

WT 12-2

Proximity/Diffuse Sensors-Foreground Suppression



1.4...3.9 in (35...100 mm)
sensing range



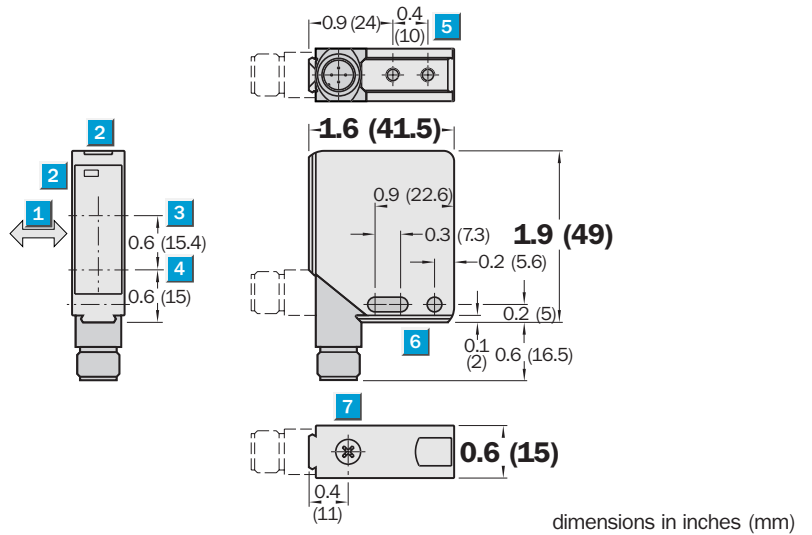
Highlights

- Rugged die cast metal housing
- Red light for easy alignment
- Insensitive to ambient light
- Signal strength indicator
- Crosstalk immunity
- Adjustable foreground suppression and sensing range
- Cable connections swivel 90° for easy installation

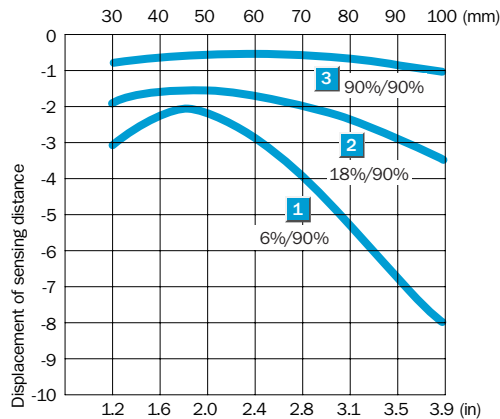
WT 12-2



Dimensional Drawing



Foreground Suppression



Adjustments

All types



- 1 Standard direction of the material being sensed
- 2 LED signal strength indicator
- 3 Center of optical axis, receiver
- 4 Center of optical axis, sender
- 5 M4 threaded mounting hole – 4 mm deep
- 6 Mounting holes \varnothing 4.2 mm
- 7 Sensing range adjustment

Order Information

Type	Part no.
WT 12-2P440	1 016 150
WT 12-2P140	1 016 148
WT 12-2N440	1 016 146
WT 12-2N140	1 016 145

Accessories

Accessories	page
Cables and connectors	909
Mounting brackets	922
Clamps*	921

* 2 pieces included with delivery

Technical Data		WT 12-2-	P440	P140	N440	N140				
Sensing range, adjustable	1.4...3.9 in (35...100 mm)									
Light source¹⁾, light type	LED, red light									
Light spot size	0.1 x 0.1 in at 2.4 in (3 x 3 mm at 60 mm)									
Supply voltage V_S	10...30 V DC ²⁾									
Ripple ³⁾	≤ 5 V _{SS}									
Current consumption ⁴⁾	≤ 30 mA									
	≤ 40 mA									
Switching outputs	PNP, Q and \bar{Q}									
	NPN, Q and \bar{Q}									
Output current I _A max.	≤ 100 mA									
Response time ⁵⁾	≤ 330 μs									
Max. switching frequency ⁶⁾	1500 Hz									
Connection types	Cable ⁷⁾ , 2 m									
	Plug, M12 4-pin									
VDE protection class⁸⁾	<input type="checkbox"/>									
Circuit protection⁹⁾	A, B, C									
Enclosure rating	IP 67/NEMA 6									
Ambient temperature T_A	Operation -40...140°F (-40...60°C)									
	Storage -40...167°F (-40...75°C)									
Approximate weight	4.2 oz (120 g)									
	7.1 oz (200 g)									
Housing material	Die cast zinc									

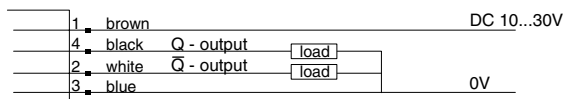
- 1) Average service life 100,000 h at T_A = 25°C
- 2) Limit values
- 3) May not exceed or fall short of V_S tolerances

- 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) Reference voltage 50 V DC

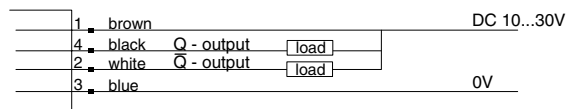
- 9) A = V_S connections reverse-polarity protected
- B = Output Q and \bar{Q} short-circuit protected
- C = Interference pulse suppression

Connection Diagram

PNP Models



NPN Models



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

