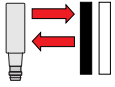


WT 4-2

Proximity/Diffuse Sensors - Background Suppression



0.2...5.1 in (4...130 mm)
sensing range



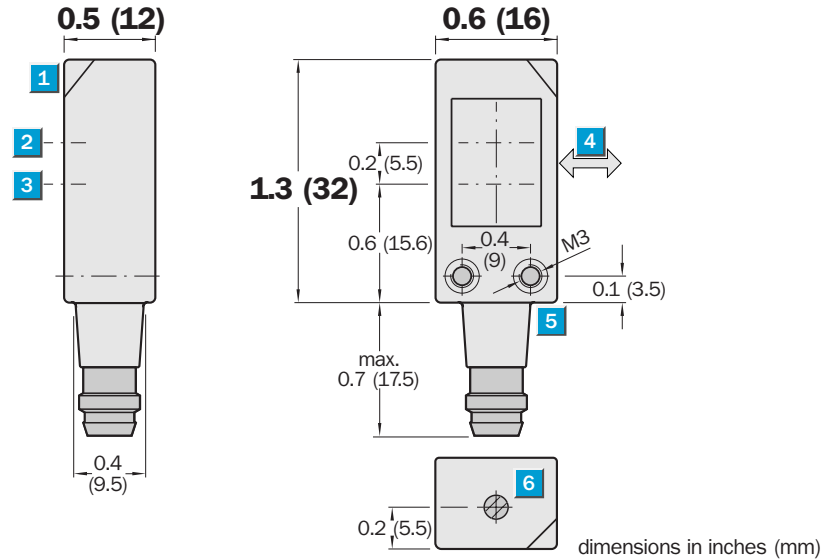
Highlights

- Rugged plastic housing
- Adjustable background suppression
- Insensitive to ambient light
- Crosstalk immunity
- Fast response time
- Red light for easy alignment
- Cable or M8 quick disconnect versions

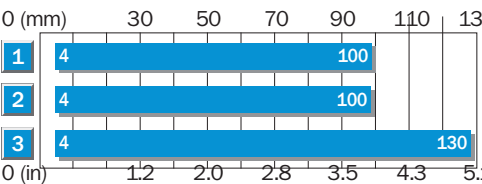
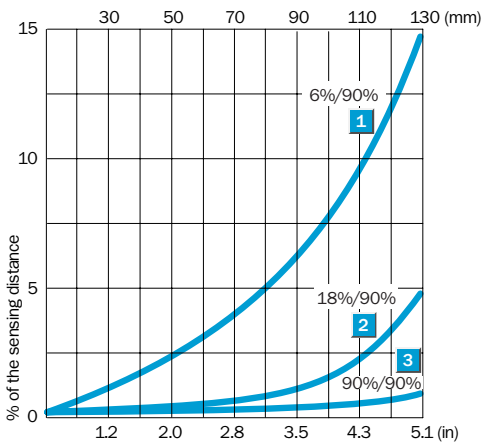
WT 4-2



Dimensional Drawing



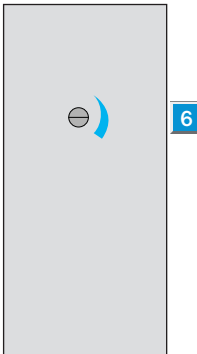
Background Suppression



- 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 LED output indicator
- 2 Optical axis, receiver
- 3 Optical axis, sender
- 4 Standard direction of the material being sensed
- 5 M3 threaded mounting hole
- 6 Sensing range adjustment

Order Information

Type	Part no.
WT 4-2P132	1 015 150
WT 4-2P330	1 015 143
WT 4-2P331	1 015 145
WT 4-2N132	1 012 874
WT 4-2N330	1 012 920
WT 4-2N331	1 015 147
WT 4-2P430	1 015 957

Accessories

Accessories	page
Cables and connectors	908
Mounting brackets	932, 935

Technical Data		WT 4-2-	P132	P330	P331	N132	N330	N331	P430
Sensing range, adjustable	0.2...5.1 in (4...130 mm)								
Background suppression	0.8...5.1 in (20...130 mm)								
Background suppression capability	% of set sensing distance (see previous pg)								
Light source¹⁾, light type	LED, red light								
Light spot diameter	0.1 in at 2.0 in (3 mm at 50 mm)								
Angle of divergence	Approx. 3.5°								
Supply voltage V_S	10...30 V DC ²⁾								
Ripple ³⁾	5 V _{SS}								
Current consumption ⁴⁾	< 20 mA								
Switching outputs	PNP, Q								
	NPN, Q								
	PNP, Q and \bar{Q}								
Switching mode	Light switching								
	Dark switching								
Output current I _A max.	100 mA								
PNP; output voltage HIGH	V _S - (< 2.5 V)								
PNP; output voltage LOW	Approx. 0 V								
NPN; output voltage HIGH	Approx. V _S								
NPN; output voltage LOW	< 1.5 V								
Response time ⁵⁾	< 500 μs								
Max. switching frequency ⁶⁾	1000 Hz								
Connection types	Cable ⁷⁾ , 2 m								
	Plug, M8 3-pin								
	Plug, M8 3-pin, with cable, 100 mm								
	Plug, M8 4-pin								
VDE protection class	⊕								
Circuit protection⁸⁾	A, B, C								
Enclosure rating⁹⁾	IP 67/NEMA 6								
Ambient temperature T_A	Operation -40...140°F (-40...60°C)								
	Storage -40...167°F (-40...75°C)								
Approximate weight	1.4 oz (20 g)								
Housing material	Glass fiber reinforced ABS								

- 1) Average service life 100,000 h where T_A = 25°C
- 2) Limit values
- 3) May not exceed or fall short of V_S tolerances

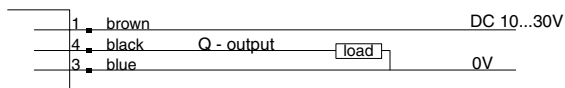
- 4) Without load
- 5) Signal transit time with resistive load
- 6) With light/dark ratio 1:1
- 7) Do not bend below 0°C

- 8) A = V_S connections reverse-polarity protected
- B = Output Q and \bar{Q} short-circuit protected
- C = Interference pulse suppression

- 9) IP 67: with screw-in cable receptacles
- IP 65: with plug-in cable receptacles

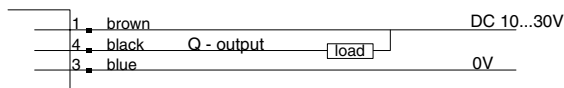
Connection Diagram

PNP Models

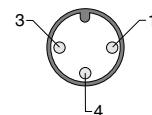


wire colors refer to standard cable, not included with quick disconnect models.

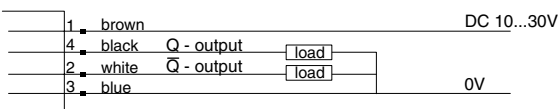
NPN Models



M8 Connector



PNP Models



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

M8 Connector

