

Designation code

M1 X XXX XXX XXX

Housing
: Polyamid
M : Stainless steel
S : Stainless steel (protected angle optic head)

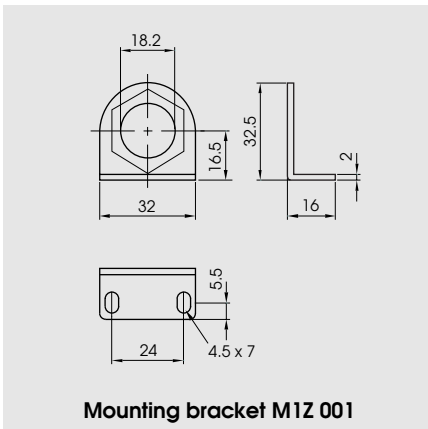
Principle	Supply	Outputs	Connection	Electr. option	Light	Range
C: Retro-reflective for transparent objects E: Through-beam receiver H: Diffuse-reflective with background rejection P: Retro-reflective with polarizing filters R: Retro-reflective S: Through-beam emitter T: Diffuse-reflective Z: Accessory	1: 10-30 VDC	KA: No output NA: NPN <i>light- and dark-on</i> PA: PNP <i>light- and dark-on</i>	1: Cable 2 m 4: Connector M12	00: Range adjustable 01: Range adjustable, <i>test input</i> 40: Range not adjustable 41: Range not adjustable, <i>test input</i>	A: Right angle optic, red I: Straight optic, infrared R: Straight optic, red W: Right angle optic, infrared	M1S/M1E: 1: 15 m 2: 10 m 3: 10 m 4: 35 m M1R/M1P/M1C: 1: 2,5 m 2: 3 m 3: 2 m 4: 2,5 m 5: 1,5 m M1T/H: 1: 10 cm 2: 20 cm 3: 40 cm 4: 55 cm 5: 5 cm 6: 10 cm

Accessories

Retroreflectors: see page 130

Connector cables: see page 128

Mounting:



Retro-reflective sensors, M18 housing



- Range adjustable
- Light reserve warning indicator
- Dual transistor outputs, NPN or PNP
- 1000 Hz switching frequency
- Short-circuit protection, reverse polarity protection, and power-up output suppression
- Connections: Straight cable, 2 meter Connector, M12
- EMC tested according to IEC 801 and EN50081-1/EN 50082-2



Product designation Plastic housing ¹⁾

Product designation Stainless steel ¹⁾

Output

Connection

Range adjustment

Optical data ²⁾

Range

Emitter

Electrical data ²⁾

Supply voltage U_s

Allowable ripple

Current consumption (without load)

Max. load current I_L

Residual voltage

Max. switching frequency

Environmental data

Sealing

Temperature T_A
(operating and storage)

Weight Plastic/Stainless steel

M1R 1NA 100 I2	M1R 1NA 400 I2	M1R 1PA 100 I2	M1R 1PA 400 I2
M1R 1NA 100 I2M	M1R 1NA 400 I2M	M1R 1PA 100 I2M	M1R 1PA 400 I2M
NPN (light- and dark-on)		PNP (light- and dark-on)	
Cable 2 m	Connector M12	Cable 2 m	Connector M12
Yes			
0,05...3 m (retroreflector OZR 001)			
Infrared-LED, 950 nm, pulsed			
10...30 VDC			
+/- 10% of U_{sp}			
< 15 mA			
100 mA			
< 1,6 V			
1000 Hz			
IP 67			
-25...+65 °C			
Connector M12: ca.15/25 g , Cable 2 m: ca. 100/110 g			

1) For product designation of sensors with options see designation code on page 23.

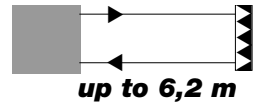
2) When not otherwise noted, all technical data at $T_A = 25\text{ °C}$ and $U_s = 24\text{ V}$.

Retro-reflector ●	Range	Retro-reflector ■	Range	Retro-reflective tape	Range
OZR 001	0.05 – 3.0 m	OZR 101	0.03 – 4.6 m	OZR 201*	0.09 – 1.0 m
OZR 002	0.02 – 2.8 m	OZR 102	0.05 – 1.6 m	OZR 202	0.15 – 2.2 m
OZR 003	0.04 – 1.3 m	OZR 103	0.02 – 3.8 m	OZR 203	0.15 – 1.5 m
		OZR 104	0.02 – 6.2 m	OZR 204*	0.15 – 1.5 m
				OZR 205*	0.15 – 2.2 m

* 30 cm long

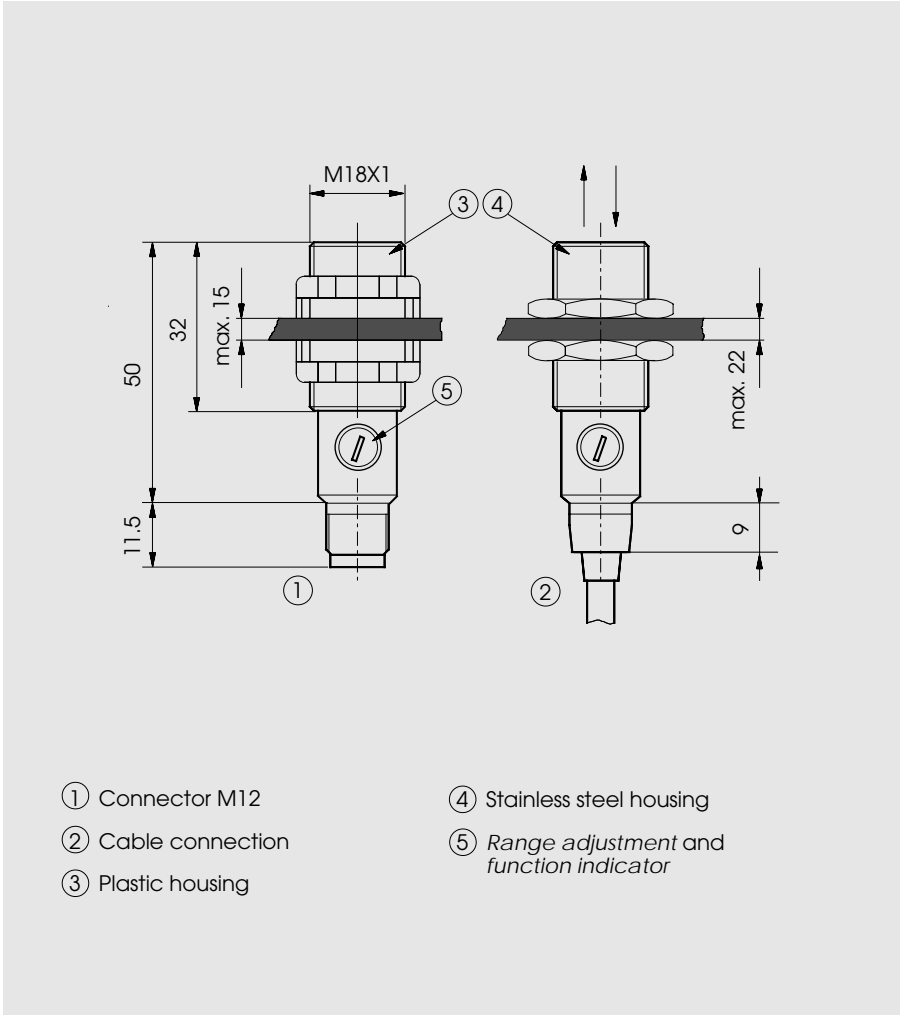
10...30 VDC

NPN / PNP
light-on and
dark-on output

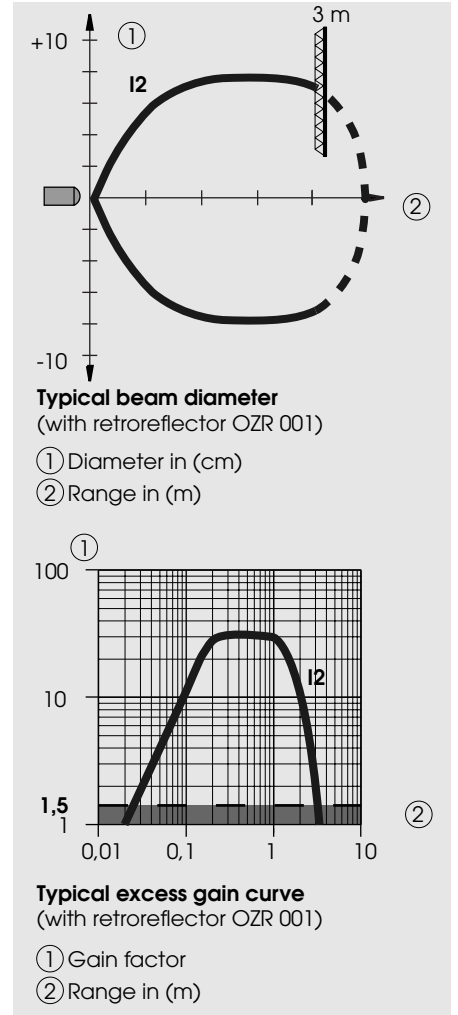


M1R

Dimensions (50 mm, M18 x 1)



Optical diagrams



Wiring diagram

