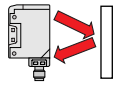


# WT 170

## Proximity/Diffuse Sensors-Fixed Focus



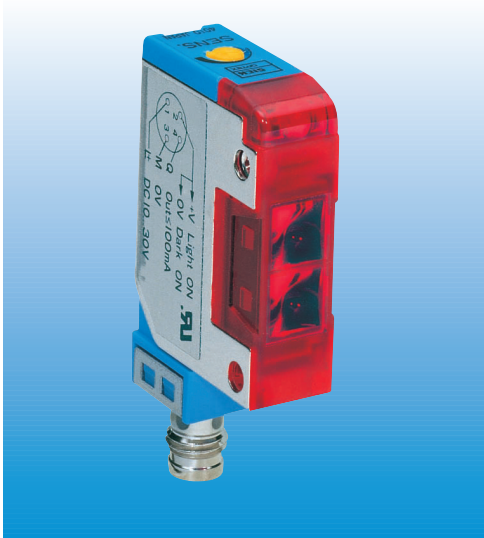
**0.4...3.9 in (10...100 mm)**  
sensing range



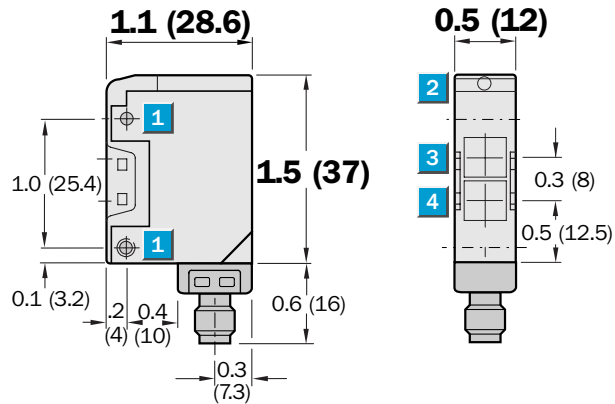
## Highlights

- Rugged stainless steel and plastic housing
- Signal strength indicator
- Visible red light for easy alignment
- Adjustable sensing range
- Crosstalk immunity
- Easy mounting with included bracket
- Cable or M8 quick disconnect versions

## WT 170

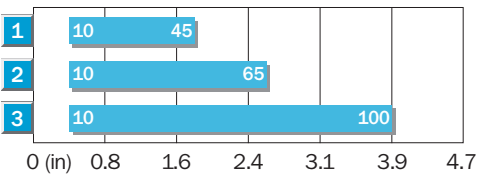
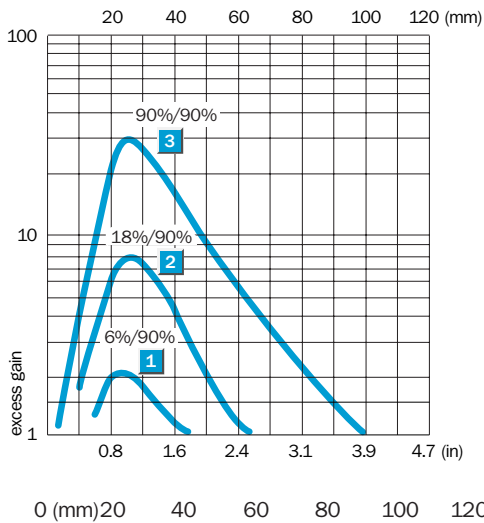


## Dimensional Drawing



dimensions in inches (mm)

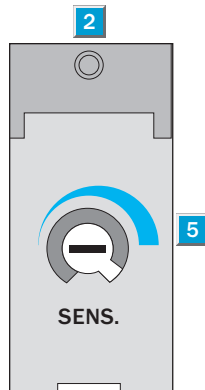
## Excess Gain



- 1** Sensing range on black, 6% remission
- 2** Sensing range on grey, 18% remission
- 3** Sensing range on white, 90% remission

## Adjustments

All types



- 1** Mounting holes  $\varnothing$  3 mm M3 thread
- 2** LED signal strength indicator, red: light received  $\geq$  switching threshold
- 3** Center of optical axis, receiver
- 4** Center of optical axis, sender
- 5** Sensitivity control (potentiometer, 270°)

## Order Information

Type	Part no.
WT 170-P112	6 010 193
WT 170-P410	6 010 194
WT 170-N112	6 010 195
WT 170-N410	6 010 196

## Accessories

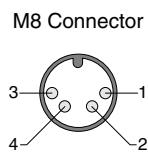
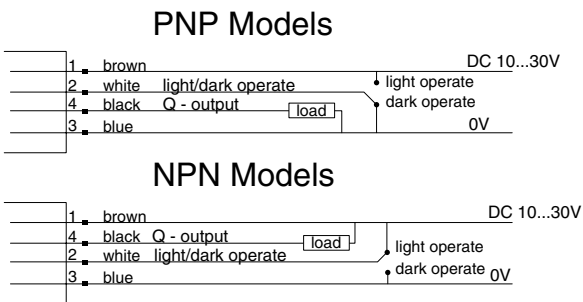
	page
Cables and connectors	908
Mounting brackets*	919

\* included with delivery

<b>Sensing range, adjustable</b>	0.4...3.9 in (10...100 mm) <sup>1)</sup>				
Background suppression	From approx. 4.7 in (120 mm), Background, 90% remission				
Sensitivity	Potentiometer, 270° (adjustable)				
<b>Light source<sup>2)</sup>, light type</b>	LED, visible red light				
Light spot size	Approx. 0.1 in at 1.6 in (3.5 mm at 40 mm)				
Angle of divergence, sender	Focused, focal point 1.6 in (40 mm)				
<b>Supply voltage V<sub>S</sub></b>	10...30 V DC <sup>3)</sup>				
Ripple <sup>4)</sup>	± 10%				
Current consumption <sup>5)</sup>	≤ 30 mA				
<b>Switching outputs</b>	PNP, open collector: Q NPN, open collector: Q				
Output current I <sub>A</sub> max.	100 mA				
Operation mode	Light/dark switch. via L/D control cable + V <sub>S</sub> = light switching 0 V = dark switching				
Response time <sup>6)</sup>	≤ 0.7 ms				
Max. switching frequency <sup>7)</sup>	700 Hz				
<b>Connection types</b>	Cable, PVC, 2 m <sup>8)</sup> ; 4 x 0.18 mm <sup>2</sup> , Ø 3.8 mm Plug, M8 4-pin				
<b>VDE protection class<sup>9)</sup></b>	□				
<b>Circuit protection<sup>10)</sup></b>	A, B, C, D				
<b>Enclosure rating</b>	IP 67/NEMA 6				
<b>Ambient temperature T<sub>A</sub></b>	Operation -13...131°F (-25...55°C) Storage -40...158°F (-40...70°C)				
<b>Approximate weight</b>	0.9 oz (25 g) 2.3 oz (66 g)				
<b>Housing material</b>	Stainless steel/glass fiber reinforced ABS				

- 1) Object with 90% remission (based on standard white to DIN 5033)
- 2) Average service life 100,000 h at T<sub>A</sub> = 25°C
- 3) Limit values
- 4) May not exceed or fall short of V<sub>S</sub> 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
- 10) A = V<sub>S</sub> connections reverse-polarity protected  
B = Inputs and outputs reverse-polarity protected  
C = Interference pulse suppression  
D = Outputs overcurrent and short-circuit protected

**Connection Diagram**



wire colors refer to standard cable, not included with quick disconnect models