2 Polarized retroreflective



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DIMENSIONS (mm)

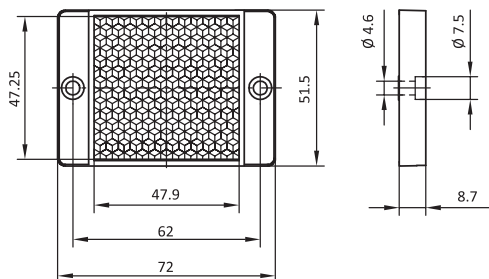
Fig. 3 BGS / diffused



OS10S-R SERIES

REFLECTOR

RB50x50-1



OS10S-R SERIES

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