

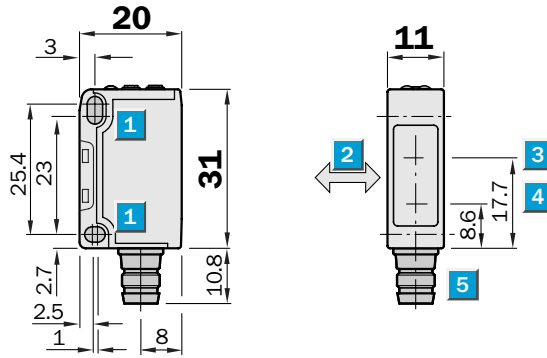
Photoelectric proximity switch, WTB140, BGS, red light - DC

Scanning distance
2 ... 500 mm

Photoelectric proximity switch

- With background suppression (BGS), consequently reliable detection of dark objects in front of a light background
- Scanning distance adjustable via potentiometer
- Red light as alignment aid
- Optionally with off delay $t_{OFF} = 0 \dots 100 \text{ ms}$

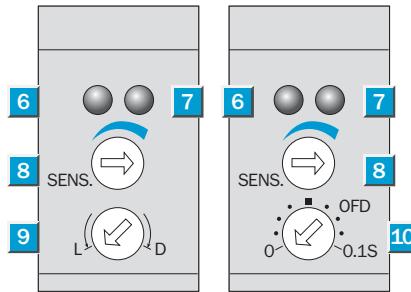
Dimensional drawing



Adjustments possible

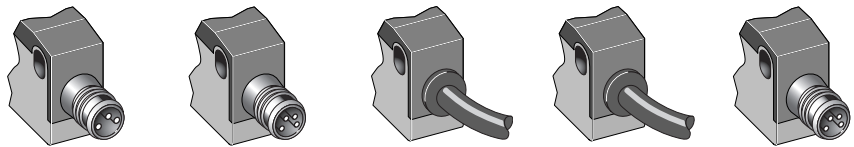
WTB140-N132	WTB140-N122
WTB140-N330	WTB140-N420
WTB140-N430	WTB140-P122
WTB140-P132	WTB140-P420
WTB140-P330	
WTB140-P430	

- Mounting hole $\varnothing 3.2 \text{ mm}$ for M3
- Standard direction of the material to be scanned
- Optics center, receiver
- Optics center, transmitter
- Connector
- Green LED indicator: light reception with operating reserve >1.1
- Orange LED indicator: switching output active
- Scanning distance control (5 turns)
- Light/dark rotary switch: L = light switching, D = dark switching
- OFD, selector switch (270°) off delay t_{OFF} ; $t=0 \text{ s (OFF)} \dots 0.1 \text{ s}$

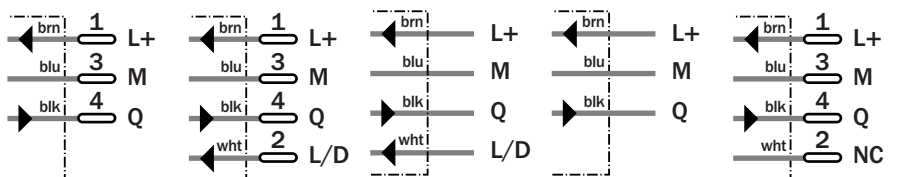


Connection type

WTB140-N330	WTB140-N420	WTB140-N122	WTB140-N132	WTB140-N430
WTB140-P330	WTB140-P420	WTB140-P122	WTB140-P132	WTB140-P430



M8, 3-pin	M8, 4-pin	4 x 0.18 mm ²	3 x 0.18 mm ²	M8, 4-pin
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Accessories

- Connector, M8, 3-pin
- Connector, M8, 4-pin
- Mounting systems

Technical specifications		WTB140-	N122	N132	N330	N420	N430	P122	P132	P330	P420	P430
Scanning distance typ. max.	2 ... 500 mm ¹⁾											
Operating distance	15 ... 500 mm ¹⁾											
Adjustment of operating distance	Potentiometer, 5 revolutions											
Light source, light type	LED, Red light, 680 nm ²⁾											
Light spot diameter	Approx. 15 mm at 200 mm distance											
Angle of dispersion	Ca. 4.3 °											
Supply voltage V _s	DC 10 ... 30 V ³⁾											
Ripple	± 10 % ⁴⁾											
Power consumption	≤ 30 mA ⁵⁾											
Switching outputs	NPN: open collector: Q											
	PNP: open collector: Q											
Switching mode	Light/dark-switching via L/D control cable											
	Light/dark-switching via rotary switch											
Signal voltage PNP HIGH / LOW	V _s - 1.8 V / approx. 0 V											
Signal voltage NPN HIGH / LOW	Approx. V _s / < 1.8 V											
Output current I _a max	100 mA											
Response time	≤ 0.5 ms ⁶⁾											
Switching frequency	1,000 Hz ⁷⁾											
Time delay	Selectable: 0 ... 100 ms											
Time type	t _{OFF} (off delay)											
Connection type	Cable, PVC, 2 m ⁸⁾											
	Connector, M8, 3-pin											
	Connector, M8, 4-pin											
VDE protection class	□ ⁹⁾											
Circuit protection	V _s connections reverse-polarity protected / In-/outputs short-circuit protected / Interference suppression / Outputs overcurrent and short-circuit protected											
Enclosure rating	IP 67											
Ambient temperature operation	-25 °C ... +55 °C											
Ambient temperature storage	-40 °C ... +70 °C											
Weight	Ca. 53 g											
	Ca. 9 g											
Housing material	PBT, PC											

¹⁾ Object with 90% remission (based on standard white to DIN 5033). Scanning distance control set to MAX

²⁾ Average service life 100,000 h at

T_a = +25°C

³⁾ Limit values, operation in short-circuit protected network max. 8 A

⁴⁾ May not exceed or fall short of

V_s tolerances

⁵⁾ Without load

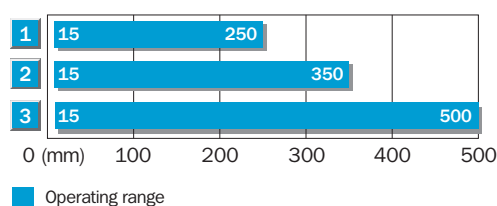
⁶⁾ Signal transit time with resistive load

⁷⁾ With light/dark ratio 1:1

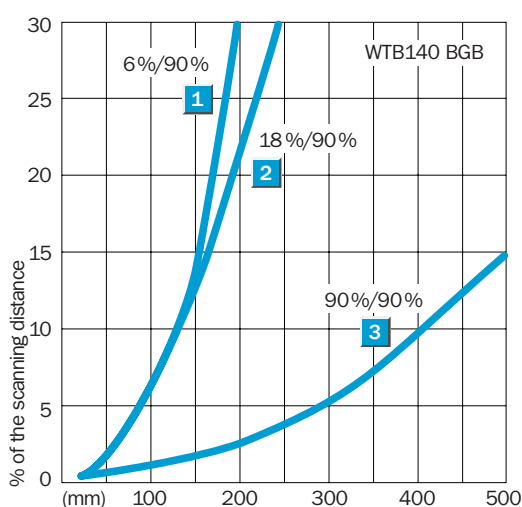
⁸⁾ Do not bend below 0 °C

⁹⁾ Reference voltage 50 V DC

Sanning distance



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



Ordering information

Type	Order No.
WTB140-N122	6 012 628
WTB140-N132	6 012 636
WTB140-N330	6 012 638
WTB140-N420	6 012 631
WTB140-N430	6 012 639
WTB140-P122	6 012 632
WTB140-P132	6 012 640
WTB140-P330	6 012 642
WTB140-P420	6 012 635
WTB140-P430	6 012 643