

Retro-reflective sensors with polarizing filters, straight optics, M18 housing



- Combined surface and bore mounting
- Glass protected optics
- Light reserve warning indicator
- Dual transistor outputs, NPN or PNP
- Test input (option)
- Short-circuit protection, reverse polarity protection, and power-up output suppression
- Connections: Straight cable, 2 meter
Connector, M12
Right angle cable, 2 meter (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

OMP 1NA 100 S2	OMP 1NA 400 S2	OMP 1PA 100 S2	OMP 1PA 400 S2
NPN (light- and dark-on)		PNP (light- and dark-on)	
Cable 2 m	Connector M12	Cable 2 m	Connector M12
Yes			
0,2...2 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 67			
-20...+60 °C			
ca. 90 g	ca. 20 g	ca. 90 g	ca. 20 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 47.

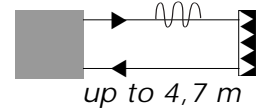
2) When not otherwise noted, all technical data at $T_A = 25\text{ °C}$ and $U_s = 24\text{ V}$.

Retro-reflector ●	Range	Retro-reflector ■	Range	Retro-reflective tape	Range
OZR 001	0.20 – 2.0 m	OZR 101	0.15 – 3.5 m	OZR 201	0 m
OZR 002	0.15 – 1.9 m	OZR 102	0.20 – 1.2 m	OZR 202	0 m
OZR 003	0.25 – 0.6 m	OZR 103	0.15 – 2.7 m	OZR 203	0.30 – 1.1 m
		OZR 104	0.15 – 4.7 m	OZR 204*	0.30 – 0.7 m
				OZR 205*	0.30 – 1.1 m

* 30 cm long

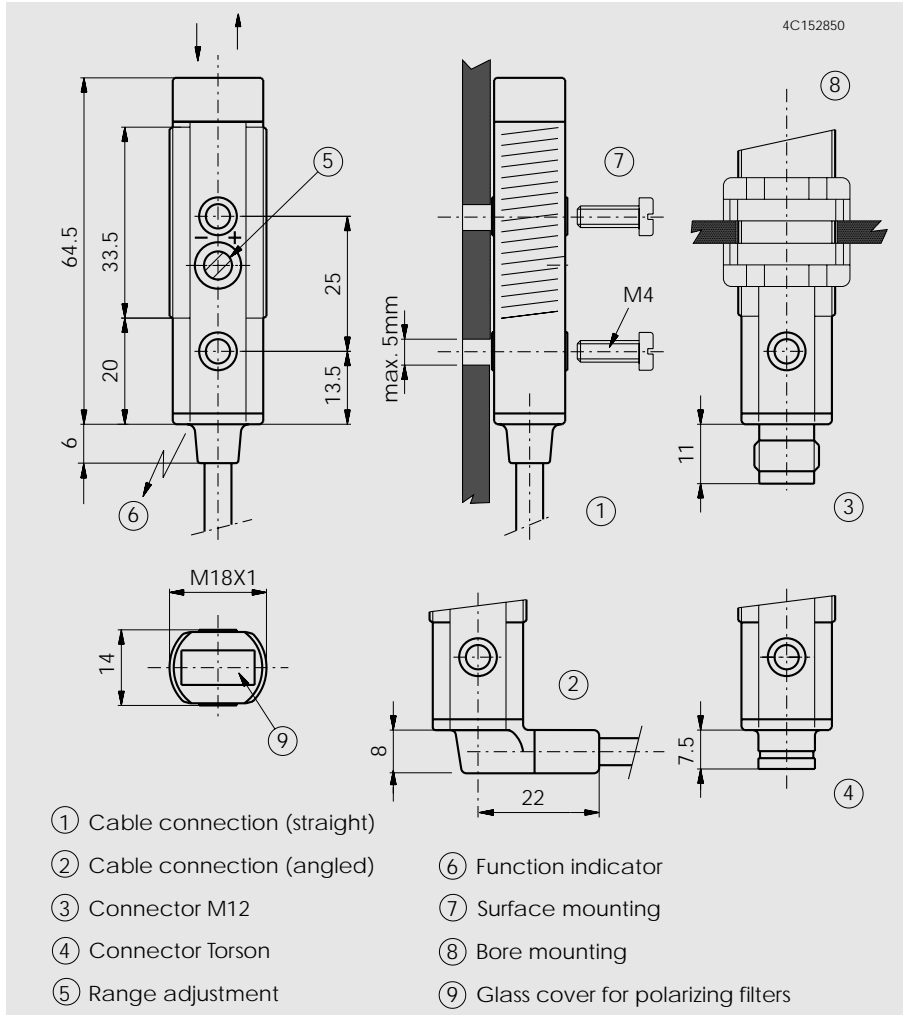
10...30 VDC

NPN / PNP
light-on and
dark-on output

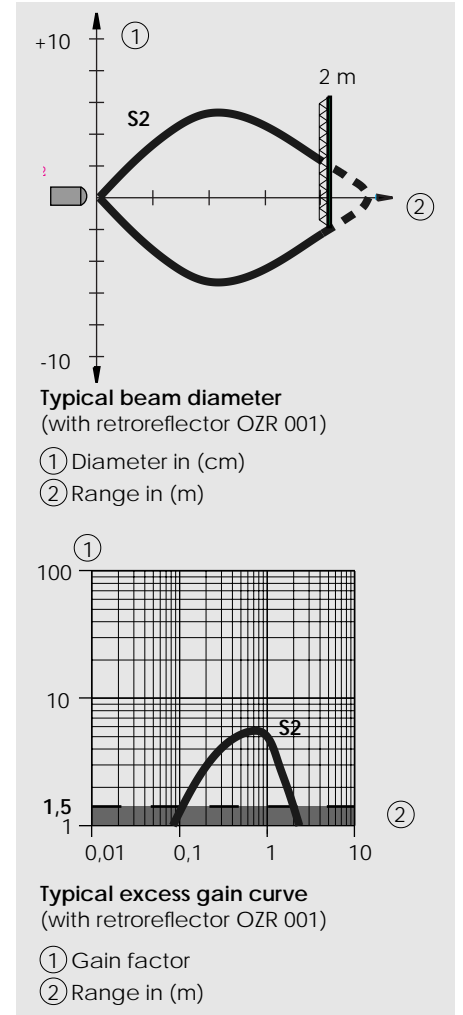


OMP straight optics

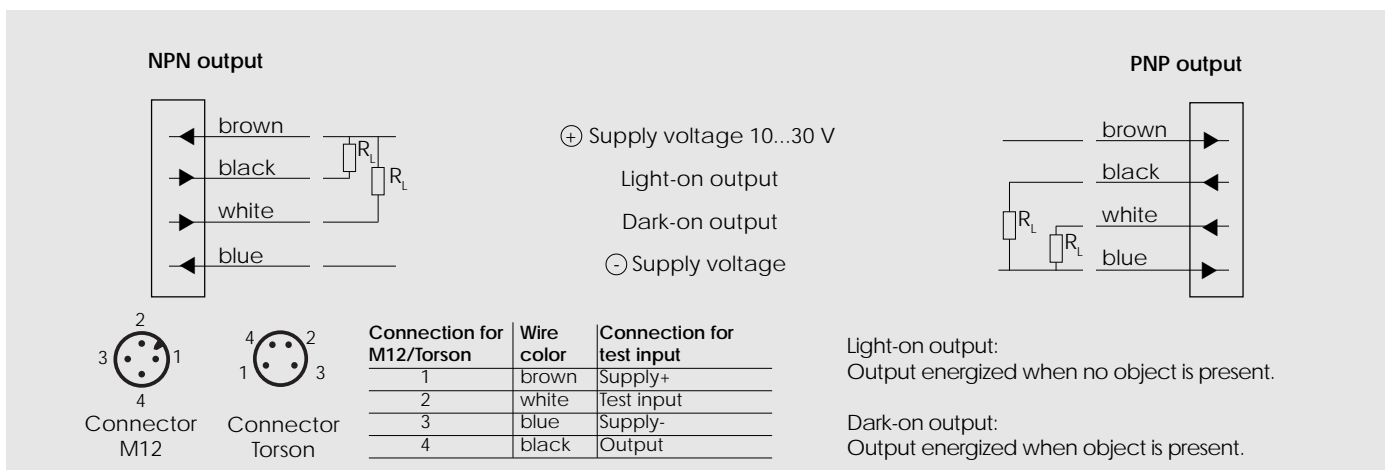
Dimensions (64,5 mm, M18 x 1)



Optical diagrams



Wiring diagram



Retro-reflective sensors with polarizing filters, right angle optics, M18 housing



- Combined surface and bore mounting
- Glass protected optics
- Light reserve warning indicator
- Dual transistor outputs, NPN or PNP
- Test input (option)
- Short-circuit protection, reverse polarity protection, and power-up output suppression
- Connections: Straight cable, 2 meter
Connector, M12
Right angle cable, 2 meter (option)
Connector, Torson (option)
- EMC tested according to IEC 801 and EN50081-1/EN 50082-2



Product designation¹⁾

Output

Connection

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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

OMP 1NA 100 A1	OMP 1NA 400 A1	OMP 1PA 100 A1	OMP 1PA 400 A1
NPN (light- and dark-on)		PNP (light- and dark-on)	
Cable 2 m	Connector M12	Cable 2 m	Connector M12
Yes			
0,2...2 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 67			
-20...+60 °C			
ca. 95 g	ca. 25 g	ca. 95 g	ca. 25 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 47.

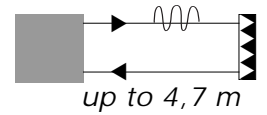
2) When not otherwise noted, all technical data at $T_A = 25\text{ °C}$ and $U_s = 24\text{ V}$.

Retro-reflector ●	Range	Retro-reflector ■	Range	Retro-reflective tape	Range
OZR 001	0.20 – 2.0 m	OZR 101	0.15 – 3.3 m	OZR 201	0 m
OZR 002	0.20 – 1.8 m	OZR 102	0.15 – 1.0 m	OZR 202	0 m
OZR 003	0.15 – 0.8 m	OZR 103	0.15 – 2.5 m	OZR 203	0.30 – 1.0 m
		OZR 104	0.15 – 4.7 m	OZR 204*	0.30 – 0.6 m
				OZR 205*	0.30 – 1.0 m

* 30 cm long

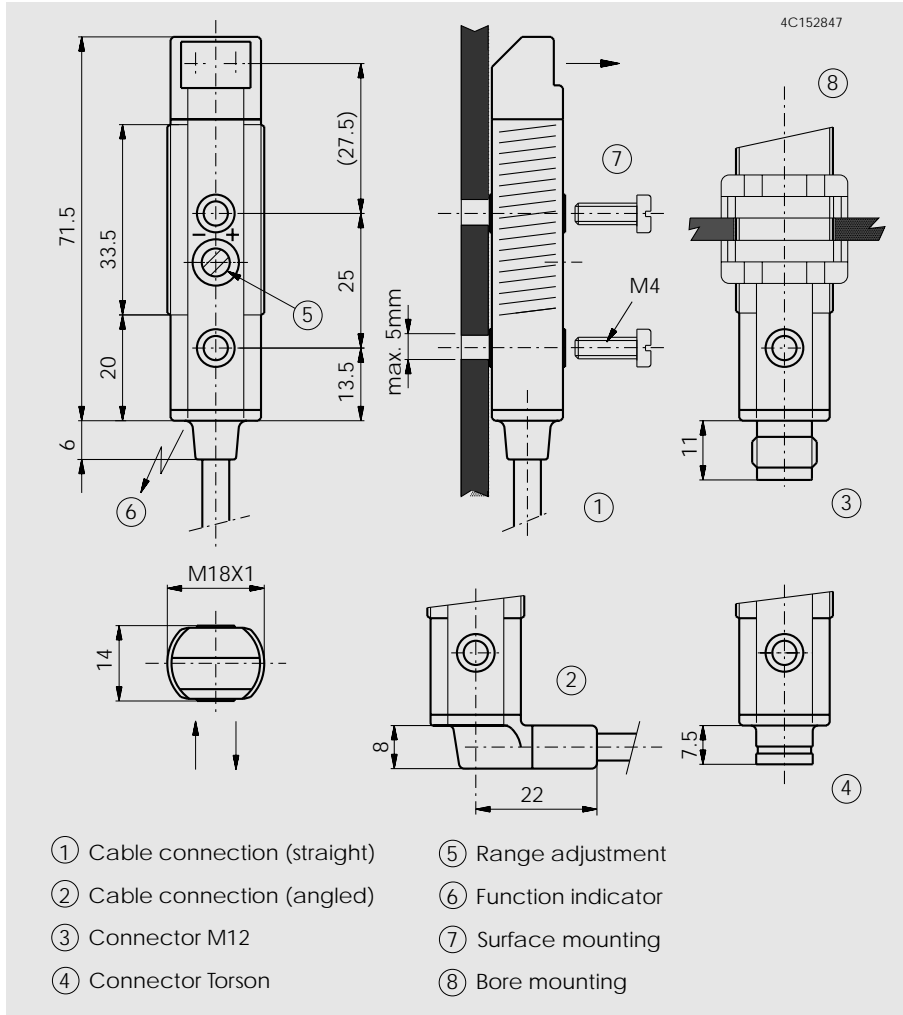
10...30 VDC

NPN / PNP
light-on and
dark-on output

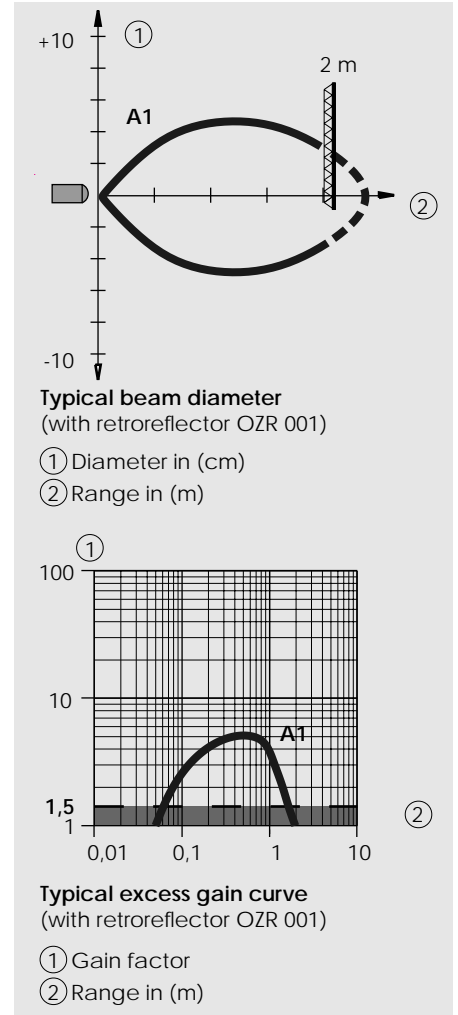


OMP right angle optics

Dimensions (71,5 mm, M18 x 1)



Optical diagrams



Wiring diagram

