

OS22-0.3-Q8 SERIES

ARTICLE PROPERTIES

SENSOR TYPE	Photoelectric sensor
SIZE	See dimensions
OPERATING DISTANCE	See table
DETECTION MODE	Opposed, BGS fixed, BGS adjustable

CONNECTION TYPES (see table)

- M8 connector 3-pin, A-coded



** Other cable lengths are available on request

TECHNICAL DATA

OPERATING VOLTAGE	10 ... 30 V DC	VOLTAGE WITHSTANDING	650 V/AC, 50/60 Hz, 60 s
RIPPLE VOLTAGE	≤ 10 %	REVERSE POLARITY PROTECTION	Yes
LIGHT SOURCE	Small red beam (630 nm)	SHORT CIRCUIT PROTECTION	Yes
LIGHT SPOT SIZE	See beam pattern	VOLTAGE SHOCK PROTECTION	Yes
OUTPUT	PNP / NPN (Depends on the model)	MTTF	
FREQUENCY	See table	• Emitter	895 years
NO-LOAD CURRENT	≤ 18 mA	• Receiver	526 years
LOAD CURRENT	≤ 100 mA	• BGS	330 years
HOUSING MATERIAL	PC + PBT		

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	-10 ... +50 °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

APPROVALS



OS22-0.3-Q8 SERIES

DETECTION MODE OPPOSED

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OS22-S6-0.3-Q8.3 (emitter)	1 m	Red	— —	— — (WD1)	— —	0.3 m cable + M8, 3-pin	see Fig. 1
OS22-SS6-0.3-Q8.3 (emitter)	1 m	Point light	— —	— — (WD1)	— —	0.3 m cable + M8, 3-pin	see Fig. 1
OS22-ELN6-0.3-Q8.3 (receiver)	1 m	— —	800 Hz	NPN (WD2)	L.O	0.3 m cable + M8, 3-pin	see Fig. 1
OS22-EDN6-0.3-Q8.3 (receiver)	1 m	— —	800 Hz	NPN (WD3)	D.O	0.3 m cable + M8, 3-pin	see Fig. 1
OS22-ELP6-0.3-Q8.3 (receiver)	1 m	— —	800 Hz	PNP (WD4)	L.O	0.3 m cable + M8, 3-pin	see Fig. 1
OS22-EDP6-0.3-Q8.3 (receiver)	1 m	— —	800 Hz	PNP (WD5)	D.O	0.3 m cable + M8, 3-pin	see Fig. 1

DETECTION MODE OPPOSED

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OS22-S6-0.3-Q8.3/I (emitter)	2 m	Infrared	— —	— — (WD1)	— —	0.3 m cable + M8, 3-pin	see Fig. 1
OS22-ELN6-0.3-Q8.3/I (receiver)	2 m	— —	800 Hz	NPN (WD2)	L.O	0.3 m cable + M8, 3-pin	see Fig. 1
OS22-EDN6-0.3-Q8.3/I (receiver)	2 m	— —	800 Hz	NPN (WD3)	D.O	0.3 m cable + M8, 3-pin	see Fig. 1
OS22-ELP6-0.3-Q8.3/I (receiver)	2 m	— —	800 Hz	PNP (WD4)	L.O	0.3 m cable + M8, 3-pin	see Fig. 1
OS22-EDP6-0.3-Q8.3/I (receiver)	2 m	— —	800 Hz	PNP (WD5)	D.O	0.3 m cable + M8, 3-pin	see Fig. 1

OS22-0.3-Q8 SERIES

DETECTION MODE BGS FIXED

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OS22-AK15LN6-0.3-Q8.3	4 ... 15 mm	Red	200 Hz	NPN (WD2)	L.O	0.3 m cable + M8, 3-pin	<i>see Fig. 2</i>
OS22-AK15DN6-0.3-Q8.3	4 ... 15 mm	Red	200 Hz	NPN (WD3)	D.O	0.3 m cable + M8, 3-pin	<i>see Fig. 2</i>
OS22-AK15LP6-0.3-Q8.3	4 ... 15 mm	Red	200 Hz	PNP (WD4)	L.O	0.3 m cable + M8, 3-pin	<i>see Fig. 2</i>
OS22-AK15DP6-0.3-Q8.3	4 ... 15 mm	Red	200 Hz	PNP (WD5)	D.O	0.3 m cable + M8, 3-pin	<i>see Fig. 2</i>
OS22-AK30LN6-0.3-Q8.3	5 ... 30 mm	Red	200 Hz	NPN (WD2)	L.O	0.3 m cable + M8, 3-pin	<i>see Fig. 2</i>
OS22-AK30DN6-0.3-Q8.3	5 ... 30 mm	Red	200 Hz	NPN (WD3)	D.O	0.3 m cable + M8, 3-pin	<i>see Fig. 2</i>
OS22-AK30LP6-0.3-Q8.3	5 ... 30 mm	Red	200 Hz	PNP (WD4)	L.O	0.3 m cable + M8, 3-pin	<i>see Fig. 2</i>
OS22-AK30DP6-0.3-Q8.3	5 ... 30 mm	Red	200 Hz	PNP (WD5)	D.O	0.3 m cable + M8, 3-pin	<i>see Fig. 2</i>

DETECTION MODE BGS ADJUSTABLE

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OS22-AK120LN6-0.3-Q8.3	10 ... 120 mm	Red	200 Hz	NPN (WD2)	L.O	0.3 m cable + M8, 3-pin	<i>see Fig. 3</i>
OS22-AK120DN6-0.3-Q8.3	10 ... 120 mm	Red	200 Hz	NPN (WD3)	D.O	0.3 m cable + M8, 3-pin	<i>see Fig. 3</i>
OS22-AK120LP6-0.3-Q8.3	10 ... 120 mm	Red	200 Hz	PNP (WD4)	L.O	0.3 m cable + M8, 3-pin	<i>see Fig. 3</i>
OS22-AK120DP6-0.3-Q8.3	10 ... 120 mm	Red	200 Hz	PNP (WD5)	D.O	0.3 m cable + M8, 3-pin	<i>see Fig. 3</i>

OS22-0.3-Q8 SERIES

DETECTION MODE BGS FIXED

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OS22-AKS15LN6-0.3-Q8.3	4 ... 15 mm	Point light	200 Hz	NPN (WD2)	L.O	0.3 m cable + M8, 3-pin	see Fig. 2
OS22-AKS15DN6-0.3-Q8.3	4 ... 15 mm	Point light	200 Hz	NPN (WD3)	D.O	0.3 m cable + M8, 3-pin	see Fig. 2
OS22-AKS15LP6-0.3-Q8.3	4 ... 15 mm	Point light	200 Hz	PNP (WD4)	L.O	0.3 m cable + M8, 3-pin	see Fig. 2
OS22-AKS15DP6-0.3-Q8.3	4 ... 15 mm	Point light	200 Hz	PNP (WD5)	D.O	0.3 m cable + M8, 3-pin	see Fig. 2
OS22-AKS30LN6-0.3-Q8.3	5 ... 30 mm	Point light	200 Hz	NPN (WD2)	L.O	0.3 m cable + M8, 3-pin	see Fig. 2
OS22-AKS30DN6-0.3-Q8.3	5 ... 30 mm	Point light	200 Hz	NPN (WD3)	D.O	0.3 m cable + M8, 3-pin	see Fig. 2
OS22-AKS30LP6-0.3-Q8.3	5 ... 30 mm	Point light	200 Hz	PNP (WD4)	L.O	0.3 m cable + M8, 3-pin	see Fig. 2
OS22-AKS30DP6-0.3-Q8.3	5 ... 30 mm	Point light	200 Hz	PNP (WD5)	D.O	0.3 m cable + M8, 3-pin	see Fig. 2

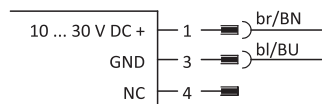
DETECTION MODE BGS ADJUSTABLE

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OS22-AKS120LN6-0.3-Q8.3	10 ... 120 mm	Point light	200 Hz	NPN (WD2)	L.O	0.3 m cable + M8, 3-pin	see Fig. 3
OS22-AKS120DN6-0.3-Q8.3	10 ... 120 mm	Point light	200 Hz	NPN (WD3)	D.O	0.3 m cable + M8, 3-pin	see Fig. 3
OS22-AKS120LP6-0.3-Q8.3	10 ... 120 mm	Point light	200 Hz	PNP (WD4)	L.O	0.3 m cable + M8, 3-pin	see Fig. 3
OS22-AKS120DP6-0.3-Q8.3	10 ... 120 mm	Point light	200 Hz	PNP (WD5)	D.O	0.3 m cable + M8, 3-pin	see Fig. 3

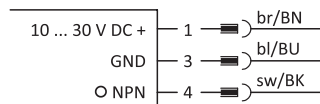
OS22-0.3-Q8 SERIES

WIRING DIAGRAMS

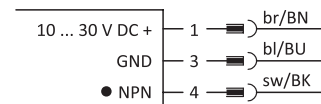
WD1 Emitter



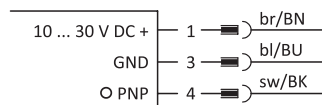
WD2 NPN / Light on



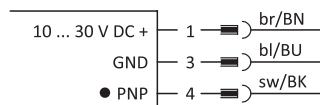
WD3 NPN / Dark on



WD4 PNP / Light on

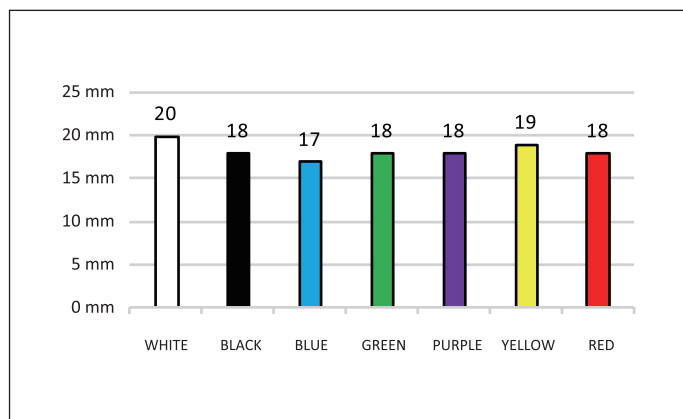


WD5 PNP / Dark on

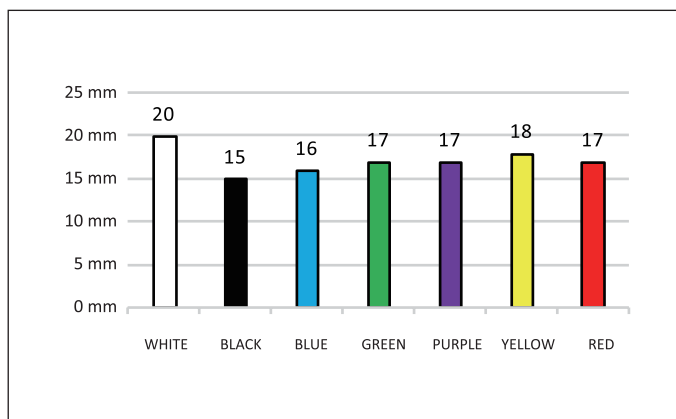


ATTENUATION FIGURE

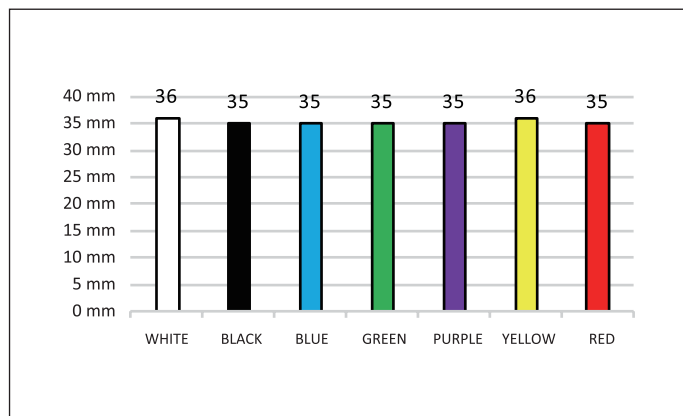
OS22-AK15



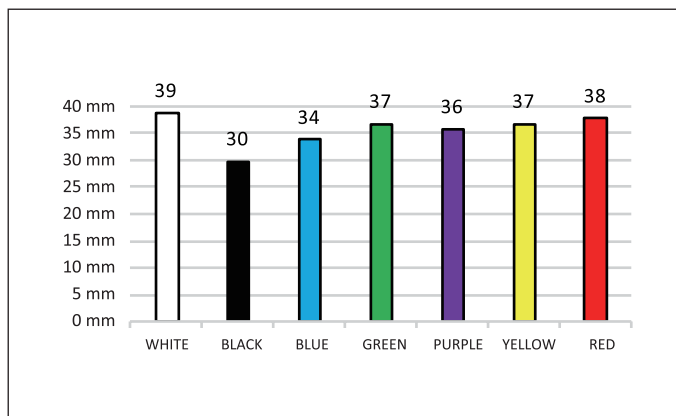
OS22-AKS15



OS22-AK30



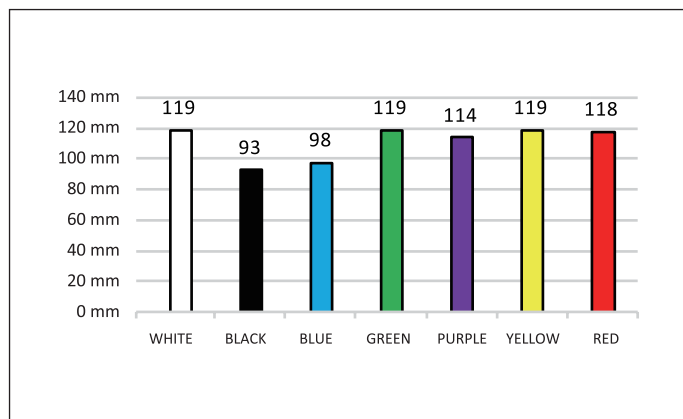
OS22-AKS30



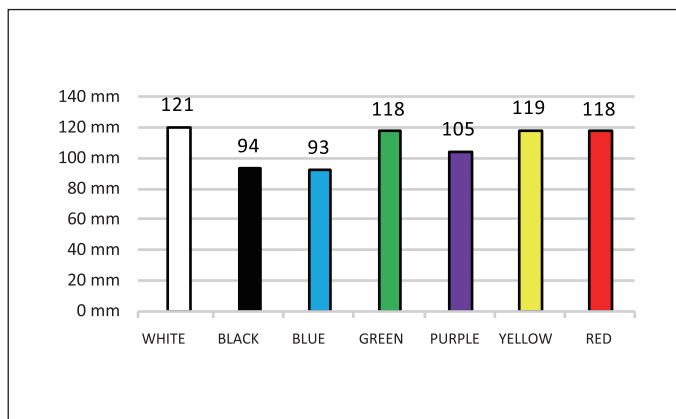
OS22-0.3-Q8 SERIES

ATTENUATION FIGURE

OS22-AK120

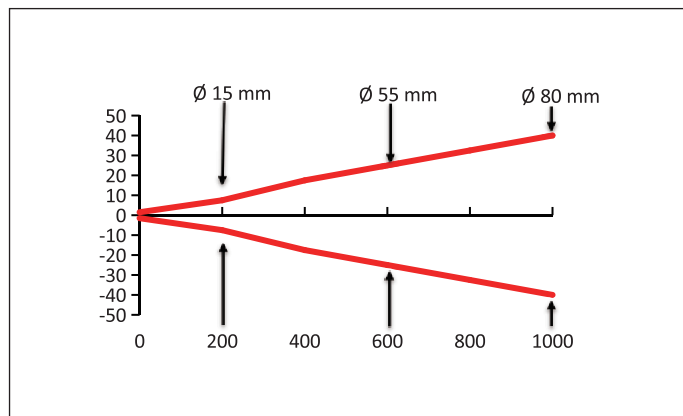


OS22-AKS120

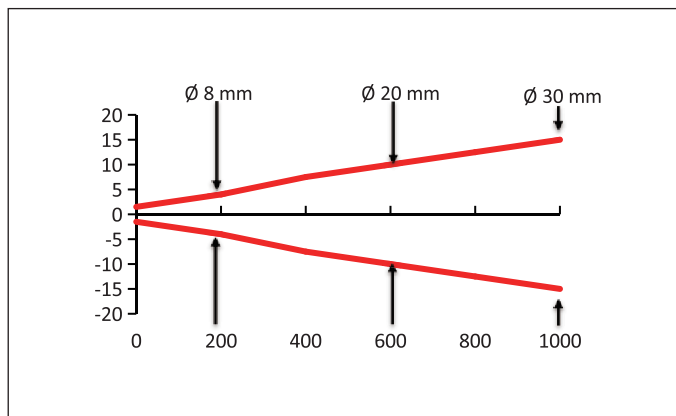


BEAM PATTERN

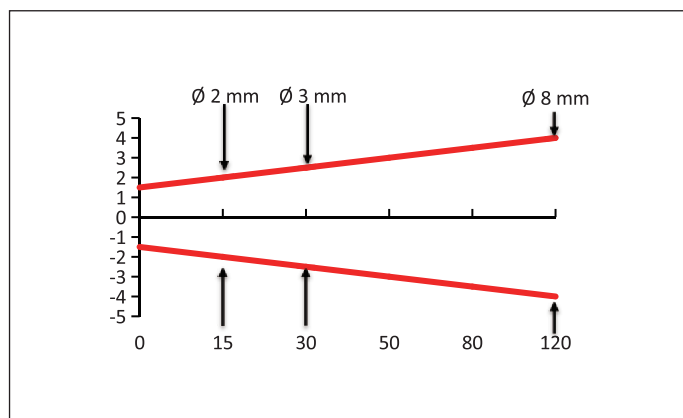
OS22-S6 / OS22-S6/I (mm)



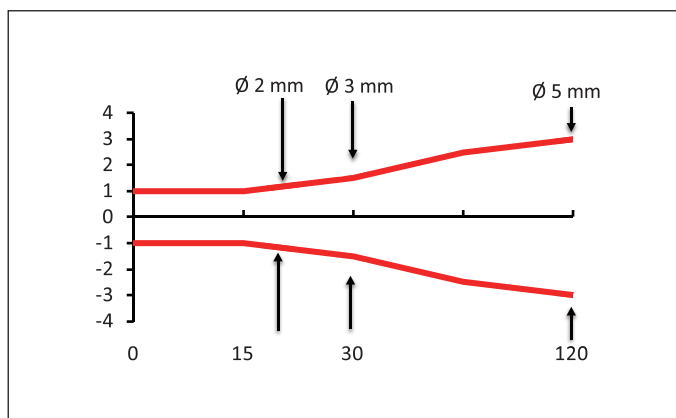
OS22-SS6 (mm)



OS22-AK15 / 30 / 120 (mm)



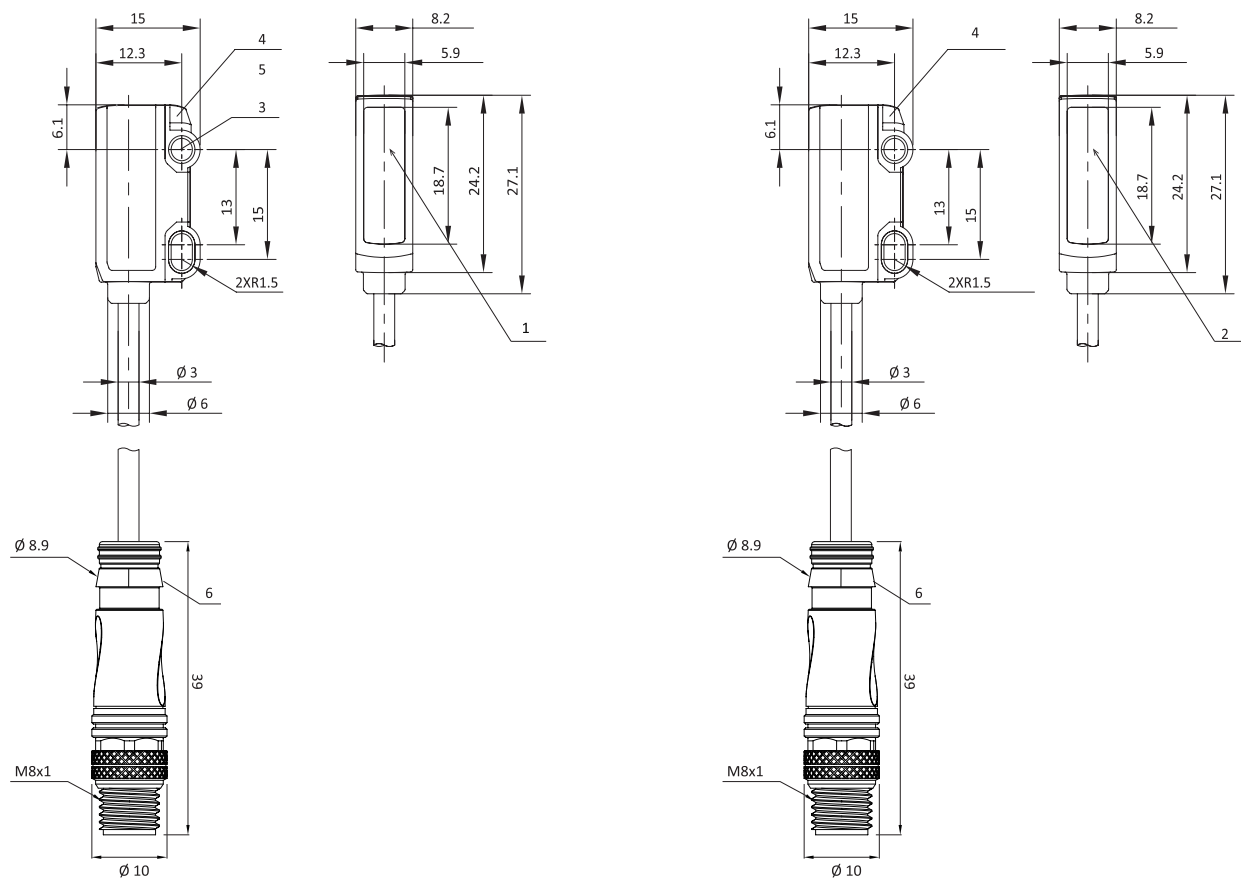
OS22-AKS15 / 30 / 120 (mm)



OS22-0.3-Q8 SERIES

DIMENSIONS (mm)

Fig. 1 Opposed



- 1 Emitter optic axis
- 2 Receiver optic axis
- 3 Mounting hole $\varnothing$ 3 mm
- 4 LED: power on
- 5 LED: on / off
- 6 Connection: 0.3 m cable + M8 connector

OS22-0.3-Q8 SERIES

DIMENSIONS (mm)

Fig. 2 BGS Fixed

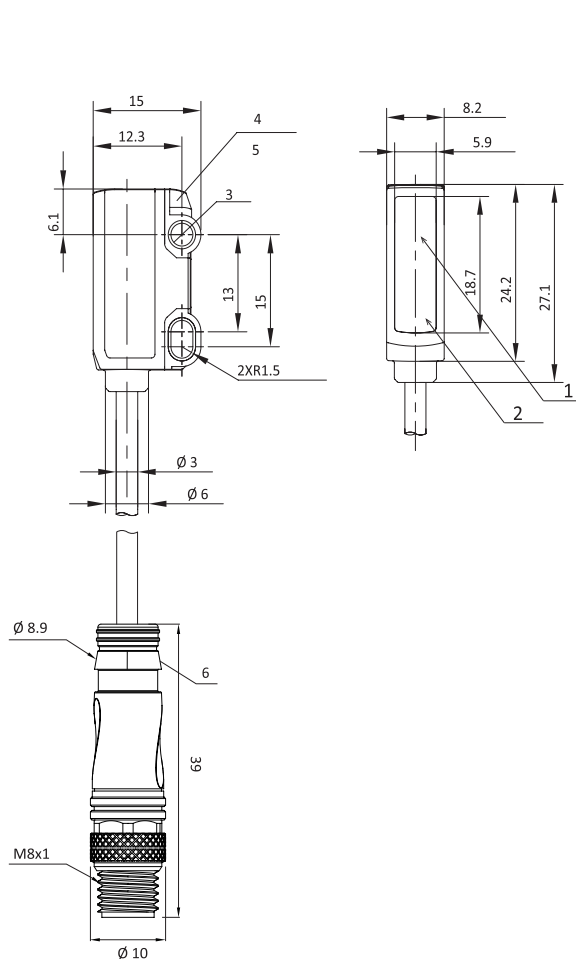
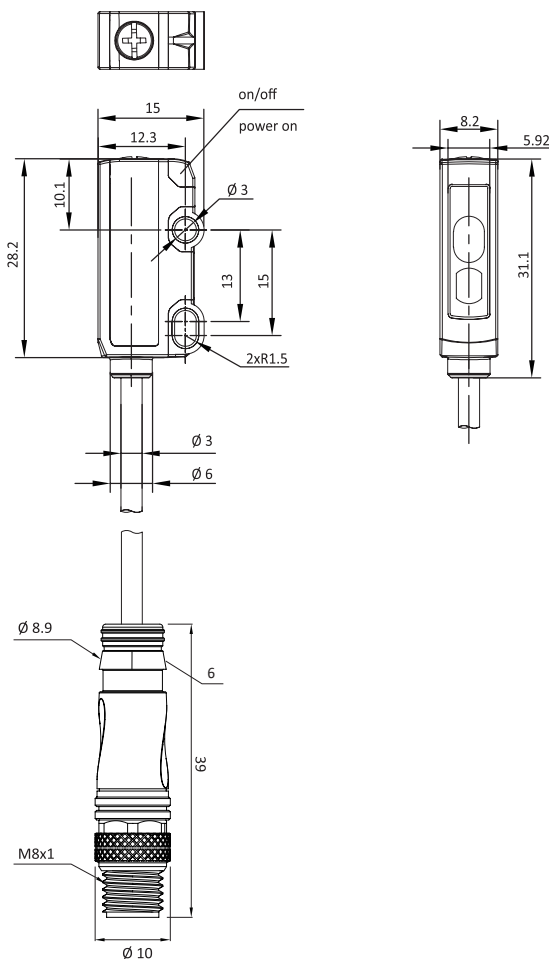


Fig. 3 BGS Adjustable



- 1 Emitter optic axis
- 2 Receiver optic axis
- 3 Mounting hole $\varnothing$ 3 mm
- 4 LED: power on
- 5 LED: on / off
- 6 Connection: 0.3 m cable + M8 connector

OS22-0.3-Q8 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