

Through-beam sensors, straight optics, M18 housing



- Combined surface and bore mounting
- Light reserve warning indicator
- Dual transistor outputs, NPN or PNP
- Test input
- 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 designation ¹⁾

Output

Connection

Range adjustment

Optical data ²⁾

Max. 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

Test input: emitter on
emitter off

Test input inverse: emitter on
emitter off

Environmental data

Sealing

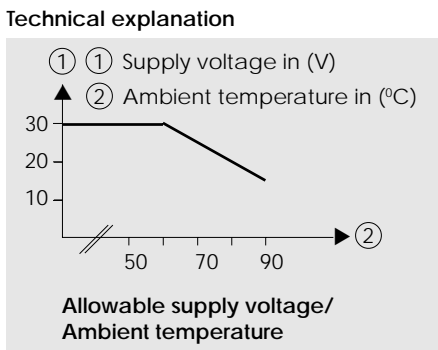
Temperature T_A
(operating and storage)

Weight

Emitter		Receiver			
OMS 1KA 141 G1	OMS 1KA 441 G1	OME 1NA 100 G1	OME 1NA 400 G1	OME 1PA 100 G1	OME 1PA 400 G1
		NPN (light- and dark-on)		PNP (light- and dark-on)	
Cable 2 m	Connector M12	Cable 2 m	Connector M12	Cable 2 m	Connector M12
No		Yes			
9 m					
Infrared-LED, 880 nm, pulsed					
10...30 VDC					
+/- 10% of U_s					
< 25 mA		< 15 mA			
		200 mA			
		< 1,6 V			
		1000 Hz			
> 8 V or open < 1,5 V					
open or < 1,5 V > 8 V					
IP 67					
-20...+90 °C (↔ Tech. explanation)					
ca. 90 g	ca. 20 g	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 $U_s = 24\text{ V}$.

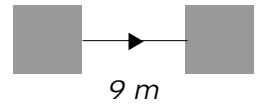


Allowable supply voltage as a function of ambient temperature

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

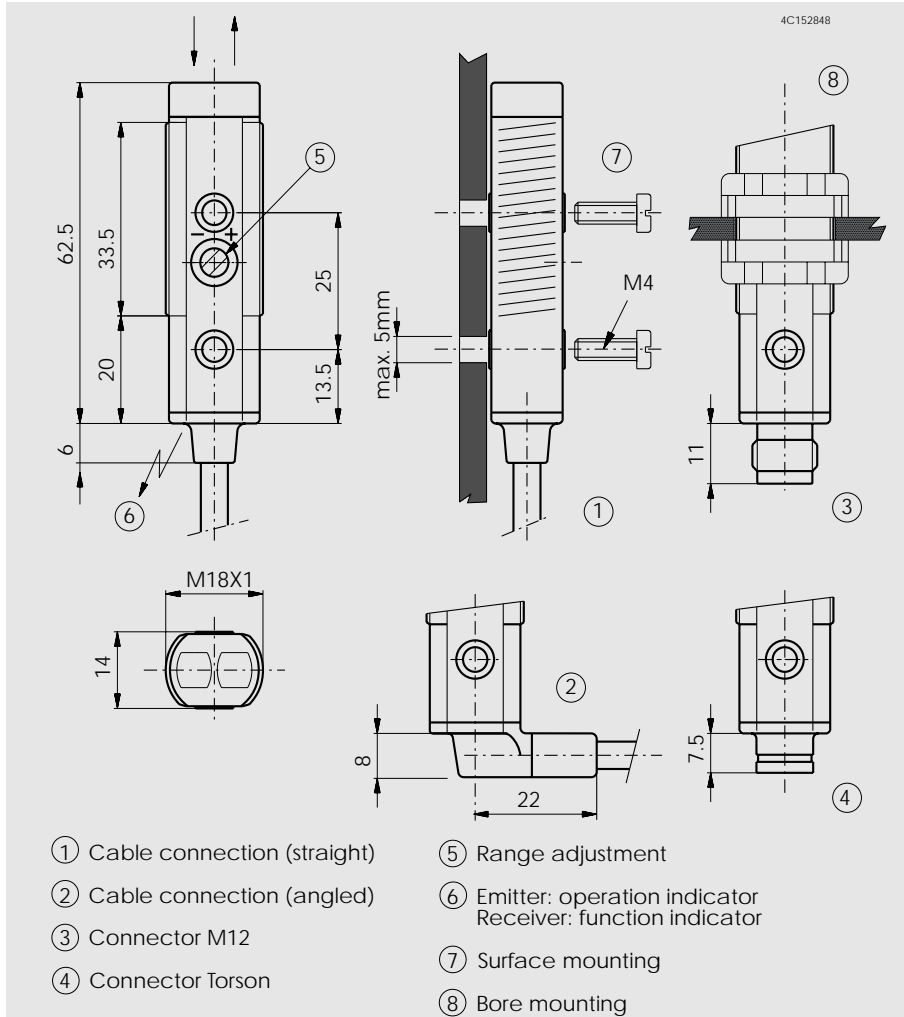
10...30 VDC

NPN / PNP
light-on and
dark-on output



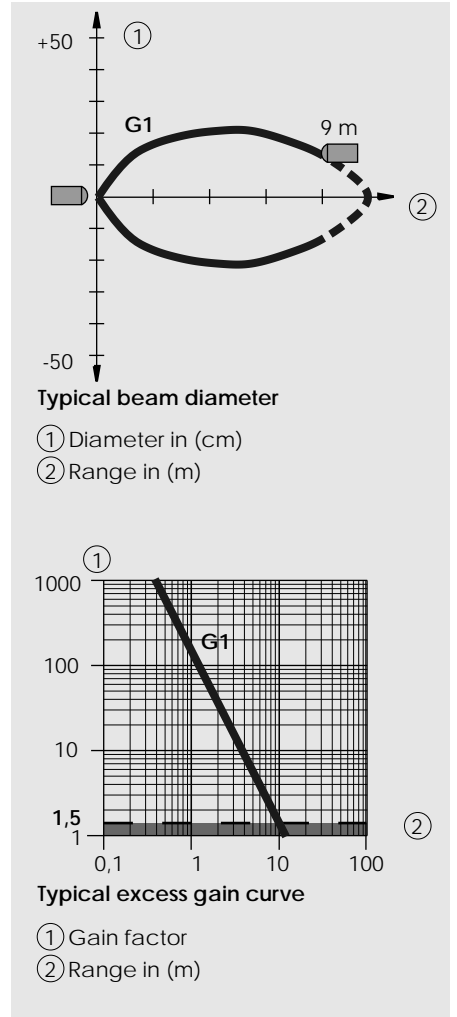
OMS/OME straight optics

Dimensions (62,5 mm, M18 x 1)

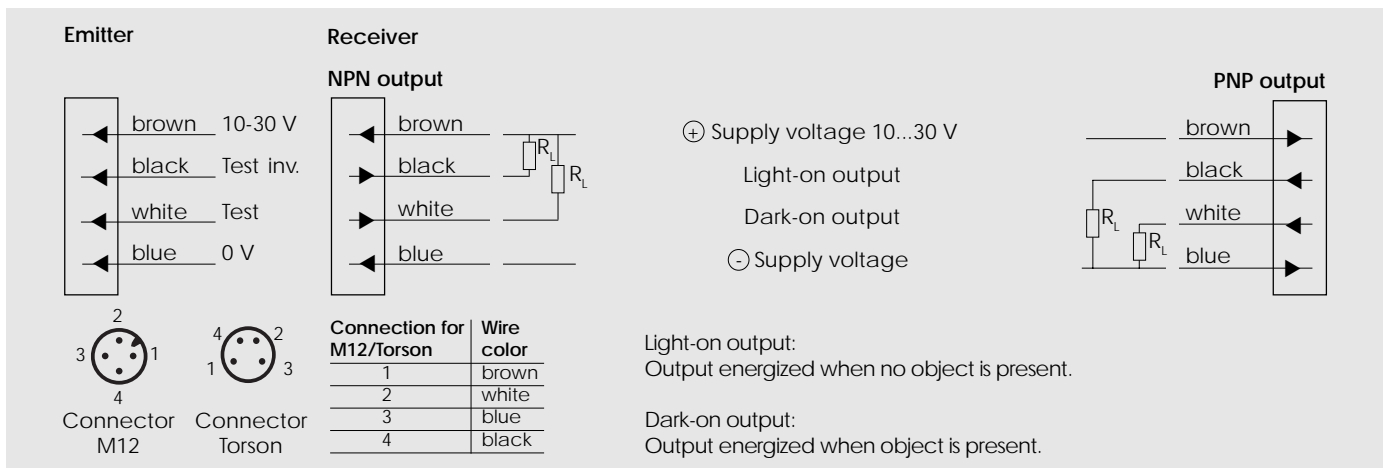


- ① Cable connection (straight)
- ② Cable connection (angled)
- ③ Connector M12
- ④ Connector Torson
- ⑤ Range adjustment
- ⑥ Emitter: operation indicator
Receiver: function indicator
- ⑦ Surface mounting
- ⑧ Bore mounting

Optical diagrams



Wiring diagram



Through-beam sensors, right angle optics, M18 housing



- Combined surface and bore mounting
- Light reserve warning indicator
- Dual transistor outputs, NPN or PNP
- Test input
- 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⁾

Max. range

Emitter

Electrical data²⁾

Supply voltage U_s

Allowable ripple

Current consumption (without load)

Max. load current I_L

Residual voltage

Max. switching frequency

Test input: emitter on
emitter off

Test input inverse: emitter on
emitter off

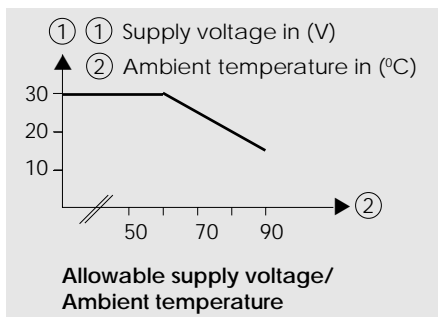
Environmental data

Sealing

Temperature T_A
(operating and storage)

Weight

Technical explanation



Emitter		Receiver			
OMS 1KA 141 W2	OMS 1KA 441 W2	OME 1NA 100 W2	OME 1NA 400 W2	OME 1PA 100 W2	OME 1PA 400 W2
		NPN (light- and dark-on)		PNP (light- and dark-on)	
Cable 2 m	Connector M12	Cable 2 m	Connector M12	Cable 2 m	Connector M12
No		Yes			
8 m					
Infrared-LED, 890 nm, pulsed					
10...30 VDC					
+/- 10% of U_s					
< 25 mA		< 15 mA			
		200 mA			
		< 1,6 V			
		1000 Hz			
> 8 V or open < 1,5 V					
open or < 1,5 V > 8 V					
IP 67					
-20...+90 °C (↔ Tech. explanation)					
ca. 95 g	ca. 25 g	ca. 95 g	ca. 25 g	ca. 95 g	ca. 25 g

1) For product designation of sensors with options see designation code on page 47.

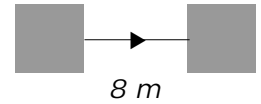
2) When not otherwise noted, all technical data at $T_A = 25\text{ °C}$ and $U_s = 24\text{ V}$.

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").

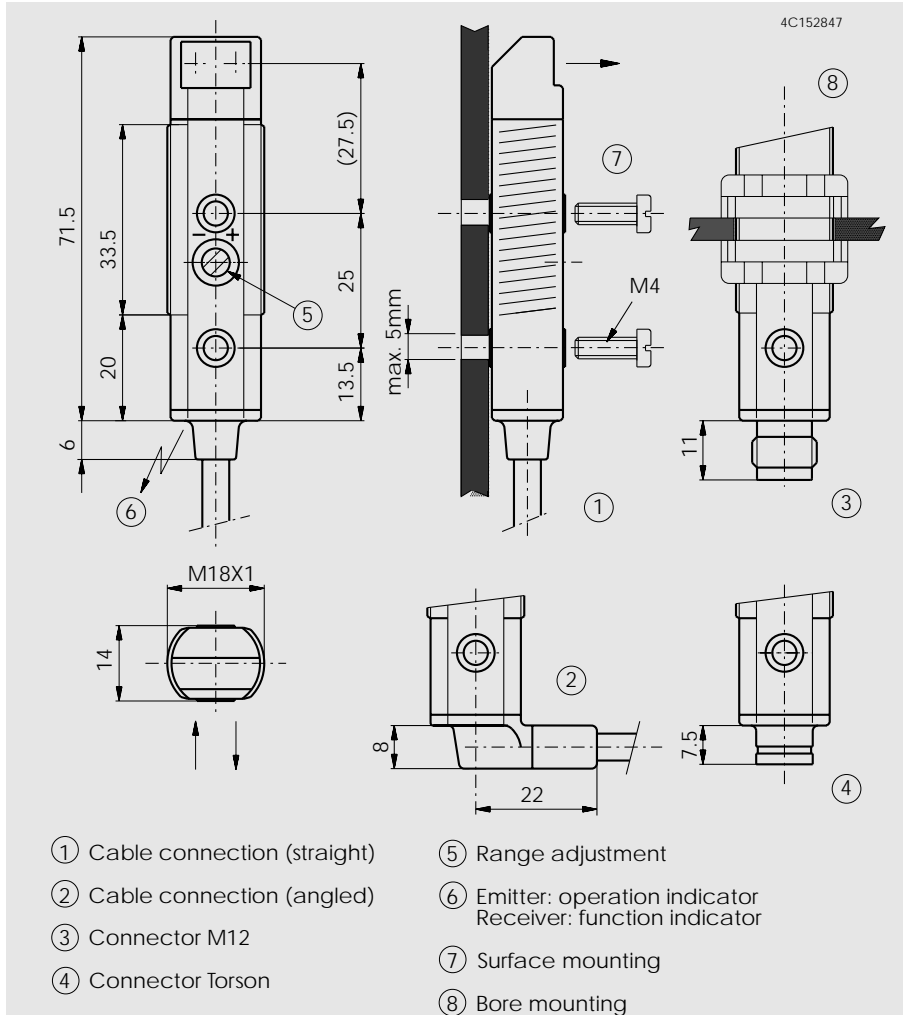
10...30 VDC

NPN / PNP
light-on and
dark-on output

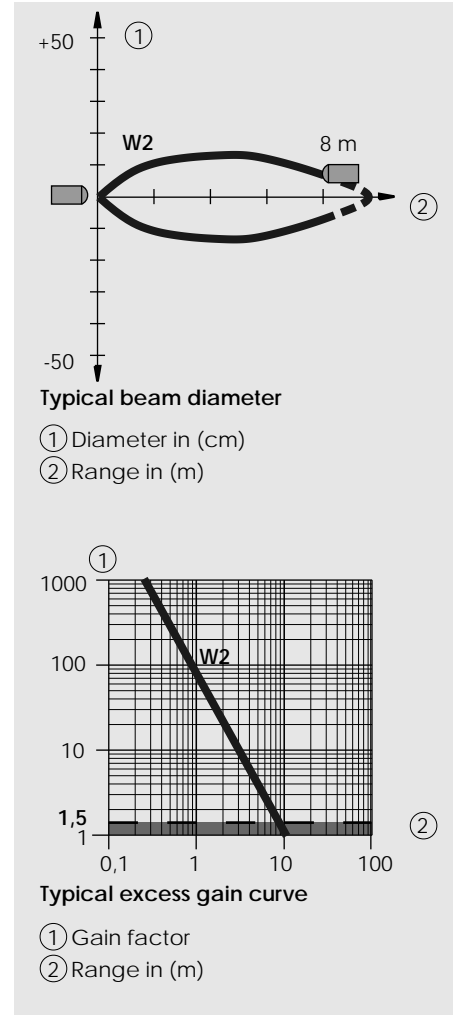


OMS/OME right angle optics

Dimensions (71,5 mm, M18 x 1)



Optical diagrams



Wiring diagram

