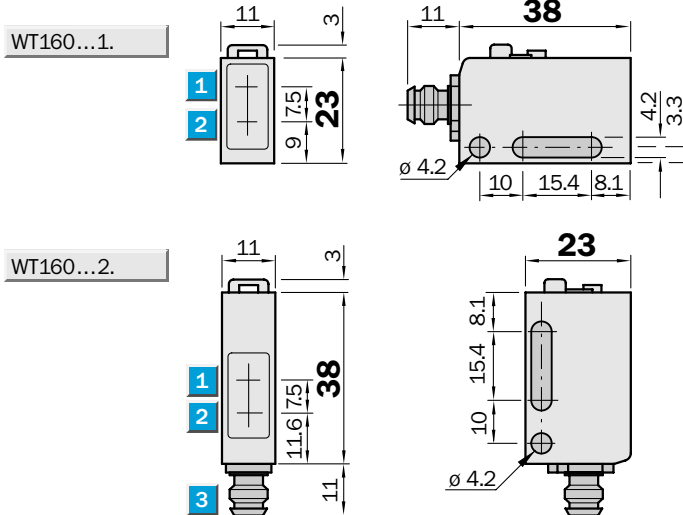


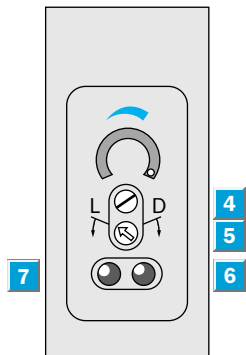
- Horizontal and vertical models
- Focused scanner with background blanking and great sensitivity
- Contamination control with green LED indicator and pre-failure signalling output
- Test input for equipment and system testing

Dimensional drawing



Adjustments possible

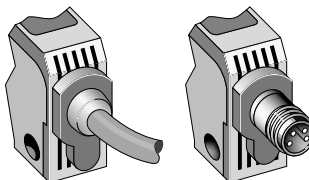
All types



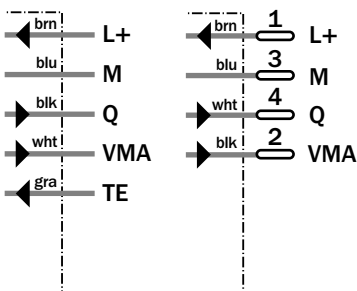
- Centre of optical axis, receiver
- Centre of optical axis, sender
- Plug 4-pin, M 8 or connection cable
- Sensitivity adjustment
- Light/dark rotary switch:
L = light-switching
D = dark-switching
- Red LED signal strength indicator
- Green LED signal strength indicator

Connection types

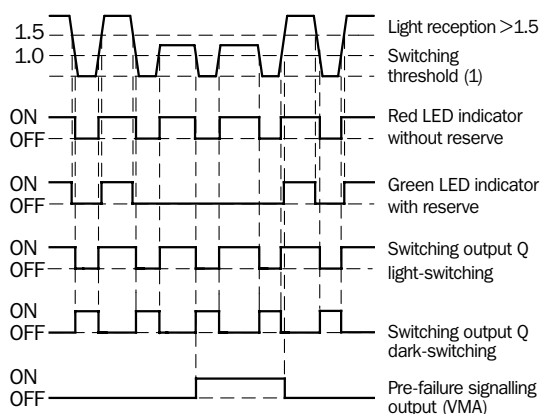
WT 160-P112	WT 160-P410
WT 160-N112	WT 160-N410
WT 160-P122	WT 160-P420
WT 160-N122	WT 160-N420


5 x 0.2 mm²

4-pin, M8



Operating diagram



Accessories	page
Cable receptacles	496
Mounting brackets*	510

* included with delivery

Technical data		WT 160-	P 112	P 410	N 112	N 410	P 122	P 420	N 122	N 420		
Housing design	Horizontal											
	Vertical											
Scanning distance, max. typical	3... 60 mm ⁴⁾											
Operating distance	8... 50 mm ⁴⁾											
Background blanking	From approx. 100 mm (background 90 % remission) ²⁾											
Adjustable sensitivity	Potentiometer, 2 turns with scaling 270°											
Light source ³⁾ , light type	LED, red light											
Light spot diameter	Approx. 3 mm at 25 mm											
Angle of dispersion, sender	Focused, focus 25 mm											
Supply voltage V_S	10...30 V DC ⁴⁾											
Ripple ⁵⁾	± 10 %											
Current consumption ⁶⁾	≤ 30 mA											
Switching outputs	PNP, open collector: Q											
	NPN, open collector: Q											
Output current I_A max.	100 mA											
Light receiver, switching type	Light /dark-switching via rotary switch											
Response time ⁷⁾ /max. switching freq. ⁸⁾	≤ 0.9 ms / 550/s											
Pre-failure signalling output (VMA)	100 mA, static											
Test input "TE" ⁹⁾	Sender off; PNP: TE to +V											
	Sender off; NPN: TE to 0 V											
Connection types cable	PVC, 2 m ¹⁰⁾ ; 5 x 0.2 mm ² , Ø 4.2 mm											
plug	4-pin, M8											
VDE protection class ¹¹⁾	□											
Circuit protection ¹²⁾	A, B, C, D											
Enclosure rating	IP 67											
Ambient temperature T_A	Operation - 25 °C...+ 55 °C											
	Storage - 40 °C...+ 70 °C											
Weight with cable	Approx. 60 g											
with plug	Approx. 20 g											
Housing material	Housing: ABS; optics: PC											

1) Scanned material with 90 % remission
(based on standard white according to
DIN 5033)

2) Average service life 100,000 h
at $T_A = + 25 °C$

3) Background 90 % remission

4) Limit values

5) May not exceed or fall short of
 V_S tolerances

6) Without load

7) Signal transit time with resistive load

8) With light/dark ratio 1:1

9) TE not with plug model

10) Do not bend below 0 °C

11) Reference voltage 50 V DC

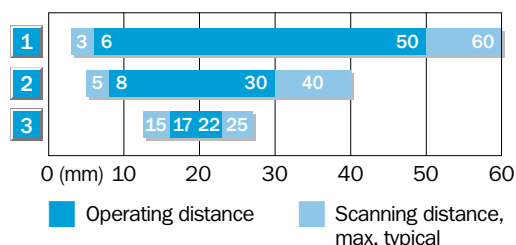
12) A = V_S connections reverse-polarity
protected

B = Inputs and outputs reverse-
polarity protected

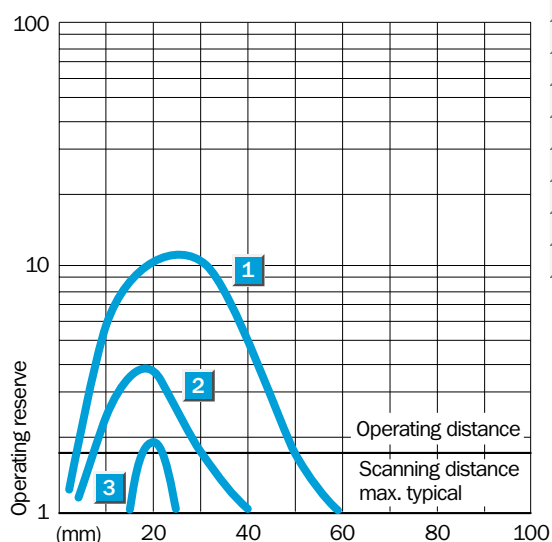
C = Interference pulse suppression

D = Outputs overload and short-
circuit protected

Scanning distance



- 1 Scanning range on white, 90 % remission
- 2 Scanning range on gray, 18 % remission
- 3 Scanning range on black, 6 % remission



Order information

Type	Part no.
WT 160-P 112	6 009 511
WT 160-P 410	6 009 519
WT 160-N 112	6 008 819
WT 160-N 410	6 008 827
WT 160-P 122	6 009 512
WT 160-P 420	6 009 520
WT 160-N 122	6 008 820
WT 160-N 420	6 008 828