

Fiber optic sensors OMT for glass fiber optics



- Combined surface and bore mounting
- 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: Cable, 2 meter
Connector, M12
Right angle cable, 2 meter cable, (option)
Connector, Torson (option)
- EMC tested according to IEC 801 and EN50081-1/EN 50082-2



Product designation¹⁾

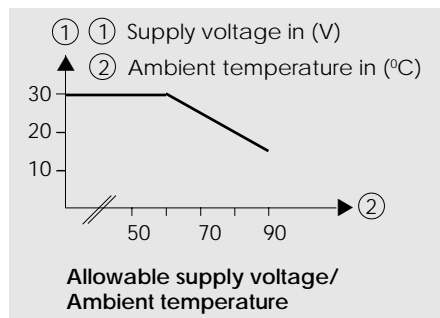
Output
Connection
Range adjustment
Optical data ²⁾
Range
Emitter
Electrical data ²⁾
Supply voltage U_s
Allowable ripple
Current consumption (without load)
Max. load current I_L
Residual voltage
Max. switching frequency
Environmental data
Sealing
Temperature T_A (operating and storage)
Weight

OMT 1NA 100 G2	OMT 1NA 400 G2	OMT 1PA 100 G2	OMT 1PA 400 G2
NPN (light- and dark-on)		PNP (light- and dark-on)	
Cable 2 m	Connector M12	Cable 2 m	Connector M12
Yes			
depends on the selected fiber optic cable			
Infrared LED, 880 nm, pulsed			
		10...30 VDC	
		+/- 10% of U_s	
		< 15 mA	
		200 mA	
		< 1,6 V	
		1000 Hz	
IP 67			
-20...+90 °C (☛ Tech. explanation)			
ca. 90 g	ca. 20 g	ca. 90 g	ca. 20 g

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 $U_s = 24\text{ V}$.

Technical explanation

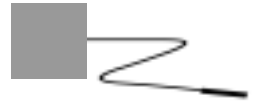


Allowable supply voltage as a function of ambient temperature

The specified operating temperature is only usable if the supply voltage is reduced at higher temperatures (☛ Diagram "Allowable supply voltage/Ambient temperature").

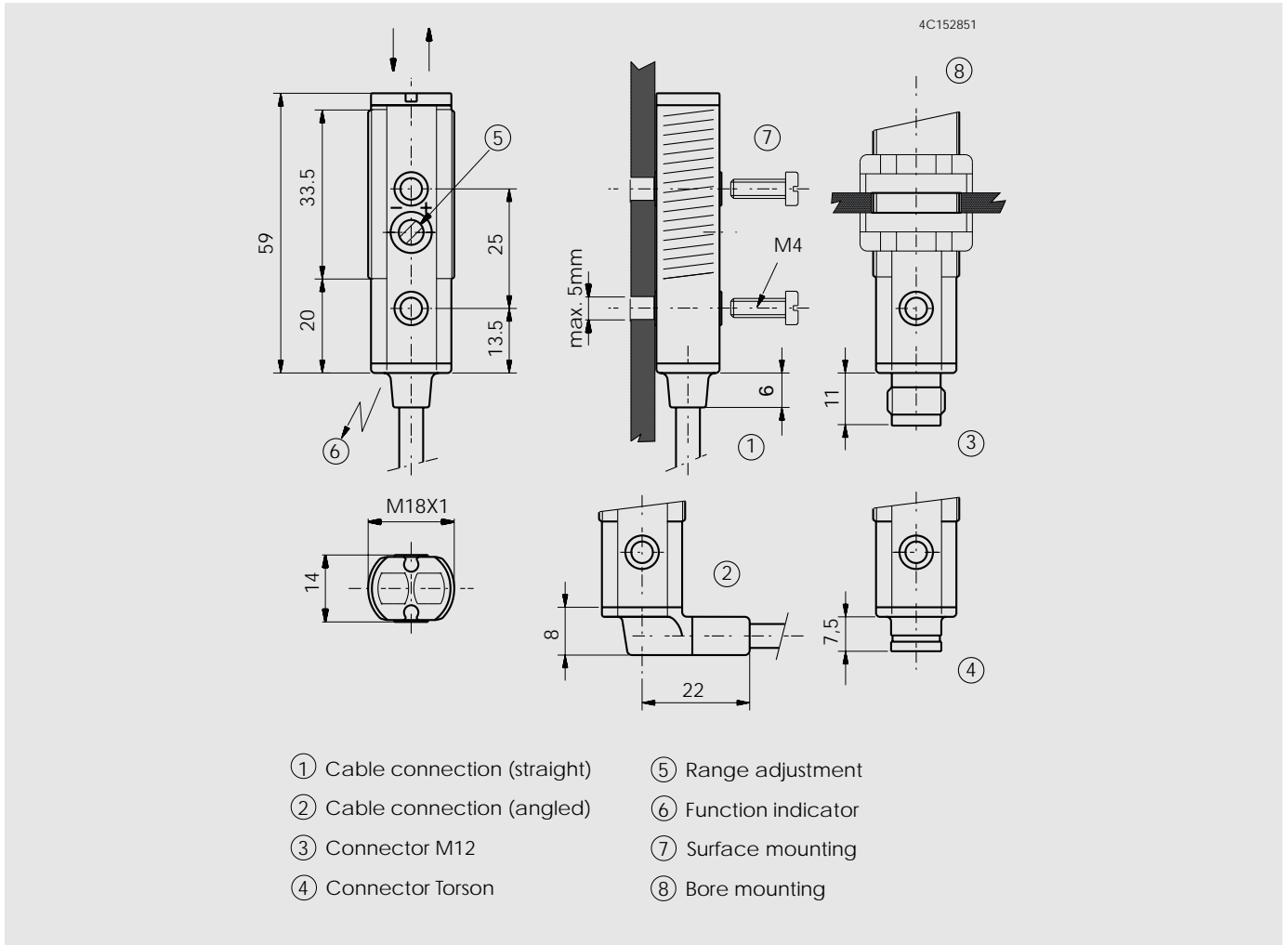
10...30 VDC

NPN / PNP
light-on and
dark-on output



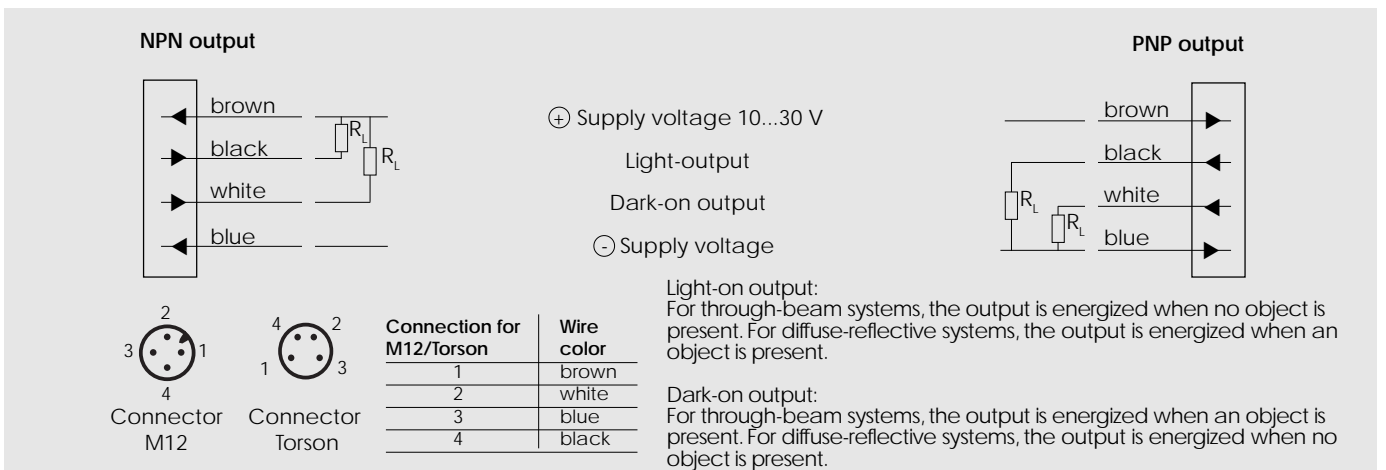
OMT

Dimensions (59 mm, M18 x 1)

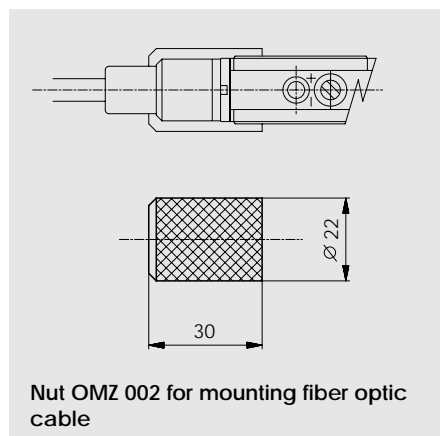
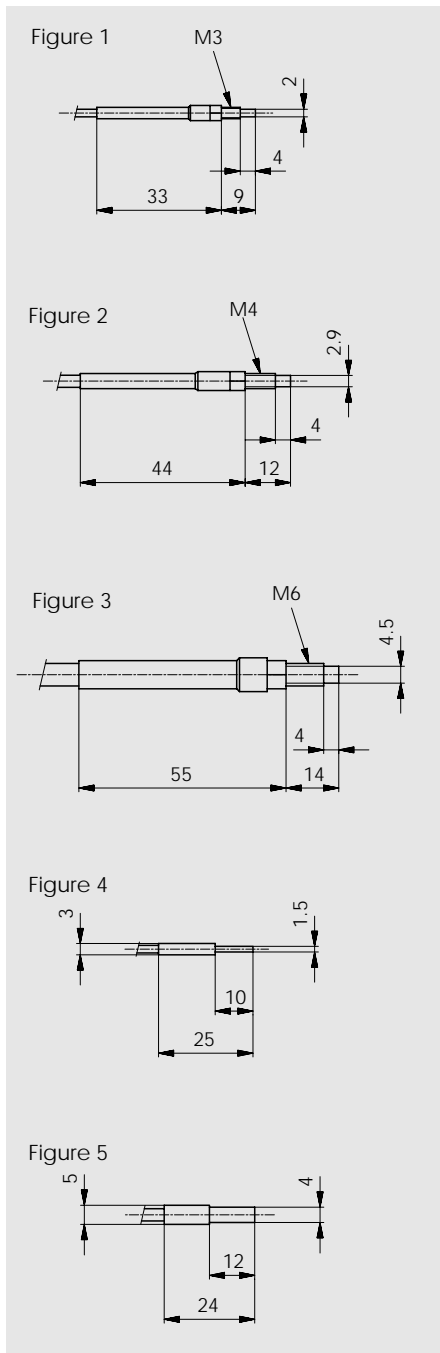


- ① Cable connection (straight)
- ② Cable connection (angled)
- ③ Connector M12
- ④ Connector Torson
- ⑤ Range adjustment
- ⑥ Function indicator
- ⑦ Surface mounting
- ⑧ Bore mounting

Wiring diagram



Dimensions



Through-beam

Fig.	Sensing head	Sheathing material	Cross section	Length	Range	Product designation
1	Threaded M3	Plastic (-25...+80 °C)	2 x 1 mm ²	50 cm	70 mm	OZL 112 A 251
1	Threaded M3	Plastic (-25...+80 °C)	2 x 1 mm ²	100 cm	40 mm	OZL 112 A 351
2	Threaded M4	Plastic (-25...+80 °C)	2 x 4 mm ²	50 cm	200 mm	OZL 116 A 252
2	Threaded M4	Plastic (-25...+80 °C)	2 x 4 mm ²	100 cm	150 mm	OZL 116 A 352
4	Ferruled 1,5 mm	Plastic (-25...+80 °C)	2 x 1 mm ²	50 cm	120 mm	OZL 112 A 240
5	Ferruled 4 mm	Plastic (-25...+80 °C)	2 x 4 mm ²	50 cm	200 mm	OZL 116 A 242
2	Threaded M4	Metal (-25...+250 °C)	2 x 4 mm ²	50 cm	200 mm	OZL 216 A 252

Diffuse-reflective

Fig.	Sensing head	Sheathing material	Cross section	Length	Range ¹⁾	Product designation
1	Threaded M3	Plastic (-25...+80 °C)	2 x 0,5 mm ²	50 cm	4 mm	OZL 141 A 251
2	Threaded M4	Plastic (-25...+80 °C)	2 x 1 mm ²	50 cm	7 mm	OZL 142 A 252
2	Threaded M4	Plastic (-25...+80 °C)	2 x 1 mm ²	100 cm	6 mm	OZL 142 A 352
3	Threaded M6	Plastic (-25...+80 °C)	2 x 4 mm ²	50 cm	40 mm	OZL 146 A 254
3	Threaded M6	Plastic (-25...+80 °C)	2 x 4 mm ²	100 cm	32 mm	OZL 146 A 354
4	Ferruled 1,5 mm	Plastic (-25...+80 °C)	2 x 0,5 mm ²	50 cm	4 mm	OZL 141 A 240
3	Threaded M6	Metal (-25...+250 °C)	2 x 4 mm ²	50 cm	40 mm	OZL 246 A 254

1) Measured with Kodak card white, 10 x10 cm

Important mounting instructions:

These glass fiber optic cables are only for use with fiber optic sensor OMT.

Do not bend the glass optic cables sharply. The bending radius may not be smaller than three times the sheathing diameter. Do not subject the fiber optic cables to mechanical forces (i.e. pulling, pressure, or twisting). The light emitting surfaces must also be protected from mechanical damage.