

Retro-reflective sensors with polarizing filters, ultramini



- Front or back mounting in the direction of the optical axis
- Glass protected optics
- Light reserve warning indicator
- Insensitive to foreign light sources, e.g. HF-lamps, etc.
- «Cross-talk» suppression for elimination of mutual disturbances
- Dual transistor outputs, NPN or PNP
- Short-circuit protection, reverse polarity protection, and power-up output suppression
- Connections: Cable, 2 meter
Connector, M8
- EMC tested according to IEC 801 and EN50081-1/EN 50082-2



Product designation¹⁾

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

OUP 1NA 140 R1	OUP 1NA 540 R1	OUP 1PA 140 R1	OUP 1PA 540 R1
NPN (light- and dark-on)		PNP (light- and dark-on)	
Cable 2 m	Connector M8	Cable 2 m	Connector M8
No			
0,03...1 m (retroreflector OZR 001)			
Visible-red LED, 645 nm, pulsed, with polarizing filter			
10...30 VDC			
+/- 10% of U_s			
< 15 mA			
100 mA			
< 1,6 V			
1000 Hz			
IP 67			
-25...+65 °C			
ca. 45 g	ca. 4 g	ca. 45 g	ca. 4 g

1) For product designation of sensors with options see designation code on page 13.

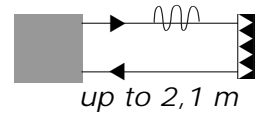
2) When not otherwise noted, all technical data at $T_A = 25\text{ °C}$ and $U_s = 24\text{ V}$.

Retro-reflector ●	Range	Retro-reflector ■	Range	Retro-reflective tape	Range
OZR 001	0.03 – 1.0 m	OZR 101	0.03 – 1.6 m	OZR 201	0 m
OZR 002	0.02 – 0.9 m	OZR 102	0.03 – 0.5 m	OZR 202	0 m
OZR 003	0.02 – 0.35 m	OZR 103	0.03 – 1.2 m	OZR 203	0.10 – 0.6 m
		OZR 104	0.03 – 2.1 m	OZR 204*	0.10 – 0.45 m
				OZR 205*	0.10 – 0.55 m

* 30 cm long

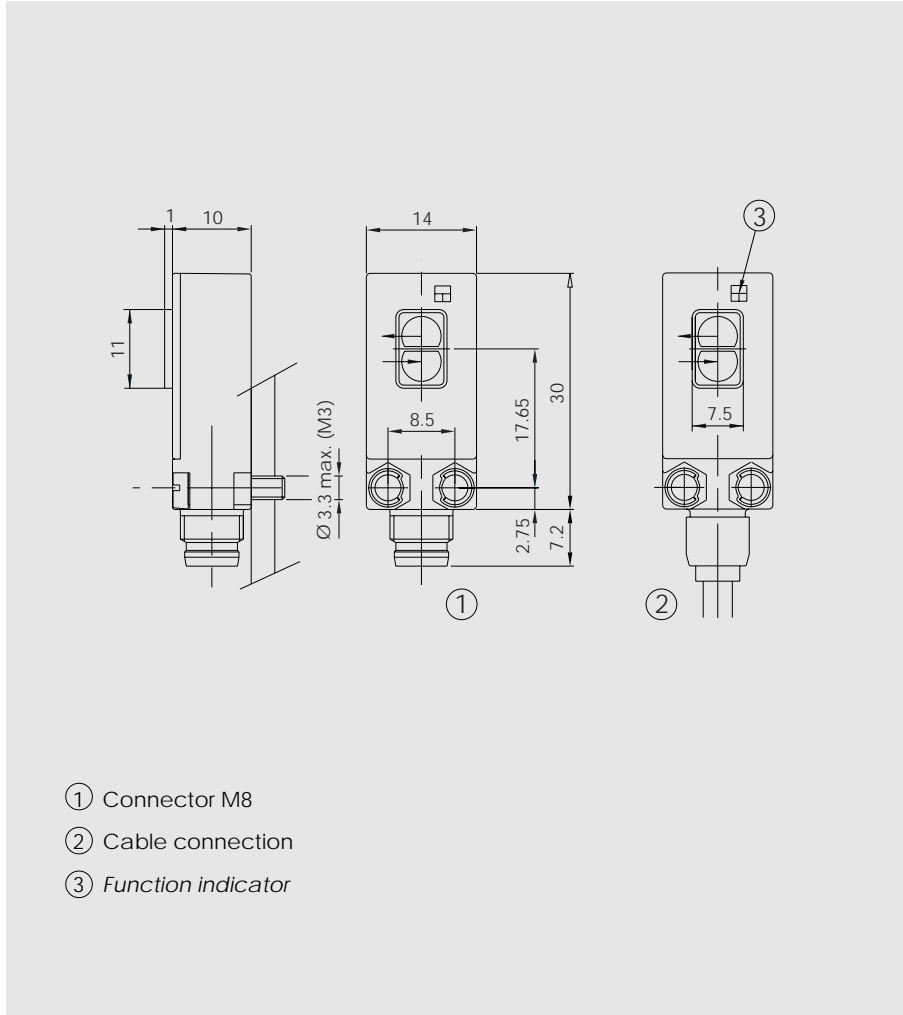
10...30 VDC

NPN / PNP
light-on and
dark-on output

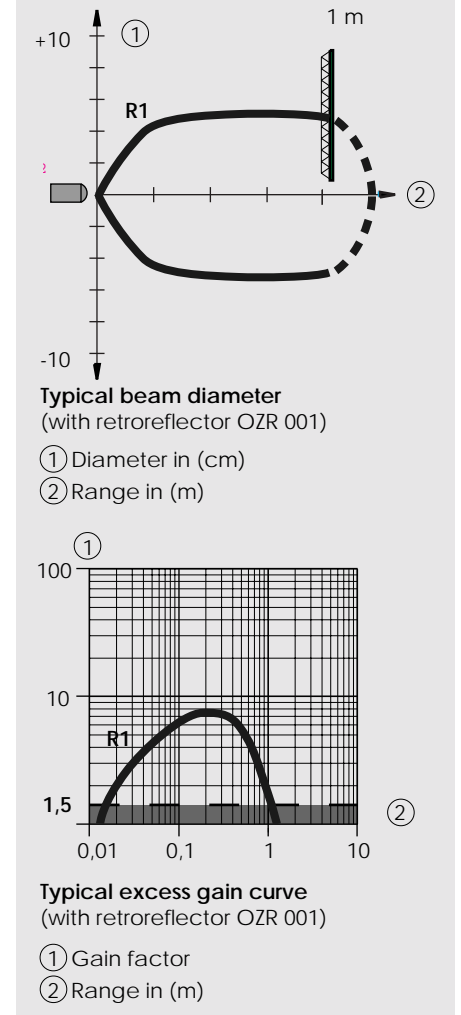


OUP

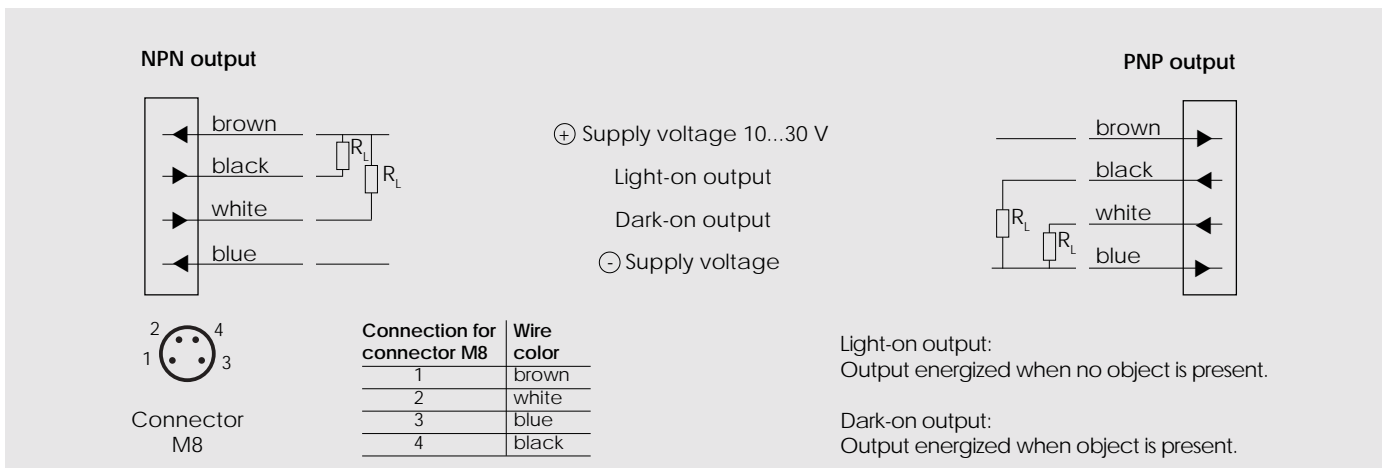
Dimensions (30 mm x 10 mm x 14 mm)



Optical diagrams



Wiring diagram



Retro-reflective sensors with polarizing filters, ultramini, for transparent objects



- Front or back mounting in the direction of the optical axis
- Glass protected optics
- Light reserve warning indicator
- Insensitive to foreign light sources, e.g. HF-lamps, etc.
- «Cross-talk» suppression for elimination of mutual disturbances
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- Connections: Cable, 2 meter
Connector, M8
- EMC tested according to IEC 801 and EN50081-1/EN 50082-2



Product designation¹⁾

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
Temperatrer T_A (operating and storage)
Weight

OUC 1NA 100 R2	OUC 1NA 500 R2	OUC 1PA 100 R2	OUC 1PA 500 R2
NPN (light- and dark-on)		PNP (light- and dark-on)	
Cable 2 m	Connector M8	Cable 2 m	Connector M8
Yes			
0,05...1,2 m (retroreflector OZR 104)			
Visible-red LED, 645 nm, pulsed, with polarizing filter			
		10...30 VDC	
		+/- 10% of U_s	
		< 15 mA	
		100 mA	
		< 1,6 V	
		1000 Hz	
IP 67			
-25...+65 °C			
ca. 45 g	ca. 4 g	ca. 45 g	ca. 4 g

1) For product designation of sensors with options see designation code on page 13.

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

Technical explanation

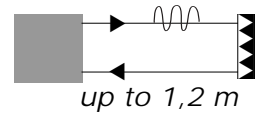
To detect very transparent objects, best results are obtained, when decreasing the range adjustment of the sensor to the threshold, between a continuously lit function indicator and a blinking function indicator. In this condition (function indicator blinking) a glass window inserted into the optical path, will be reliably detected.

Retro-reflector ●	Range	Retro-reflector ■	Range	Retro-reflective tape	Range
OZR 001*	0.05 – 0.8 m	OZR 101	0.05 – 0.9 m	OZR 201	0 m
OZR 002	0.04 – 0.4 m	OZR 102	0.05 – 0.4 m	OZR 202	0 m
OZR 003	0.05 – 0.1 m	OZR 103	0.05 – 0.8 m	OZR 203	0 m
		OZR 104	0.05 – 1.2 m	OZR 204	0 m
				OZR 205	0 m

* not recommended for bottle detection

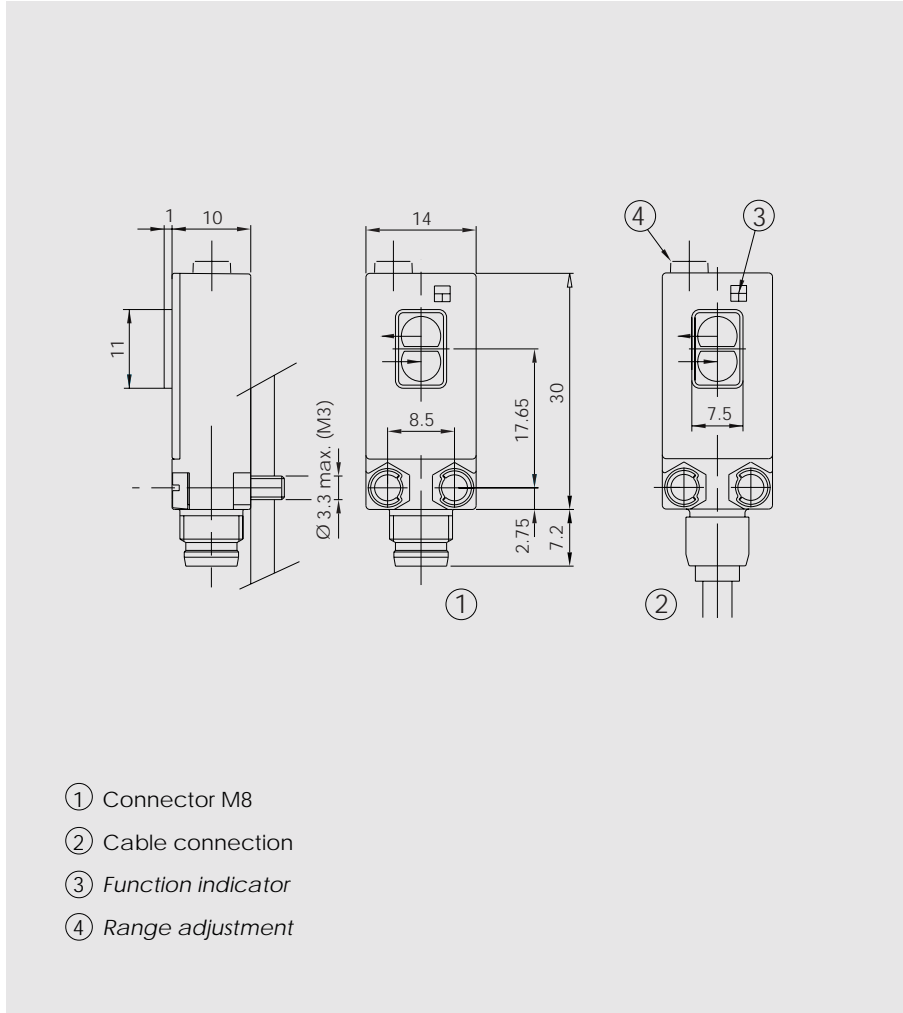
10...30 VDC

NPN / PNP
light-on and
dark-on output

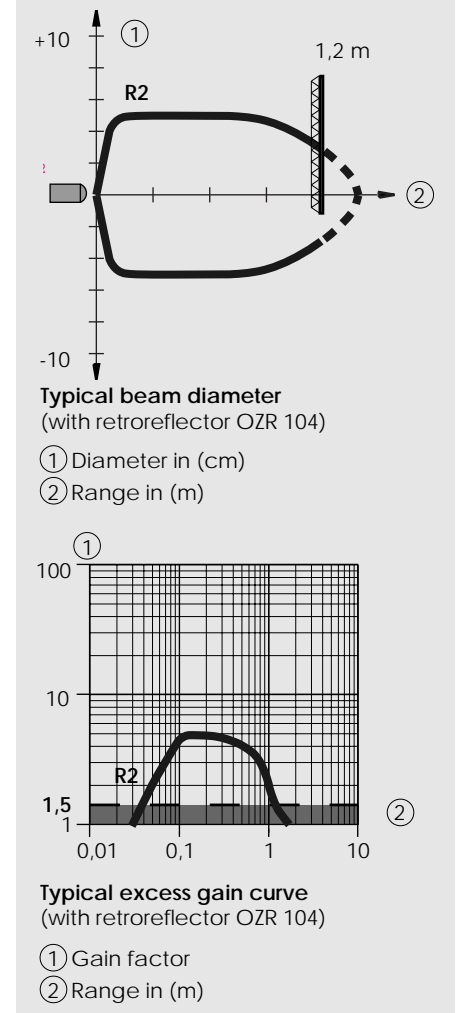


OUC

Dimensions (30 mm x 10 mm x 14 mm)



Optical diagrams



Wiring diagram

