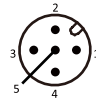


OSM41 SERIES

ARTICLE PROPERTIES

<b>SENSOR TYPE</b>	Laser distance sensor	<b>CONNECTION TYPES</b> (see table)
<b>SIZE</b>	45.7 x 26.5 x 20 mm	<ul style="list-style-type: none"> <li>• 2 m cable                      PVC, 0.2 mm<sup>2</sup>, 2 m**</li> <li>• M12 connector</li> <li>• A-coded</li> </ul>
<b>OPERATING DISTANCE</b>	See table	
<b>DETECTION MODE</b>	CMOS ranging	

\*\* Other cable lengths are available on request

TECHNICAL DATA

<b>OPERATING VOLTAGE</b>	10 ... 30 V DC	<b>LOAD CURRENT</b>	≤ 150 mA
<b>LIGHT SOURCE</b>	Red laser (655 nm) / class2	<b>HOUSING MATERIAL</b>	Housing: Die-cast zinc Front screen: Glass
<b>REPEATABILITY</b>	0.01 mm @ 30 mm 0.03 mm @ 50 mm 0.07 mm @ 100 mm 0.5 mm @ 200 ... 400 mm 1 mm @ 400 ... 600 mm 2mm 600 mm ... 800 mm 5 mm @ 800 ... 1500 mm	<b>VOLTAGE WITHSTANDING</b>	1000 V/AC, 50/60 Hz, 60 s
<b>LIGHT SPOT SIZE</b>	∅ 0.2 mm @ 30 mm ∅ 0.5mm @ 50 mm ∅ 0.5 mm @ 100 mm ∅ 1 mm @ 200 mm ∅ 1 mm @ 400 mm ∅ 2 mm @ 600 mm	<b>REVERSE POLARITY PROTECTION</b>	Yes
<b>SWITCH OUTPUT</b>	PNP / NPN	<b>OVERLOAD RESISTANCE</b>	Yes
<b>ANALOG OUTPUT</b>	4 ... 20 mA, 0 ... 5 V or 0 ... 10 V	<b>SHORT CIRCUIT PROTECTION</b>	Yes
<b>COMMUNICATION TYPE</b>	RS-485	<b>MTTF</b>	
<b>RESPONSE TIME</b>	1.5 ms / 5 ms / 15 ms	<ul style="list-style-type: none"> <li>• NPN/PNP + analog                      68 years</li> <li>• NPN/PNP + RS-485                      80 years</li> <li>• 2 x Push-Pull                              78 years</li> </ul>	
<b>SWITCHING MODE</b>	L.O / D.O		
<b>POWER</b>	< 1 W		

OSM41 SERIES

ENVIRONMENTAL CONDITIONS

<b>OPERATING ENVIRONMENT HUMIDITY</b>	35 % to 85 % RH (no condensation)	<b>INSULATION IMPEDENCE</b>	≥ 50 MΩ (500 V DC)
<b>PROTECTION CLASS</b>	IP67	<b>SHOCK RESISTANCE (EN 60068-2-27)</b>	500 m/s <sup>2</sup> (50 G) 3 times X, Y, Z respectively
<b>STORAGE TEMPERATURE</b>	-20 ... +60 °C	<b>IMPACT RESISTANCE (EN 60068-2-6)</b>	Complex amplitude 1.5 mm 10 ... 50 Hz (2hr X, Y, Z respectively)
<b>AMBIENT TEMPERATURE</b>	-10 ... +50 °C	<b>ANTI-AMBIENT LIGHT</b>	≤ 3000 Lux

STANDARDS AND DIRECTIVES

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



DETECTION MODE CMOS RANGING

Article number	Operating distance	Light source	Output (wiring diagram)	Resoluton	Connection	Dimensions
OSM41-KL30CBLIU6	30±5 mm	Red laser	NPN / PNP + analog mA / V (WD1)	0.001 mm	2 m cable	see Fig. 1
OSM41-KL50CBLIU6	50±15 mm	Red laser	NPN / PNP + analog mA / V (WD1)	0.01 mm	2 m cable	see Fig. 1
OSM41-KL100CBLIU6	100±35 mm	Red laser	NPN / PNP + analog mA / V (WD1)	0.01 mm	2 m cable	see Fig. 1
OSM41-KL200CBLIU6	200±80 mm	Red laser	NPN / PNP + analog mA / V (WD1)	0.1 mm	2 m cable	see Fig. 1
OSM41-KL400CBLIU6	400±200 mm	Red laser	NPN / PNP + analog mA / V (WD1)	0.1 mm	2 m cable	see Fig. 1
OSM41-KL1500CBLIU6	150 ... 1500 mm	Red laser	NPN / PNP + analog mA / V (WD1)	1 mm	2 m cable	see Fig. 1

## OSM41 SERIES

## DETECTION MODE CMOS RANGING

Article number	Operating distance	Light source	Output (wiring diagram)	Resoluton	Connection	Dimensions
OSM41-KL30CB6/485	30±5 mm	Red laser	NPN / PNP + RS-485 (WD2)	0.001 mm	2 m cable	see Fig. 1
OSM41-KL50CB6/485	50±15 mm	Red laser	NPN / PNP + RS-485 (WD2)	0.01 mm	2 m cable	see Fig. 1
OSM41-KL100CB6/485	100±35 mm	Red laser	NPN / PNP + RS-485 (WD2)	0.01 mm	2 m cable	see Fig. 1
OSM41-KL200CB6/485	200±80 mm	Red laser	NPN / PNP + RS-485 (WD2)	0.1 mm	2 m cable	see Fig. 1
OSM41-KL400CB6/485	400±200 mm	Red laser	NPN / PNP + RS-485 (WD2)	0.1 mm	2 m cable	see Fig. 1
OSM41-KL1500CB/485	150 ... 1500 mm	Red laser	NPN / PNP + RS-485 (WD2)	1 mm	2 m cable	see Fig. 1

## DETECTION MODE CMOS RANGING

Article number	Operating distance	Light source	Output (wiring diagram)	Resoluton	Connection	Dimensions
OSM41-KL30C2B6	30±5 mm	Red laser	2 × NPN / PNP (WD3)	0.001 mm	2 m cable	see Fig. 1
OSM41-KL50C2B6	50±15 mm	Red laser	2 × NPN / PNP (WD3)	0.01 mm	2 m cable	see Fig. 1
OSM41-KL100C2B6	100±35 mm	Red laser	2 × NPN / PNP (WD3)	0.01 mm	2 m cable	see Fig. 1
OSM41-KL200C2B6	200±80 mm	Red laser	2 × NPN / PNP (WD3)	0.1 mm	2 m cable	see Fig. 1
OSM41-KL400C2B6	400±200 mm	Red laser	2 × NPN / PNP (WD3)	0.1 mm	2 m cable	see Fig. 1

## DETECTION MODE CMOS RANGING

Article number	Operating distance	Light source	Output (wiring diagram)	Resoluton	Connection	Dimensions
OSM41-KL30CBLIU6-0.3-Q12.1	30±5 mm	Red laser	NPN / PNP + analog mA / V (WD1)	0.001 mm	0.3 m cable + M12 connector	see Fig. 2
OSM41-KL50CBLIU6-0.3-Q12.1	50±15 mm	Red laser	NPN / PNP + analog mA / V (WD1)	0.01 mm	0.3 m cable + M12 connector	see Fig. 2
OSM41-KL100CBLIU6-0.3-Q12.1	100±35 mm	Red laser	NPN / PNP + analog mA / V (WD1)	0.01 mm	0.3 m cable + M12 connector	see Fig. 2
OSM41-KL200CBLIU6-0.3-Q12.1	200±80 mm	Red laser	NPN / PNP + analog mA / V (WD1)	0.1 mm	0.3 m cable + M12 connector	see Fig. 2
OSM41-KL400CBLIU6-0.3-Q12.1	400±200 mm	Red laser	NPN / PNP + analog mA / V (WD1)	0.1 mm	0.3 m cable + M12 connector	see Fig. 2
OSM41-KL1500CBLIU6-0.3-Q12.1	150 ... 1500 mm	Red laser	NPN / PNP + analog mA / V (WD1)	1 mm	0.3 m cable + M12 connector	see Fig. 2

## OSM41 SERIES

## DETECTION MODE CMOS RANGING

Article number	Operating distance	Light source	Output (wiring diagram)	Resoluton	Connection	Dimensions
OSM41-KL30CB6/485-0.3-Q12.1	30±5 mm	Red laser	NPN / PNP + RS-485 (WD2)	0.001 mm	0.3 m cable + M12 connector	see Fig. 2
OSM41-KL50CB6/485-0.3-Q12.1	50±15 mm	Red laser	NPN / PNP + RS-485 (WD2)	0.01 mm	0.3 m cable + M12 connector	see Fig. 2
OSM41-KL100CB6/485-0.3-Q12.1	100±35 mm	Red laser	NPN / PNP + RS-485 (WD2)	0.01 mm	0.3 m cable + M12 connector	see Fig. 2
OSM41-KL200CB6/485-0.3-Q12.1	200±80 mm	Red laser	NPN / PNP + RS-485 (WD2)	0.1 mm	0.3 m cable + M12 connector	see Fig. 2
OSM41-KL400CB6/485-0.3-Q12.1	400±200 mm	Red laser	NPN / PNP + RS-485 (WD2)	0.1 mm	0.3 m cable + M12 connector	see Fig. 2
OSM41-KL1500CB/485-0.3-Q12.1	150 ... 1500 mm	Red laser	NPN / PNP + RS-485 (WD2)	1 mm	0.3 m cable + M12 connector	see Fig. 2

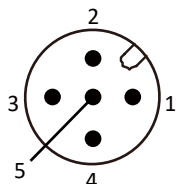
## DETECTION MODE CMOS RANGING

Article number	Operating distance	Light source	Output (wiring diagram)	Resoluton	Connection	Dimensions
OSM41-KL30C2B6-0.3-Q12.1	30±5 mm	Red laser	2 × NPN / PNP (WD3)	0.001 mm	0.3 m cable + M12 connector	see Fig. 2
OSM41-KL50C2B6-0.3-Q12.1	50±15 mm	Red laser	2 × NPN / PNP (WD3)	0.01 mm	0.3 m cable + M12 connector	see Fig. 2
OSM41-KL100C2B6-0.3-Q12.1	100±35 mm	Red laser	2 × NPN / PNP (WD3)	0.01 mm	0.3 m cable + M12 connector	see Fig. 2
OSM41-KL200C2B6-0.3-Q12.1	200±80 mm	Red laser	2 × NPN / PNP (WD3)	0.1 mm	0.3 m cable + M12 connector	see Fig. 2
OSM41-KL400C2B6-0.3-Q12.1	400±200 mm	Red laser	2 × NPN / PNP (WD3)	0.1 mm	0.3 m cable + M12 connector	see Fig. 2

OSM41 SERIES

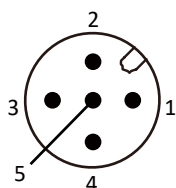
WIRING DIAGRAMS

WD1



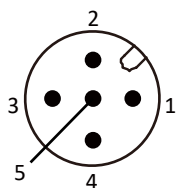
Number	Colour	Function
1	BN	Power +
2	GY	Analogue output
3	BU	Power -
4	BK	NPN / PNP
5	PK	Enable input

WD2



Number	Colour	Function
1	BN	Power +
2	GY	485B
3	BU	Power -
4	BK	NPN / PNP
5	PK	485A

WD3



Number	Colour	Function
1	BN	Power +
2	GY	NPN / PNP 2
3	BU	Power -
4	BK	NPN / PNP 1
5	PK	Enable input

OSM41 SERIES

DIMENSIONS

Fig. 1 Cable

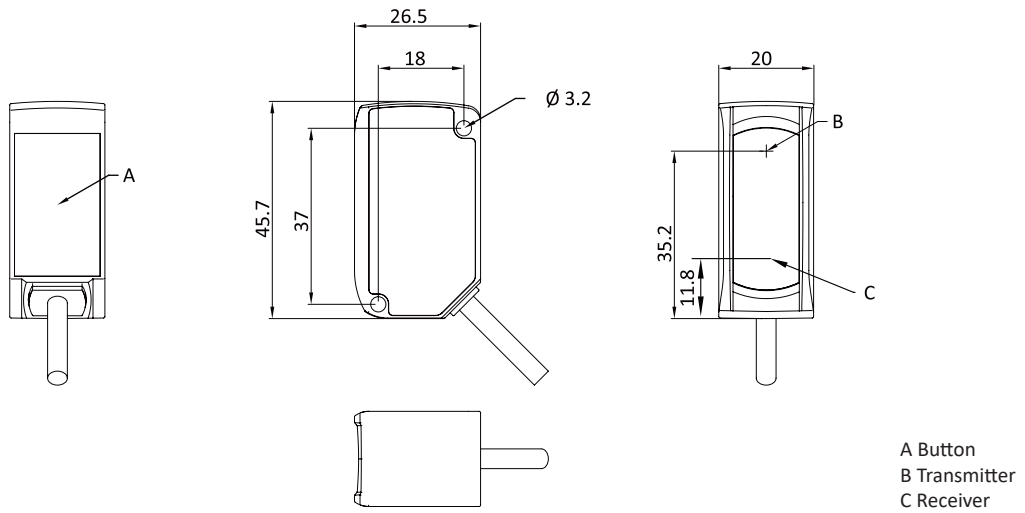
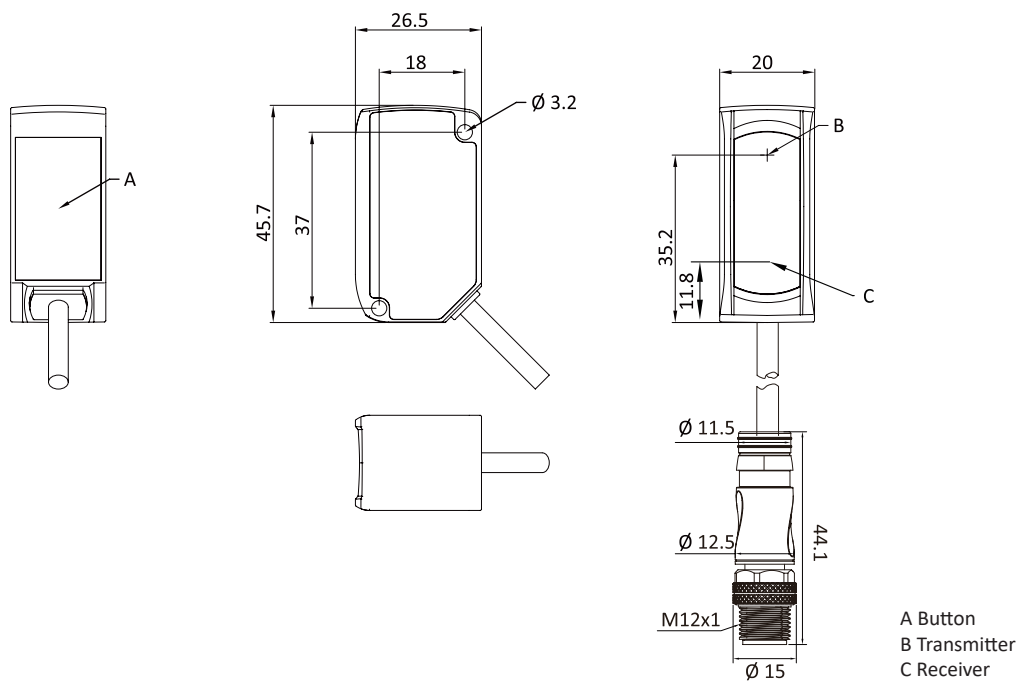


Fig. 2 Connector



## OSM41 SERIES

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