


OS20 SERIES

ARTICLE PROPERTIES

SENSOR TYPE	Photoelectric sensor	CONNECTION TYPES (see table)	
SIZE	See dimensions	• Cable	PVC, 0.34 mm ² , 2 m**
OPERATING DISTANCE	See table	• M8 connector	
DETECTION MODE	BGS PCB detection line array light source, BGS, Non-coaxial polarized retro-reflective detection, Coaxial polarized retro-reflective detection		** Other cable lengths are available on request

TECHNICAL DATA

OPERATING VOLTAGE	10 ... 30 V DC	HOUSING MATERIAL	PC + PBT
RIPPLE VOLTAGE	≤ 10 %	VOLTAGE WITHSTANDING	1000 V/AC, 50/60 Hz, 60 s
LASER CLASS	Red laser: 650 nm / class 1 Red light: 650 nm	REVERSE POLARITY PROTECTION	Yes
LIGHT SPOT SIZE	Line array light 6 x 60 mm (100 mm)	OVERLOAD RESISTANCE	Yes
OUTPUT	PNP / NPN	SHORT CIRCUIT PROTECTION	Yes
FREQUENCY	See table	MTTF	
CURRENT CONSUMPTION	≤ 20 mA	• BGS	310 years
LOAD CURRENT	≤ 100 mA	• Polarized retro-reflective	326 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	-25 ... +55 °C	IMPACT RESISTANCE (EN 60068-2-6)	Complex amplitude 1.5 mm 10 ... 50 Hz (2hr X, Y, Z respectively)
AMBIENT TEMPERATURE	-40 ... +70 °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



OS20 SERIES

DETECTION MODE BGS PCB DETECTION LINE ARRAY LIGHT SOURCE

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OS20-AK100CN6/L	100 mm	Red	400 Hz	NPN (WD1)	L.O / D.O	2 m cable	see Fig. 1
OS20-AK100CP6/L	100 mm	Red	400 Hz	PNP (WD2)	L.O / D.O	2 m cable	see Fig. 1
OS20-AK100CN6Q8/L	100 mm	Red	400 Hz	NPN (WD3)	L.O / D.O	M8 connector, 4-pin	see Fig. 2
OS20-AK100CP6Q8/L	100 mm	Red	400 Hz	PNP (WD4)	L.O / D.O	M8 connector, 4-pin	see Fig. 2

DETECTION MODE BGS

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OS20-AK300CN6	6 ... 300 mm	Red	400 Hz	NPN (WD1)	L.O / D.O	2 m cable	see Fig. 1
OS20-AK300CP6	6 ... 300 mm	Red	400 Hz	PNP (WD2)	L.O / D.O	2 m cable	see Fig. 1
OS20-AK300CN6Q8	6 ... 300 mm	Red	400 Hz	NPN (WD3)	L.O / D.O	M8 connector, 4-pin	see Fig. 2
OS20-AK300CP6Q8	6 ... 300 mm	Red	400 Hz	PNP (WD4)	L.O / D.O	M8 connector, 4-pin	see Fig. 2

DETECTION MODE NON-COAXIAL POLARIZED RETRO-REFLECTIVE DETECTION

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

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OS20-RPLCN6	5 m	Red laser	800 Hz	NPN (WD1)	L.O / D.O	2 m cable	see Fig. 1
OS20-RPLCP6	5 m	Red laser	800 Hz	PNP (WD2)	L.O / D.O	2 m cable	see Fig. 1
OS20-RPLCN6Q8	5 m	Red laser	800 Hz	NPN (WD3)	L.O / D.O	M8 connector, 4-pin	see Fig. 2
OS20-RPLCP6Q8	5 m	Red laser	800 Hz	PNP (WD4)	L.O / D.O	M8 connector, 4-pin	see Fig. 2

DETECTION MODE COAXIAL POLARIZED RETRO-REFLECTIVE DETECTION

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

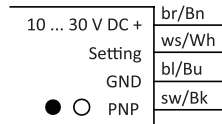
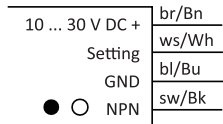
Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OS20-TRPLCN6	5 m	Red laser	800 Hz	NPN (WD1)	L.O / D.O	2 m cable	see Fig. 1
OS20-TRPLCP6	5 m	Red laser	800 Hz	PNP (WD2)	L.O / D.O	2 m cable	see Fig. 1
OS20-TRPLCN6Q8	5 m	Red laser	800 Hz	NPN (WD3)	L.O / D.O	M8 connector, 4-pin	see Fig. 2
OS20-TRPLCP6Q8	5 m	Red laser	800 Hz	PNP (WD4)	L.O / D.O	M8 connector, 4-pin	see Fig. 2

OS20 SERIES

WIRING DIAGRAMS cable

WD1 NPN / Light on | Dark on

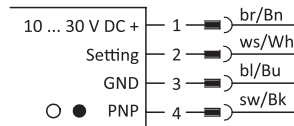
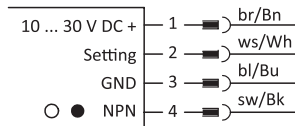
WD2 PNP / Light on | Dark on



WIRING DIAGRAMS M8 connector

WD3 NPN / Light on | Dark on

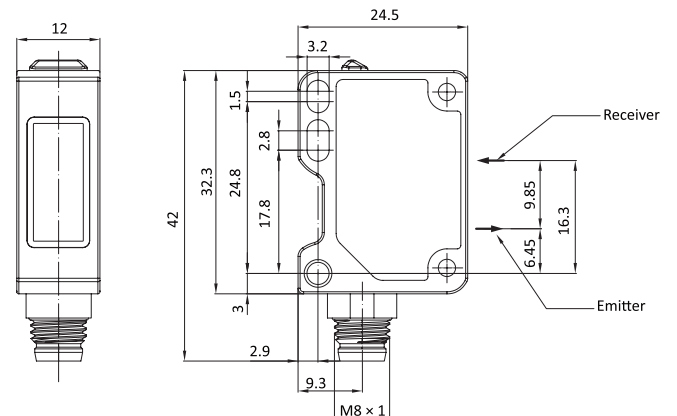
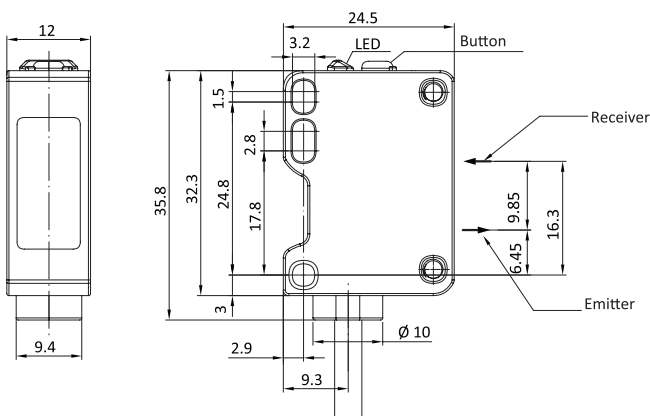
WD4 PNP / Light on | Dark on



DIMENSIONS

Fig. 1 OS20 with cable

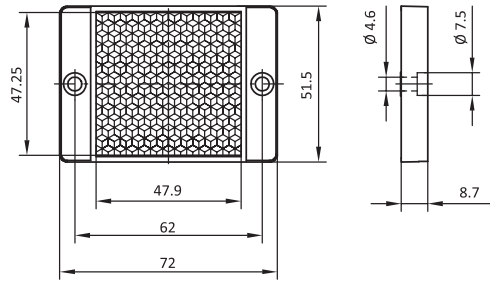
Fig. 2 OS20 with M8 connector



OS20 SERIES

REFLECTOR (OPTIONAL)

RB50x50-1



OS20 SERIES

SALES AND SERVICE

Tianjin Elco Automation Co., Ltd

No. 12, 4th XEDA Branch Road
Xiqing Economic-Technological Development Area
Tianjin 300385, P.R. China
Office Phone: 022 23788282
E-Mail: info@elco.cn
www.elco-holding.com.cn

Elco Industrie Automation GmbH

Benzstrasse 7
71720 Oberstenfeld,
Deutschland
Office Phone: +49 7062 / 6599-260
E-Mail: info@elco-automation.de
www.elco-automation.de

Elco Automation LLC

1097 Highway 101 South, Suite D-3 Greer
South Carolina 29651, USA
Office Phone: +1 864-581-7431
E-Mail: infousa@elcoautomation.com
www.elcoautomation.com

Elco Industrial Automation Pvt Ltd.

No 80, 1st Main, 2nd Cross, Royal Enclave,
Sidedahalli, Nagasandra Bangalore 560073, India
Office Phone: +91-7259931777
E-Mail: info@elcoautomation.in
www.elcoautomation.com

Elco Automation Korea Ltd.

706, 17 Daehak 4-ro, Yeongtong-gu, Suwon-si,
Gyeonggi-do, Republic of Korea, 16226
Office Phone: +82-31-216-7890
E-Mail: sales@elcoautomation.co.kr
www.elcoautomation.com