

Diffuse-reflective sensors, range 10/20 cm, M18 housing



- Range adjustable
- 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: Straight cable, 2 meter
Connector, M12
- EMC tested according to IEC 801 and EN50081-1/EN 50082-2



Product designation Plastic housing ¹⁾

Product designation Stainless steel 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

Environmental data

Sealing

Temperature T_A
(operating and storage)

Weight Plastic/Stainless steel

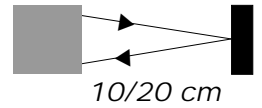
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M1T 1NA 100 I1M	M1T 1NA 400 I1M	M1T 1PA 100 I1M	M1T 1PA 400 I1M	M1T 1NA 100 I2M	M1T 1NA 400 I2M	M1T 1PA 100 I2M	M1T 1PA 400 I2M
NPN (light-/dark-on)		PNP (light-/dark-on)		NPN (light-/dark-on)		PNP (light-/dark-on)	
Cable 2 m	Connector M12	Cable 2 m	Connector M12	Cable 2 m	Connector M12	Cable 2 m	Connector M12
Yes							
10 cm (Kodak card white, 10 x 10 cm)				20 cm (Kodak card white, 10 x 10 cm)			
Infrared-LED, 880 nm, pulsed							
10...30 VDC							
+/- 10% of U_{sp}							
< 15 mA							
100 mA							
< 1,6 V							
1000 Hz							
IP 67							
-25...+65 °C							
Connector M12: ca.15/25 g , Cable 2 m: ca. 100/110 g							

1) For product designation of sensors with options see designation code on page 23.

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

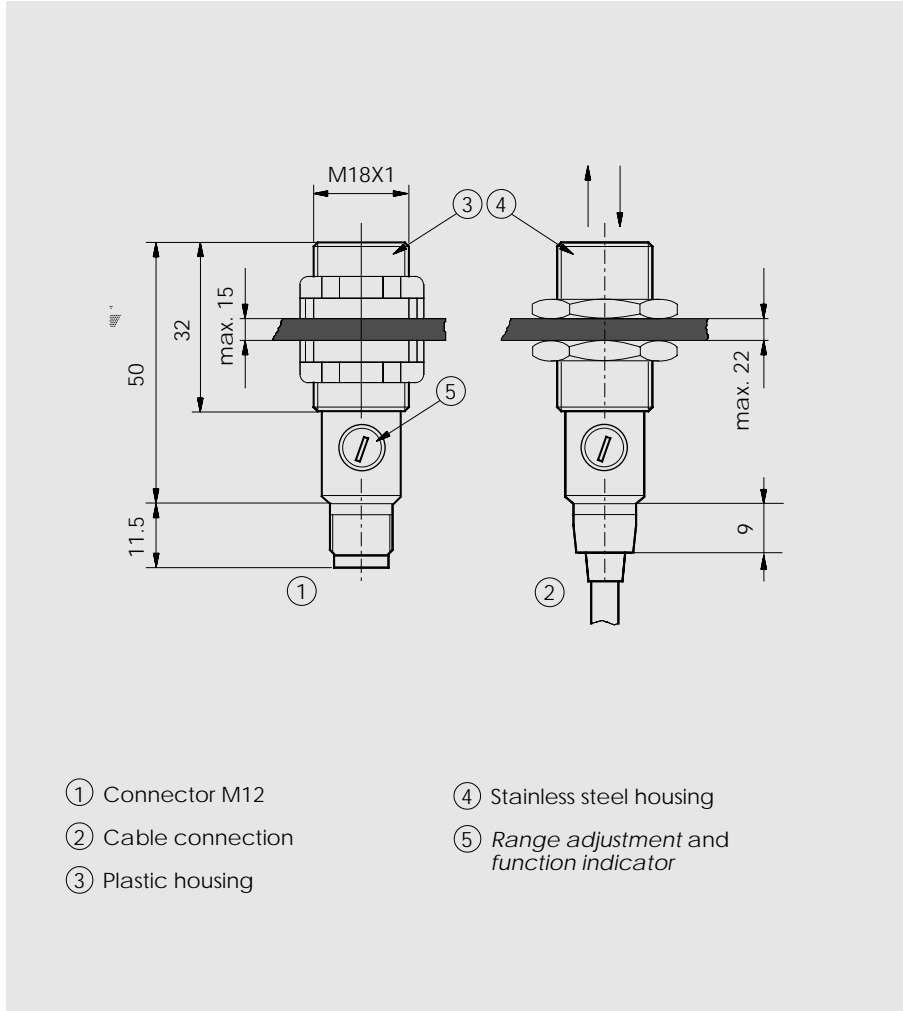
10...30 VDC

NPN / PNP
light-on and
dark-on output

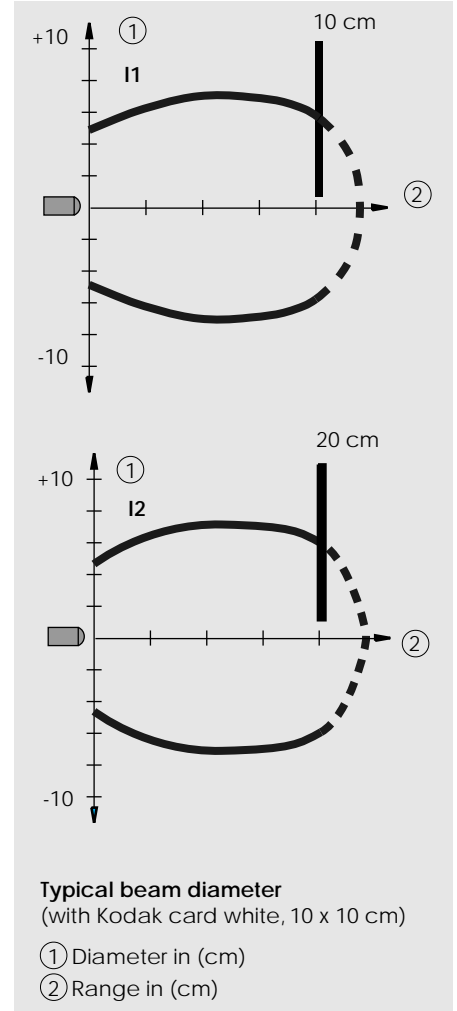


M1T

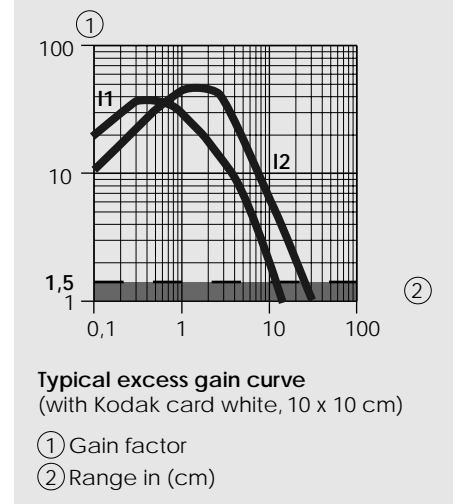
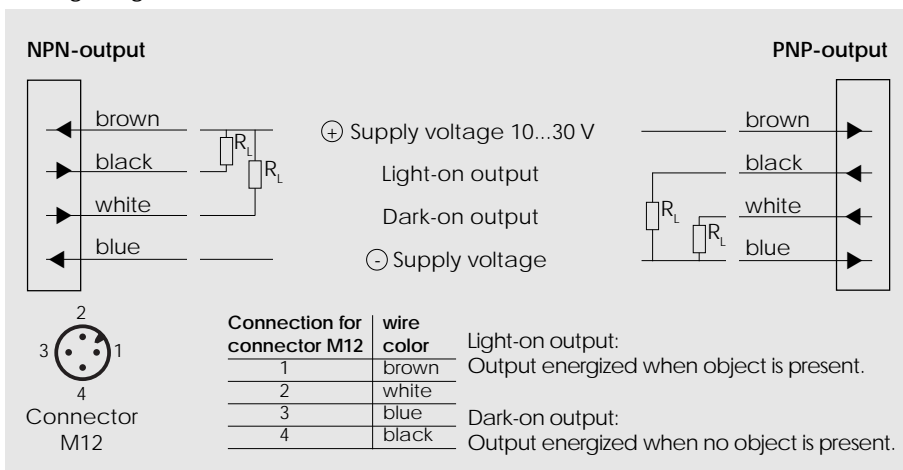
Dimensions (50 mm, M18 x 1)



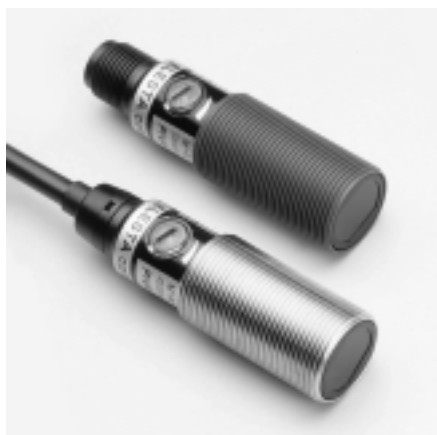
Optical diagrams



Wiring diagram



Diffuse-reflective sensors, range 40/55 cm, M18 housing



- Range adjustable
- 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: Straight cable, 2 meter
Connector, M12
- EMC tested according to IEC 801 and EN50081-1/EN 50082-2



Product designation Plastic housing ¹⁾

Product designation Stainless steel 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

Environmental data

Sealing

Temperature T_A
(operating and storage)

Weight Plastic/Stainless steel

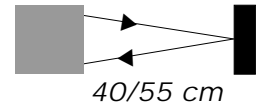
M1T 1NA 100 I3	M1T 1NA 400 I3	M1T 1PA 100 I3	M1T 1PA 400 I3	M1T 1NA 100 I4	M1T 1NA 400 I4	M1T 1PA 100 I4	M1T 1PA 400 I4
M1T 1NA 100 I3M	M1T 1NA 400 I3M	M1T 1PA 100 I3M	M1T 1PA 400 I3M	M1T 1NA 100 I4M	M1T 1NA 400 I4M	M1T 1PA 100 I4M	M1T 1PA 400 I4M
NPN (light-/dark-on)		PNP (light-/dark-on)		NPN (light-/dark-on)		PNP (light-/dark-on)	
Cable 2 m	Connector M12	Cable 2 m	Connector M12	Cable 2 m	Connector M12	Cable 2 m	Connector M12
Yes							
40 cm (Kodak card white, 10 x 10 cm)				55 cm (Kodak card white, 10 x 10 cm)			
Infrared-LED, 880 nm, pulsed							
10...30 VDC							
+/- 10% of U_{sp}							
< 15 mA							
100 mA							
< 1,6 V							
1000 Hz							
IP 67							
-25...+65 °C							
Connector M12: ca.15/25 g , Cable 2 m: ca. 100/110 g							

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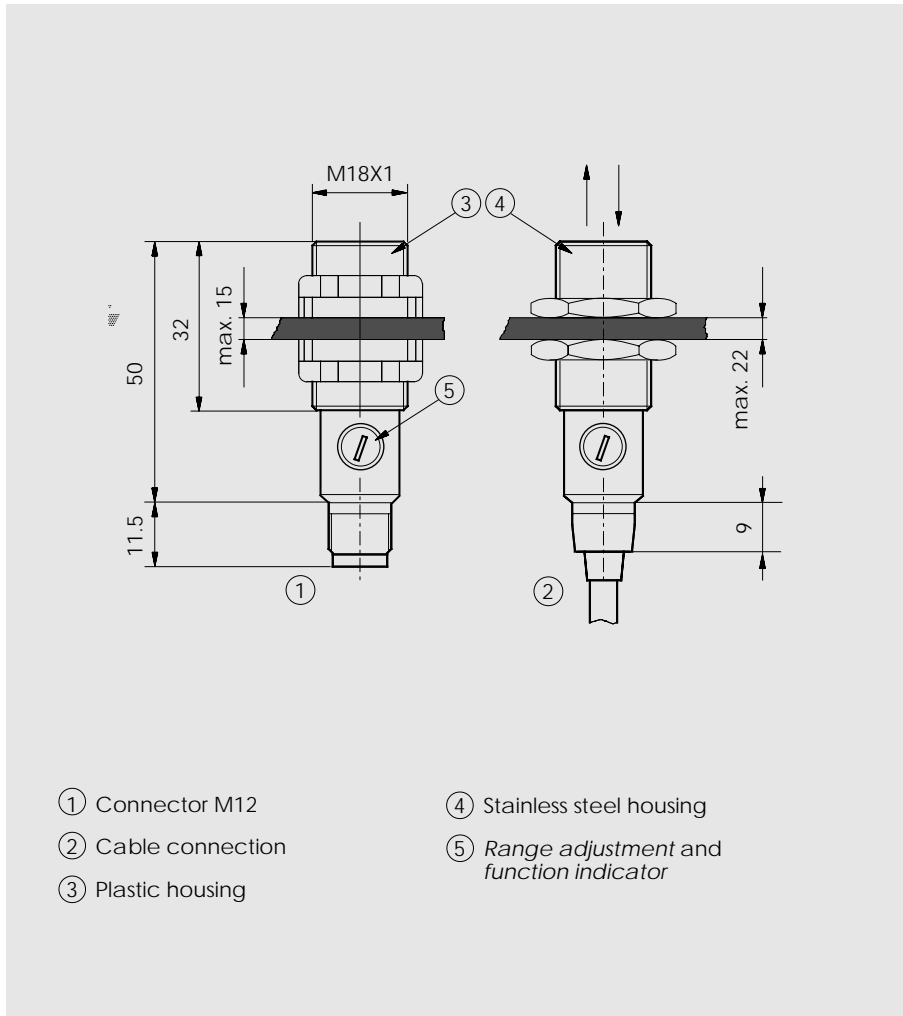
10...30 VDC

NPN / PNP
light-on and
dark-on output

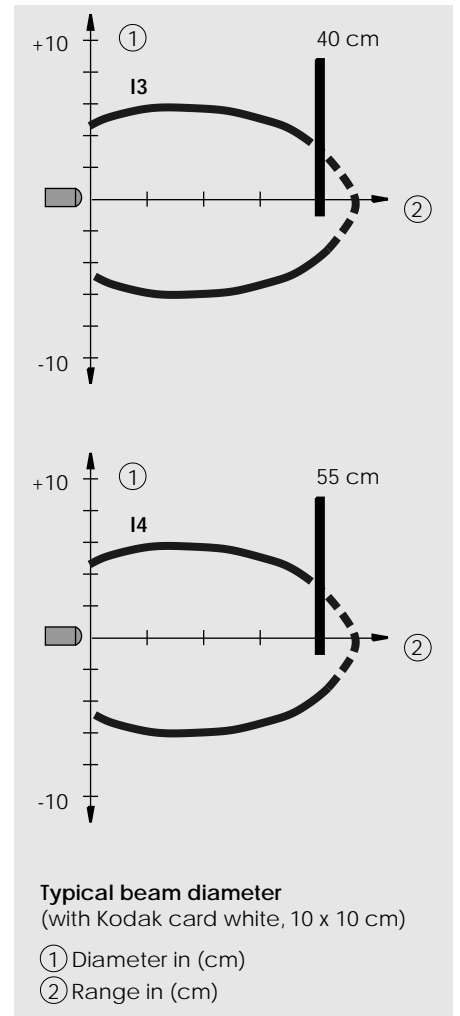


M1T

Dimensions (50 mm, M18 x 1)



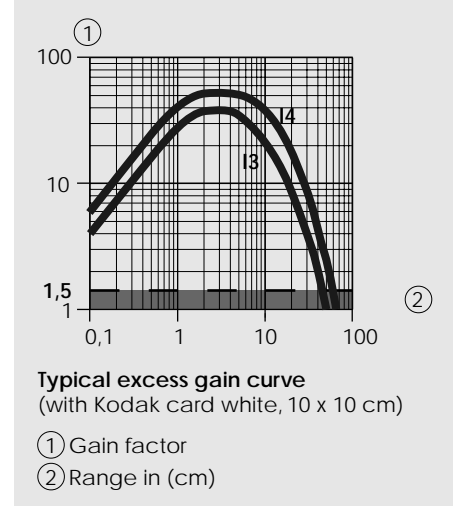
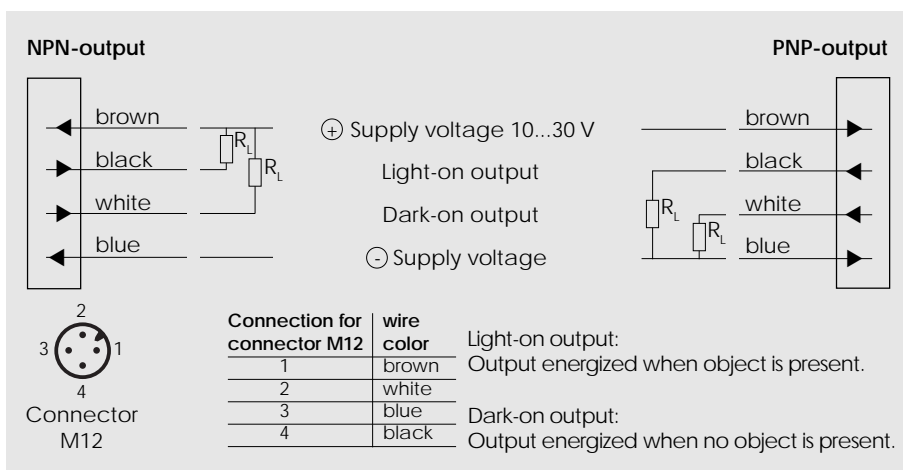
Optical diagrams



Typical beam diameter
(with Kodak card white, 10 x 10 cm)

① Diameter in (cm)
② Range in (cm)

Wiring diagram



Typical excess gain curve
(with Kodak card white, 10 x 10 cm)

① Gain factor
② Range in (cm)

Diffuse-reflective sensors, range 10/40 cm, right angle optics, M18 housing



- Range adjustable
- 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
- Extended stainless steel case for protection of angle optic head (option)
- Connections: Straight cable, 2 meter
Connector, M12
- EMC tested according to IEC 801 and EN50081-1/EN 50082-2



Product designation Plastic housing ¹⁾

Product designation Stainless steel 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

Environmental data

Sealing

Temperature T_A
(operating and storage)

Weight Plastic/Stainless steel

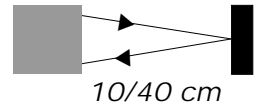
M1T 1NA 100 W1	M1T 1NA 400 W1	M1T 1PA 100 W1	M1T 1PA 400 W1	M1T 1NA 100 W3	M1T 1NA 400 W3	M1T 1PA 100 W3	M1T 1PA 400 W3
M1T 1NA 100 W1M	M1T 1NA 400 W1M	M1T 1PA 100 W1M	M1T 1PA 400 W1M	M1T 1NA 100 W3M	M1T 1NA 400 W3M	M1T 1PA 100 W3M	M1T 1PA 400 W3M
NPN (light-/dark-on)		PNP (light-/dark-on)		NPN (light-/dark-on)		PNP (light-/dark-on)	
Cable 2 m	Connector M12	Cable 2 m	Connector M12	Cable 2 m	Connector M12	Cable 2 m	Connector M12
Yes							
10 cm (Kodak card white, 10 x 10 cm)				40 cm (Kodak card white, 10 x 10 cm)			
Infrared-LED, 880 nm, pulsed							
10...30 VDC							
+/- 10% of U_{sp}							
< 15 mA							
100 mA							
< 1,6 V							
1000 Hz							
IP 67							
-25...+65 °C							
Connector M12: ca. 15/25 g , Cable 2 m: ca. 100/110 g							

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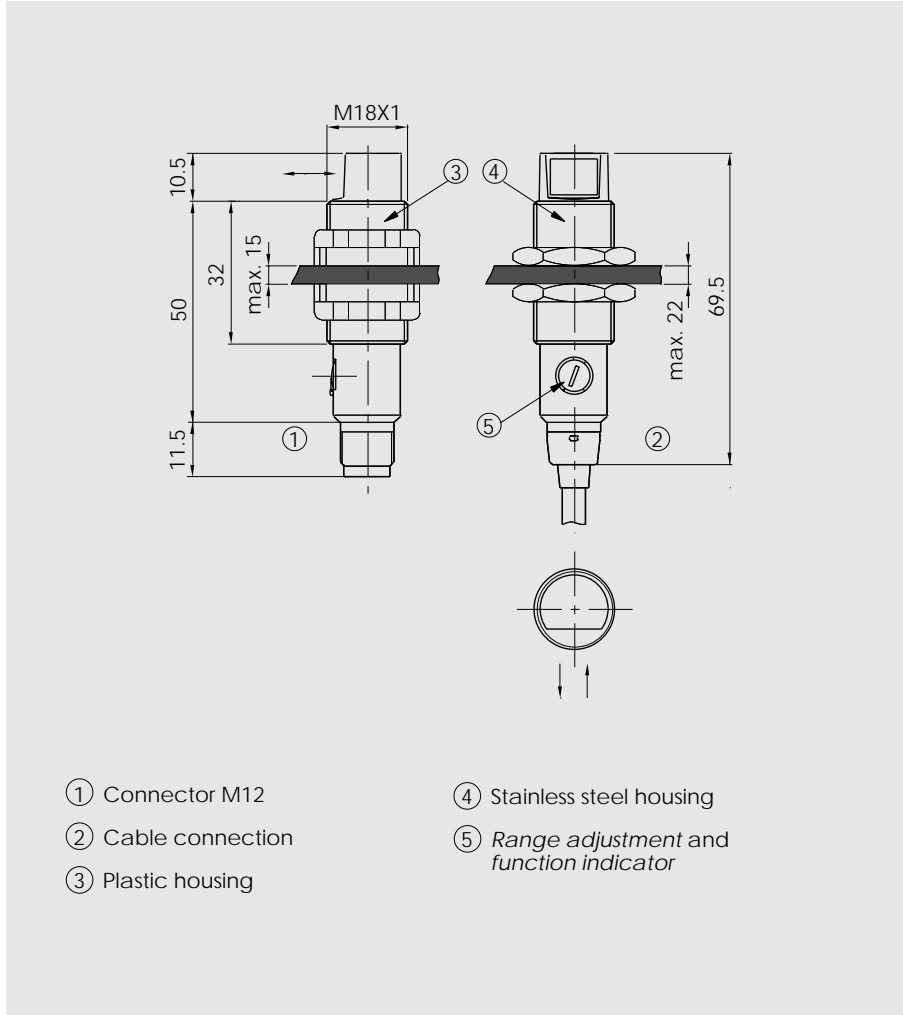
10...30 VDC

NPN / PNP
light-on and
dark-on output

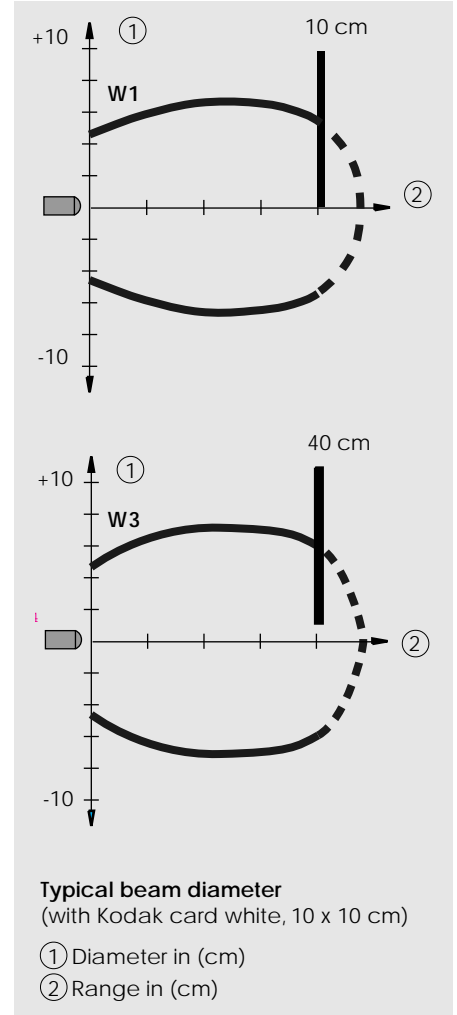


M1T right angle optics

Dimensions (60.5 mm, M18 x 1)



Optical diagrams



Wiring diagram

