

OP12 SERIES

ARTICLE PROPERTIES

SENSOR TYPE	Photoelectric sensor	CONNECTION TYPES (see table)	
SIZE	M12x1	• cable	PVC, 0.14 mm ² , 2 m**
OPERATING DISTANCE	See table		
DETECTION MODE	Opposed	** other cable lengths are available on request	

TECHNICAL DATA

OPERATING VOLTAGE	10 ... 30 V DC	LOAD CURRENT	≤ 50 mA
RIPPLE VOLTAGE	≤ 10 %	HOUSING MATERIAL	Housing: PC Front screen: PMMA
LIGHT SOURCE	Infrared light (850 nm)	VOLTAGE WITHSTANDING	650 V/AC, 50/60 Hz, 60 s
LIGHT SPOT SIZE	Ø 35 mm (300 mm) Ø 100 mm (1000 mm) Ø 200 mm (3000 mm)	REVERSE POLARITY PROTECTION	Yes
OUTPUT	PNP / NPN	OVERLOAD RESISTANCE	Yes (1 kV / 0.5 J)
FREQUENCY	See table	SHORT CIRCUIT PROTECTION	Yes
CURRENT CONSUMPTION	≤ 20 mA	MTTF	Emitter: 399 years Receiver: 293 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	-20 ... +70 °C	VIBRATION RESISTANCE (EN 60068-2-6)	Complex amplitude 1.5 mm 10 ... 50 Hz (2hr X, Y, Z respectively)
AMBIENT TEMPERATURE	-10 ... +50 °C	ANTI-AMBIENT LIGHT	≤ 10000 Lux

STANDARDS AND DIRECTIVES

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

APPROVALS

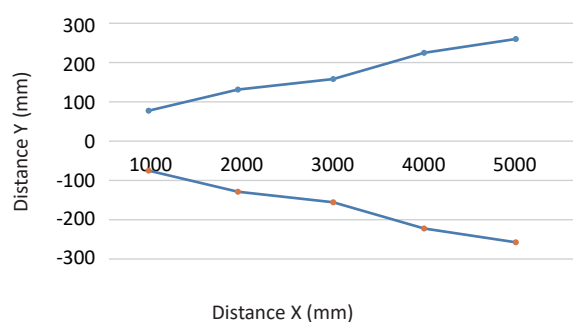


OP12 SERIES

DETECTION MODE OPPOSED

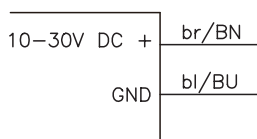
Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OP12-S6	5 m	Infrared light	— —	— — (WD1)	— —	2 m cable	see Fig. 1
OP12-ELN6	5 m	— —	100 Hz	NPN (WD2)	L.O	2 m cable	see Fig. 2
OP12-EDN6	5 m	— —	100 Hz	NPN (WD3)	D.O	2 m cable	see Fig. 2
OP12-ELP6	5 m	— —	100 Hz	PNP (WD4)	L.O	2 m cable	see Fig. 2
OP12-EDP6	5 m	— —	100 Hz	PNP (WD5)	D.O	2 m cable	see Fig. 2

TRANSLATION CHARACTERISTIC CURVE

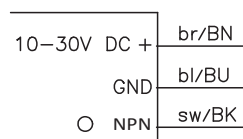


WIRING DIAGRAMS

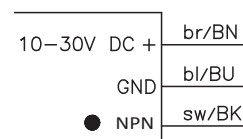
WD1 Emitter



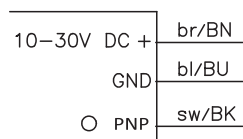
WD2 NPN / Light on



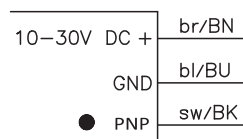
WD3 NPN / Dark on



WD4 PNP / Light on



WD5 PNP / Dark on



OP12 SERIES

DIMENSIONS

Fig. 1 Emitter

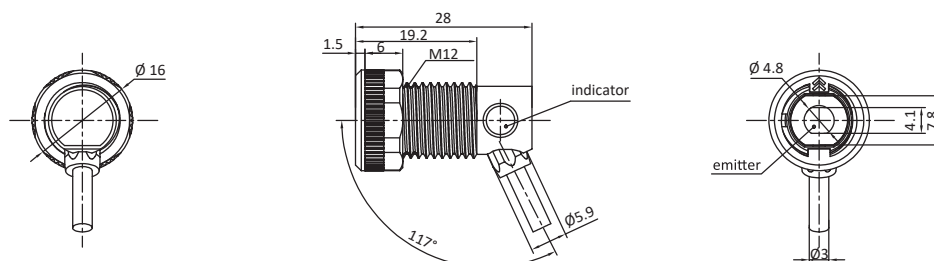
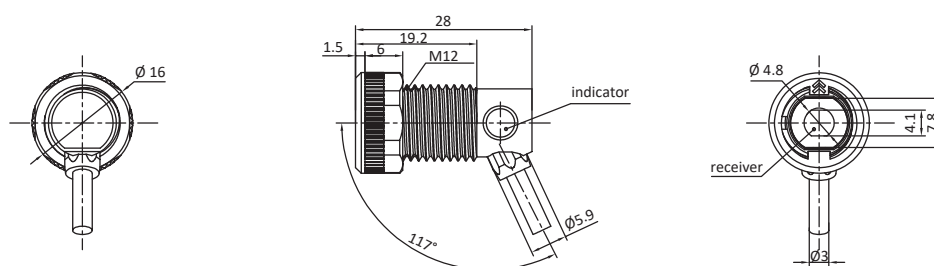


Fig. 2 Receiver



OP12 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