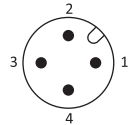


OSQ18 SERIES

ARTICLE PROPERTIES

SENSOR TYPE	Photoelectric sensor	CONNECTION TYPES (see table)
SIZE	See dimensions	<ul style="list-style-type: none"> • Cable TPU, 0.15 mm², 2 m** • M12 connector
OPERATING DISTANCE	See table	
DETECTION MODE	Opposed, Retro-reflective, Polarized retro-reflective, Diffused, Fixed distance BGS	

** 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
LIGHT SOURCE	Infrared light: 850 nm Red light: 650 nm 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	337 years
CURRENT CONSUMPTION	Opposed: ≤ 25 mA Others: ≤ 15 mA	• Receiver	174 years
LOAD CURRENT	≤ 200 mA	• Retro-reflective and diffused	236 years
HOUSING MATERIAL	PBT + ABS	• Polarized retro-reflective	177 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

OSQ18 SERIES

STANDARDS AND DIRECTIVES

EMC DIRECTIVE 2014/30/EU EN IEC 60947-5-2

ROHS DIRECTIVE 2011/65/EU EN IEC 63000

APPROVALS



DETECTION MODE OPPOSED

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OSQ18-S6 (emitter)	25 m	Infrared	— —	— — (WD1)	— —	2 m cable	see Fig. 1
OSQ18-EVP6 (receiver)	25 m	— —	800 Hz	PNP (WD2)	L.O + D.O	2 m cable	see Fig. 1
OSQ18-EVN6 (receiver)	25 m	— —	800 Hz	NPN (WD3)	L.O + D.O	2 m cable	see Fig. 1
OSQ18-S6Q (emitter)	25 m	Infrared	— —	— — (WD6)	— —	M12 connector	see Fig. 2
OSQ18-EVP6Q (receiver)	25 m	— —	800 Hz	PNP (WD7)	L.O + D.O	M12 connector	see Fig. 2
OSQ18-EVN6Q (receiver)	25 m	— —	800 Hz	NPN (WD8)	L.O + D.O	M12 connector	see Fig. 2
OSQ18-SL306 (emitter)	30 m	Red laser	— —	— — (WD1)	— —	2 m cable	see Fig. 1
OSQ18-EL30VP6 (receiver)	30 m	— —	800 Hz	PNP (WD2)	L.O + D.O	2 m cable	see Fig. 1
OSQ18-EL30VN6 (receiver)	30 m	— —	800 Hz	NPN (WD3)	L.O + D.O	2 m cable	see Fig. 1
OSQ18-SL306Q (emitter)	30 m	Red laser	— —	— — (WD6)	— —	M12 connector	see Fig. 2
OSQ18-EL30VP6Q (receiver)	30 m	— —	800 Hz	PNP (WD7)	L.O + D.O	M12 connector	see Fig. 2
OSQ18-EL30VN6Q (receiver)	30 m	— —	800 Hz	NPN (WD8)	L.O + D.O	M12 connector	see Fig. 2

OSQ18 SERIES

DETECTION MODE RETRO-REFLECTIVE

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

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OSQ18-RVP6	3.5 m	Red	800 Hz	PNP (WD2)	L.O + D.O	2 m cable	<i>see Fig. 1</i>
OSQ18-RVN6	3.5 m	Red	800 Hz	NPN (WD3)	L.O + D.O	2 m cable	<i>see Fig. 1</i>
OSQ18-RVP6Q	3.5 m	Red	800 Hz	PNP (WD7)	L.O + D.O	M12 connector	<i>see Fig. 2</i>
OSQ18-RVN6Q	3.5 m	Red	800 Hz	NPN (WD8)	L.O + D.O	M12 connector	<i>see Fig. 2</i>

DETECTION MODE POLARIZED RETRO-REFLECTIVE

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

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OSQ18-RPVP6	3.5 m	Red	800 Hz	PNP (WD2)	L.O + D.O	2 m cable	<i>see Fig. 1</i>
OSQ18-RPVN6	3.5 m	Red	800 Hz	NPN (WD3)	L.O + D.O	2 m cable	<i>see Fig. 1</i>
OSQ18-RPVP6Q	3.5 m	Red	800 Hz	PNP (WD7)	L.O + D.O	M12 connector	<i>see Fig. 2</i>
OSQ18-RPVN6Q	3.5 m	Red	800 Hz	NPN (WD8)	L.O + D.O	M12 connector	<i>see Fig. 2</i>

DETECTION MODE DIFFUSED

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OSQ18-K200VP6	200 mm	Red	800 Hz	PNP (WD4)	L.O + D.O	2 m cable	<i>see Fig. 1</i>
OSQ18-K200VN6	200 mm	Red	800 Hz	NPN (WD5)	L.O + D.O	2 m cable	<i>see Fig. 1</i>
OSQ18-K200VP6Q	200 mm	Red	800 Hz	PNP (WD9)	L.O + D.O	M12 connector	<i>see Fig. 2</i>
OSQ18-K200VN6Q	200 mm	Red	800 Hz	NPN (WD10)	L.O + D.O	M12 connector	<i>see Fig. 2</i>
OSQ18-K400VP6	400 mm	Red	800 Hz	PNP (WD4)	L.O + D.O	2 m cable	<i>see Fig. 1</i>
OSQ18-K400VN6	400 mm	Red	800 Hz	NPN (WD5)	L.O + D.O	2 m cable	<i>see Fig. 1</i>
OSQ18-K400VP6Q	400 mm	Red	800 Hz	PNP (WD9)	L.O + D.O	M12 connector	<i>see Fig. 2</i>
OSQ18-K400VN6Q	400 mm	Red	800 Hz	NPN (WD10)	L.O + D.O	M12 connector	<i>see Fig. 2</i>
OSQ18-K600VP6	600 mm	Red	800 Hz	PNP (WD4)	L.O + D.O	2 m cable	<i>see Fig. 1</i>
OSQ18-K600VN6	600 mm	Red	800 Hz	NPN (WD5)	L.O + D.O	2 m cable	<i>see Fig. 1</i>
OSQ18-K600VP6Q	600 mm	Red	800 Hz	PNP (WD9)	L.O + D.O	M12 connector	<i>see Fig. 2</i>
OSQ18-K600VN6Q	600 mm	Red	800 Hz	NPN (WD10)	L.O + D.O	M12 connector	<i>see Fig. 2</i>

OSQ18 SERIES

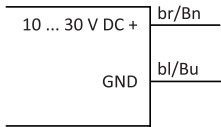
DETECTION MODE BGS

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OSQ18-AK50VP6	5 ... 50 mm	Red	400 Hz	PNP (WD4)	L.O + D.O	2 m cable	<i>see Fig. 1</i>
OSQ18-AK50VN6	5 ... 50 mm	Red	400 Hz	NPN (WD5)	L.O + D.O	2 m cable	<i>see Fig. 1</i>
OSQ18-AK50VP6Q	5 ... 50 mm	Red	400 Hz	PNP (WD9)	L.O + D.O	M12 connector	<i>see Fig. 2</i>
OSQ18-AK50VN6Q	5 ... 50 mm	Red	400 Hz	NPN (WD10)	L.O + D.O	M12 connector	<i>see Fig. 2</i>
OSQ18-AK100VP6	8 ... 100 mm	Red	400 Hz	PNP (WD4)	L.O + D.O	2 m cable	<i>see Fig. 1</i>
OSQ18-AK100VN6	8 ... 100 mm	Red	400 Hz	NPN (WD5)	L.O + D.O	2 m cable	<i>see Fig. 1</i>
OSQ18-AK100VP6Q	8 ... 100 mm	Red	400 Hz	PNP (WD9)	L.O + D.O	M12 connector	<i>see Fig. 2</i>
OSQ18-AK100VN6Q	8 ... 100 mm	Red	400 Hz	NPN (WD10)	L.O + D.O	M12 connector	<i>see Fig. 2</i>
OSQ18-AK150VP6	10 ... 150 mm	Red	400 Hz	PNP (WD4)	L.O + D.O	2 m cable	<i>see Fig. 1</i>
OSQ18-AK150VN6	10 ... 150 mm	Red	400 Hz	NPN (WD5)	L.O + D.O	2 m cable	<i>see Fig. 1</i>
OSQ18-AK150VP6Q	10 ... 150 mm	Red	400 Hz	PNP (WD9)	L.O + D.O	M12 connector	<i>see Fig. 2</i>
OSQ18-AK150VN6Q	10 ... 150 mm	Red	400 Hz	NPN (WD10)	L.O + D.O	M12 connector	<i>see Fig. 2</i>
OSQ18-AK200VP6	10 ... 200 mm	Red	400 Hz	PNP (WD4)	L.O + D.O	2 m cable	<i>see Fig. 1</i>
OSQ18-AK200VN6	10 ... 200 mm	Red	400 Hz	NPN (WD5)	L.O + D.O	2 m cable	<i>see Fig. 1</i>
OSQ18-AK200VP6Q	10 ... 200 mm	Red	400 Hz	PNP (WD9)	L.O + D.O	M12 connector	<i>see Fig. 2</i>
OSQ18-AK200VN6Q	10 ... 200 mm	Red	400 Hz	NPN (WD10)	L.O + D.O	M12 connector	<i>see Fig. 2</i>

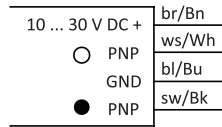
OSQ18 SERIES

WIRING DIAGRAMS Pre-wired cable

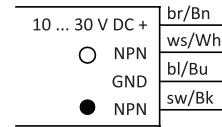
WD1 Emitter



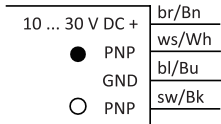
WD2 PNP / Light on | Dark on



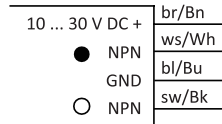
WD3 NPN / Light on | Dark on



WD4 PNP / Light on | Dark on

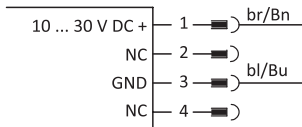


WD5 NPN / Light on | Dark on

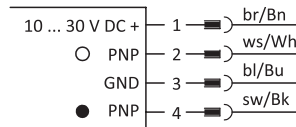


WIRING DIAGRAMS M12 connector

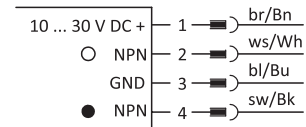
WD6 Emitter



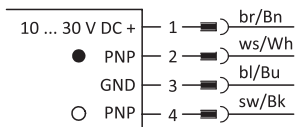
WD7 PNP / Light on | Dark on



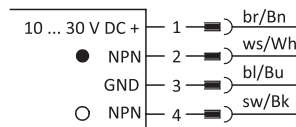
WD8 NPN / Light on | Dark on



WD9 PNP / Light on | Dark on



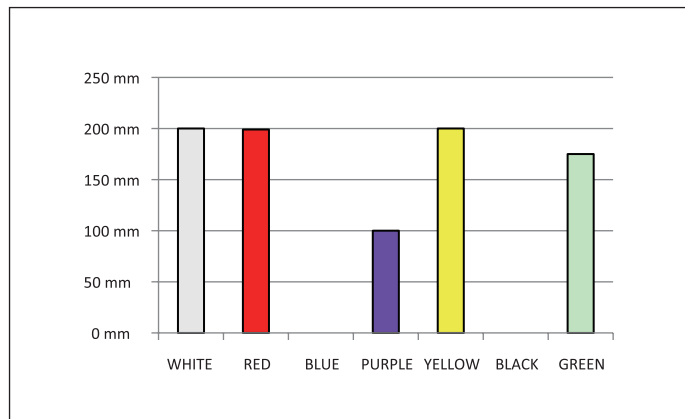
WD10 NPN / Light on | Dark on



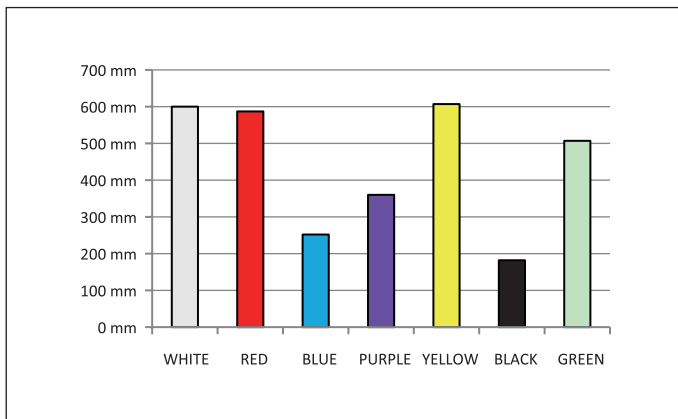
OSQ18 SERIES

ATTENUATION FIGURE

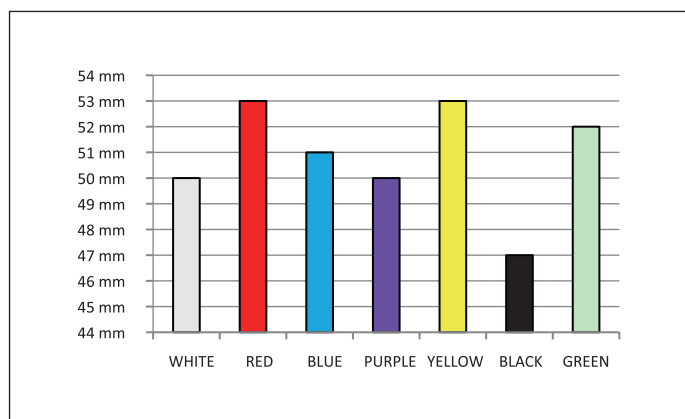
OSQ18-K200



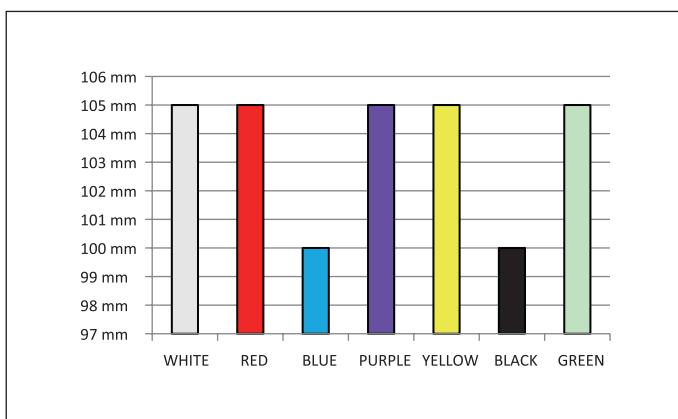
OSQ18-K600



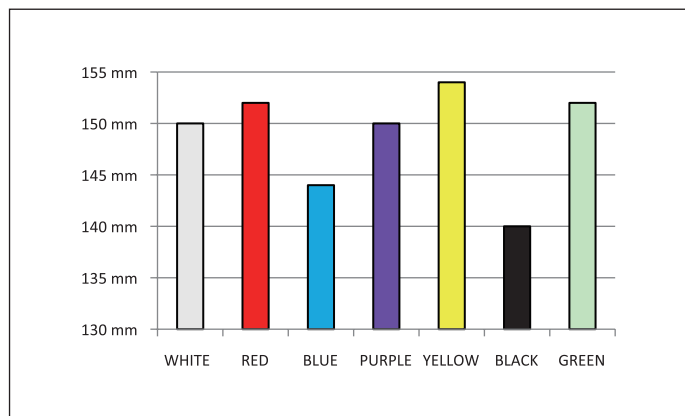
OSQ18-AK50



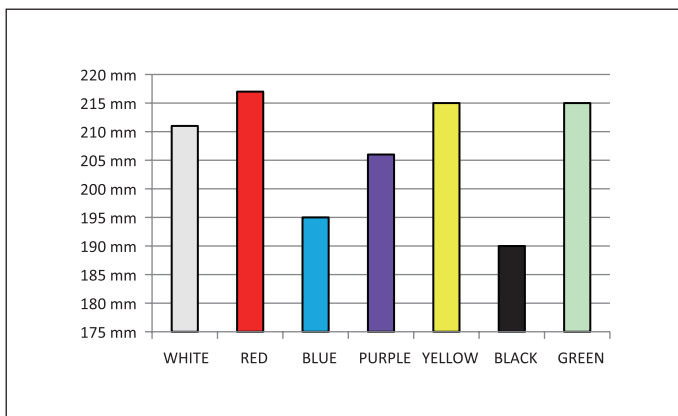
OSQ18-AK100



OSQ18-AK150



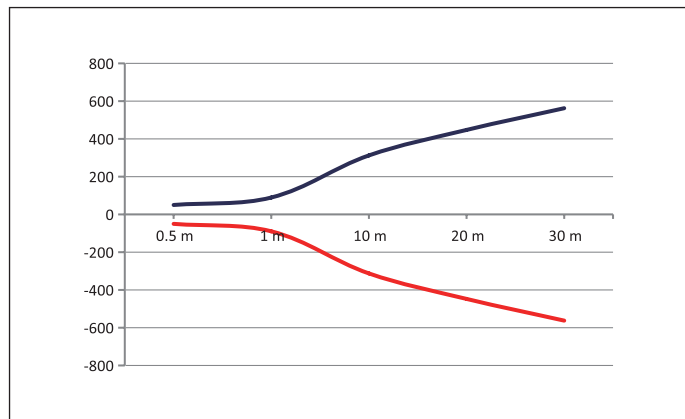
OSQ18-AK200



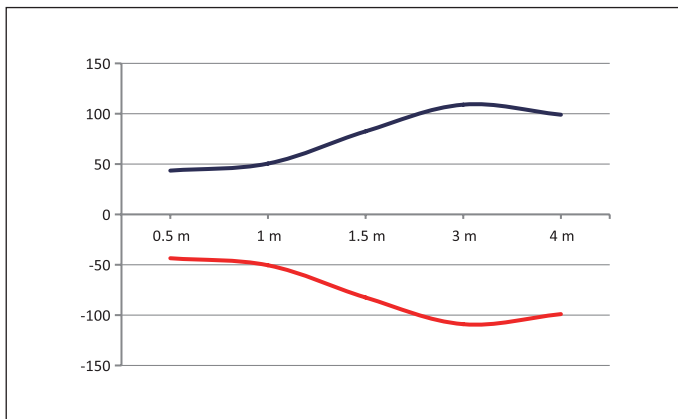
OSQ18 SERIES

TRANSLATION CHARACTERISTIC CURVE

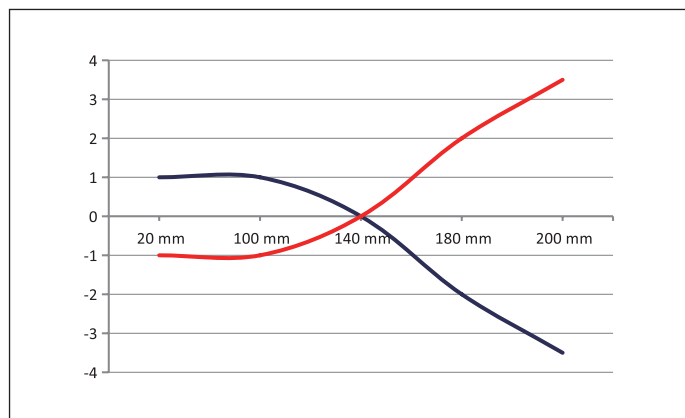
OSQ18-S6 (mm)



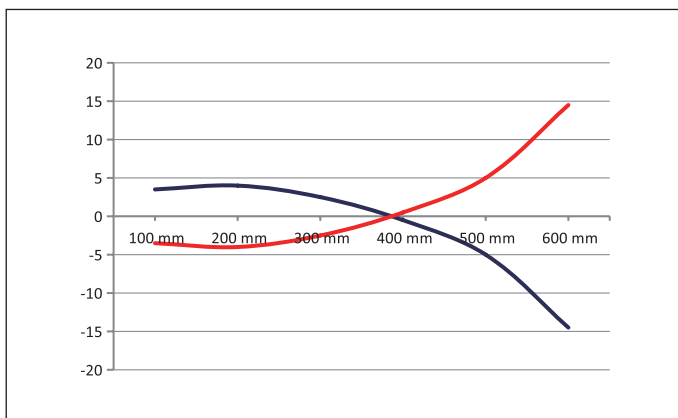
OSQ18-RP/R (mm)



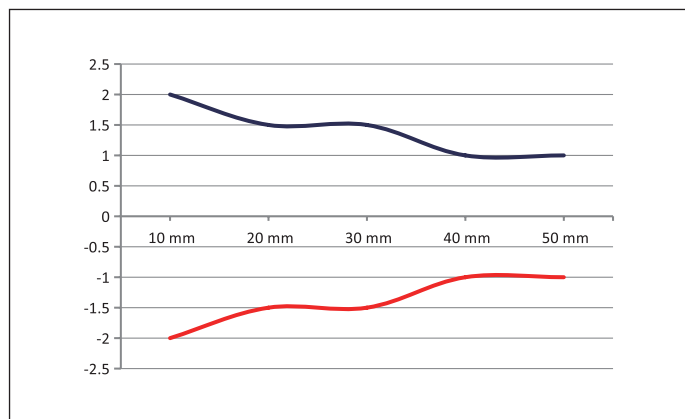
OSQ18-K200 (mm)



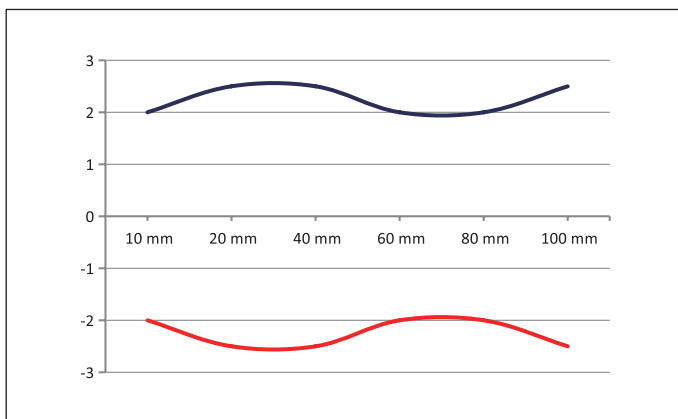
OSQ18-K600 (mm)



OSQ18-AK50 (mm)



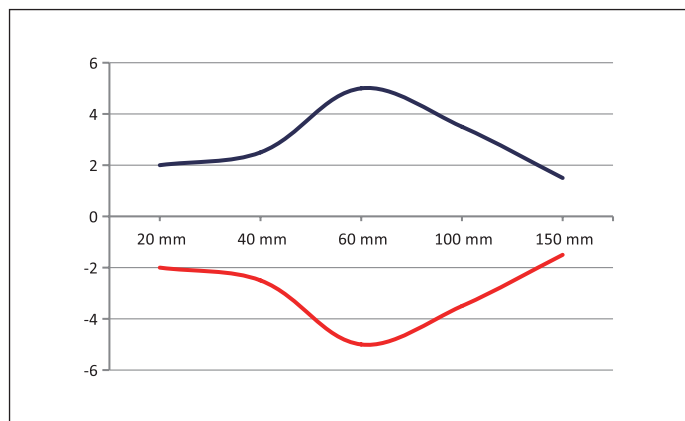
OSQ18-AK100 (mm)



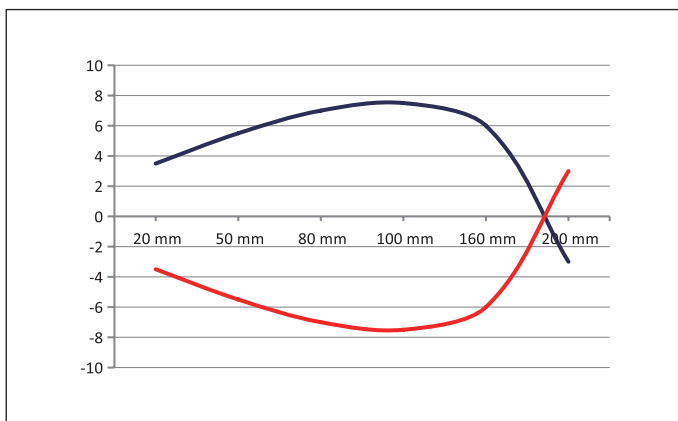
OSQ18 SERIES

TRANSLATION CHARACTERISTIC CURVE

OSQ18-AK150 (mm)

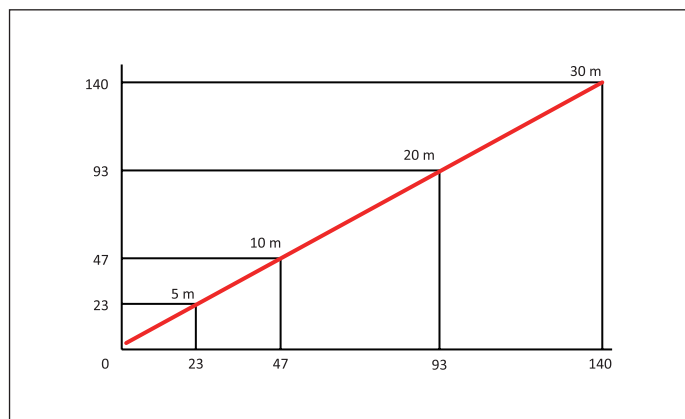


OSQ18-AK200 (mm)

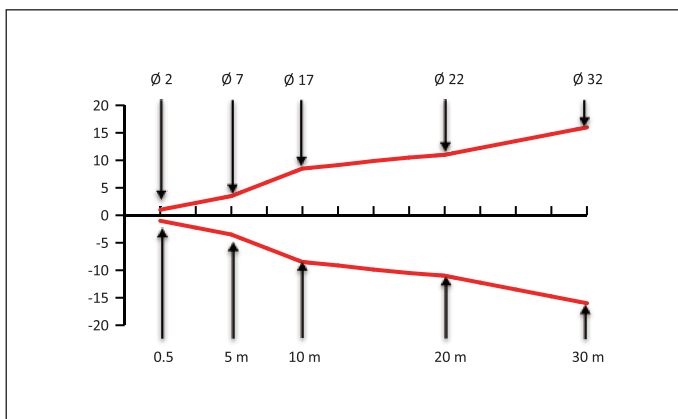


BEAM PATTERN

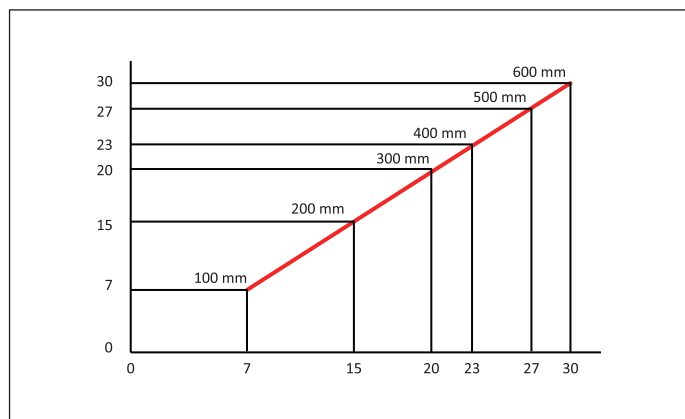
OSQ18-S6 (cm)



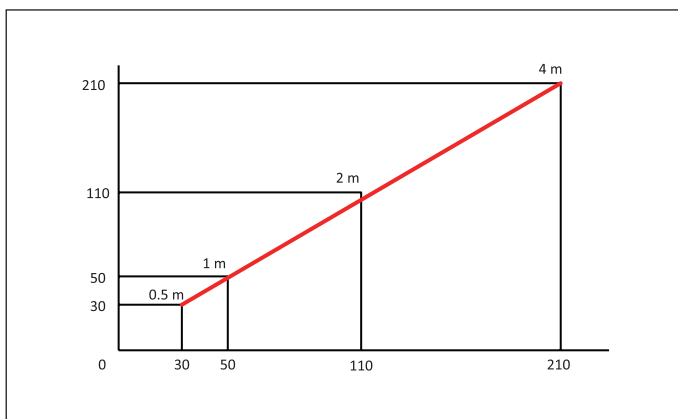
OSQ18-SL (mm)



OSQ18-K (mm)



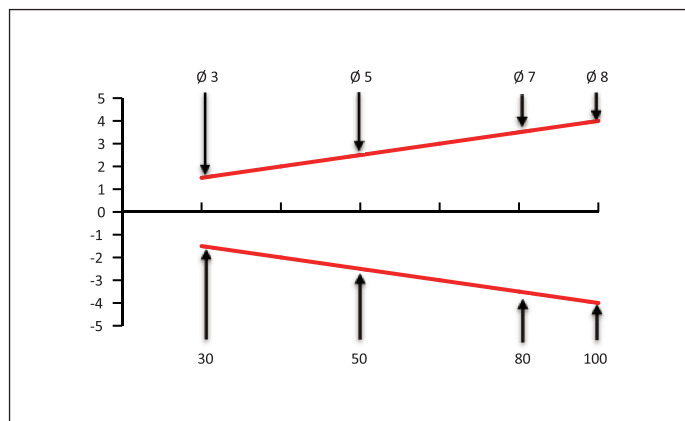
OSQ18-RP/R (mm)



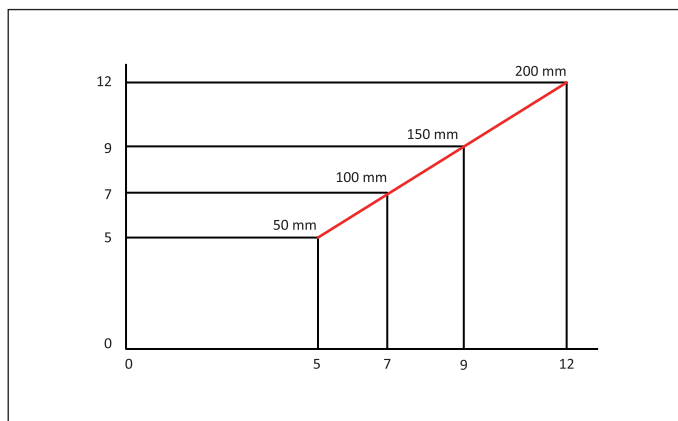
OSQ18 SERIES

BEAM PATTERN

OSQ18-AK50/100 (mm)



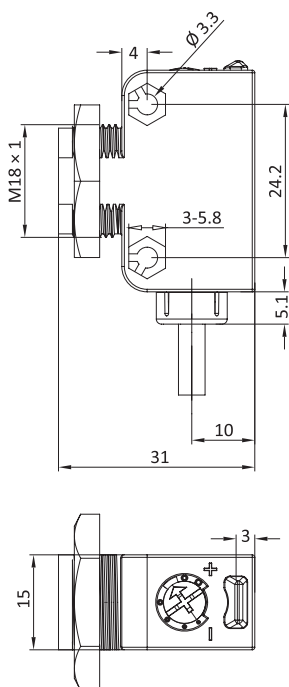
OSQ18-AK150/200 (mm)



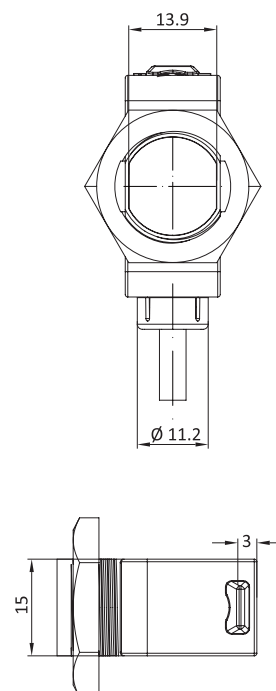
DIMENSIONS (mm)

Fig. 1 OSQ18 with cable

Receiver / Retro-reflective / Diffused



Emitter / Fixed distance BGS



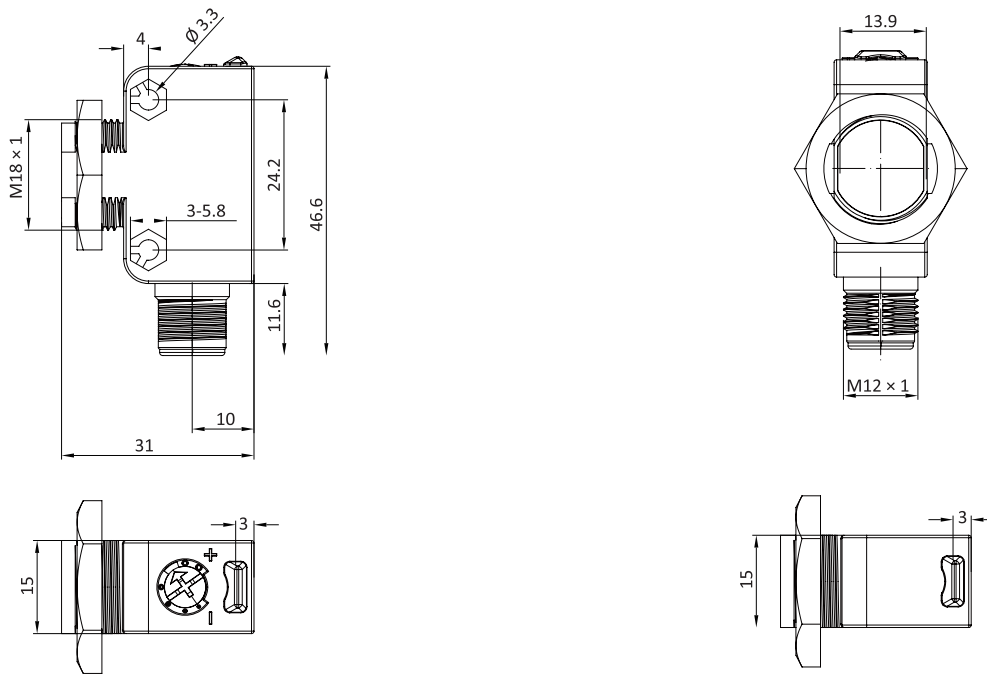
OSQ18 SERIES

DIMENSIONS (mm)

Fig. 2 OSQ18 with M12 connector

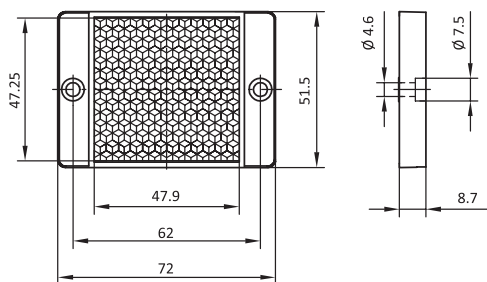
Receiver / Retro-reflective / Diffused

Emitter / Fixed distance BGS



REFLECTOR (OPTIONAL)

RB50x50-1



OSQ18 SERIES

SALES AND SERVICE

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