

Retro-reflective sensors with polarizing filters, in a small plastic housing



- Glass protected optics
- 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
- Test input (option)
- Connections: Cable, 2 meter
Connector, M12
Connector, M8 (option)
Connector, Torson (option)
- EMC tested according to IEC 801 and EN50081-1/EN 50082-2



Product designation¹⁾

Output

Connection

Range adjustment

Optical data²⁾

Range

Emitter

Electrical data²⁾

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

Option¹⁾

Test input: emitter on

emitter off

OPP 1NA 100 R1	OPP 1NA 400 R1	OPP 1PA 100 R1	OPP 1PA 400 R1
NPN (light- and dark-on)		PNP (light- and dark-on)	
Cable 2 m	Connector M12	Cable 2 m	Connector M12
Yes			
0,1...3,5 m (retroreflector OZR 001)			
Visible-red LED, 660 nm, pulsed, with polarizing filter			
10...30 VDC			
+/- 10% of U_s			
< 15 mA			
200 mA			
< 1,6 V			
1000 Hz			
IP 65			
-25...+65°C			
ca. 100 g	ca. 35 g	ca. 100 g	ca. 35 g

+ U_s or open	
< 1,5 V	< U_s - 8 V

1) For product designation of sensors with options see designation code on page 81.

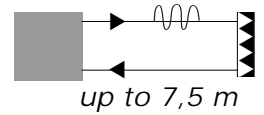
2) When not otherwise noted, all technical data at $T_A = 25^\circ\text{C}$ and $U_s = 24\text{ V}$.

Retro-reflector ●	Range	Retro-reflector ■	Range	Retro-reflective tape	Range
OZR 001	0.10 – 3.5 m	OZR 101	0.10 – 5.8 m	OZR 201*	0 m
OZR 002	0.08 – 3.3 m	OZR 102	0.10 – 1.9 m	OZR 202	0 m
OZR 003	0.15 – 1.3 m	OZR 103	0.08 – 4.6 m	OZR 203	0.25 – 1.8 m
		OZR 104	0.08 – 7.5 m	OZR 204*	0.25 – 1.3 m
				OZR 205*	0.25 – 1.8 m

* 30 cm long

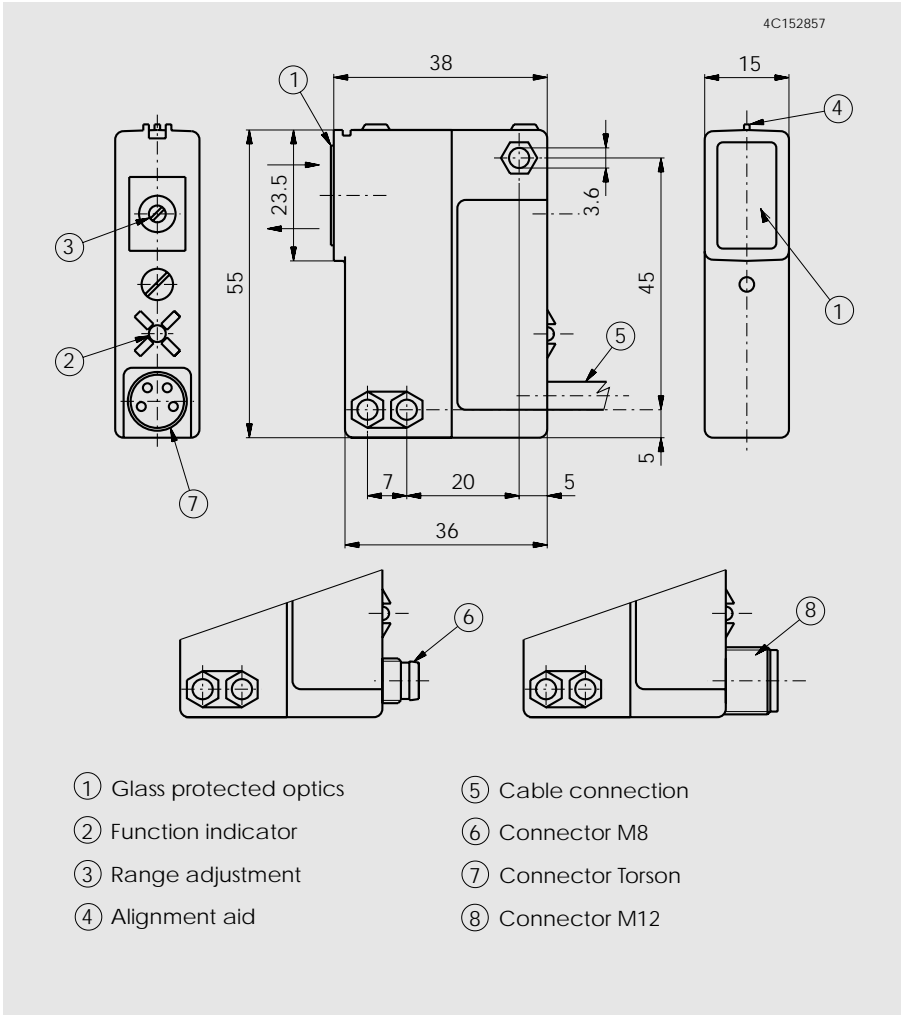
10...30 VDC

NPN / PNP
light-on and
dark-on output



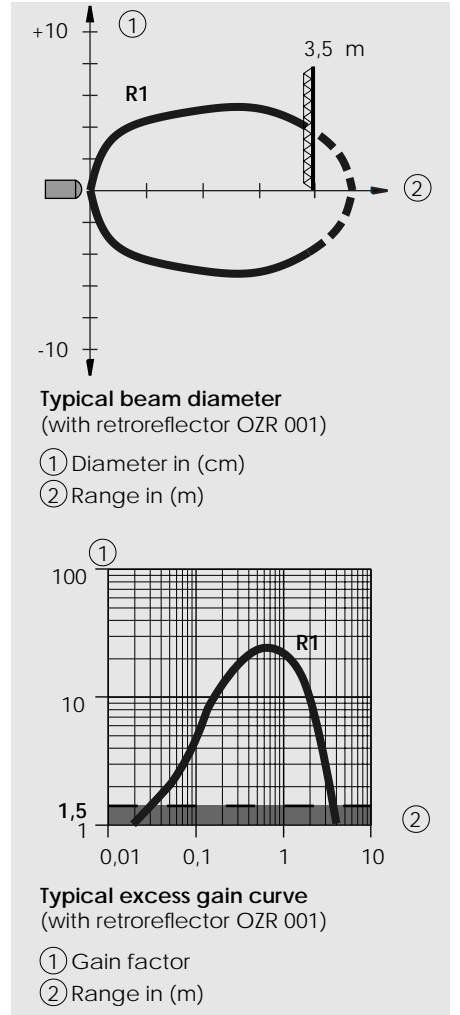
OPP

Dimensions (55 mm x 38 mm x 15 mm)



- ① Glass protected optics
- ② Function indicator
- ③ Range adjustment
- ④ Alignment aid
- ⑤ Cable connection
- ⑥ Connector M8
- ⑦ Connector Torson
- ⑧ Connector M12

Optical diagrams



Wiring diagram

