

WL 27-2

Reflex/Retro-Reflective Sensors



0...45.9 ft (0...14 m)

sensing range



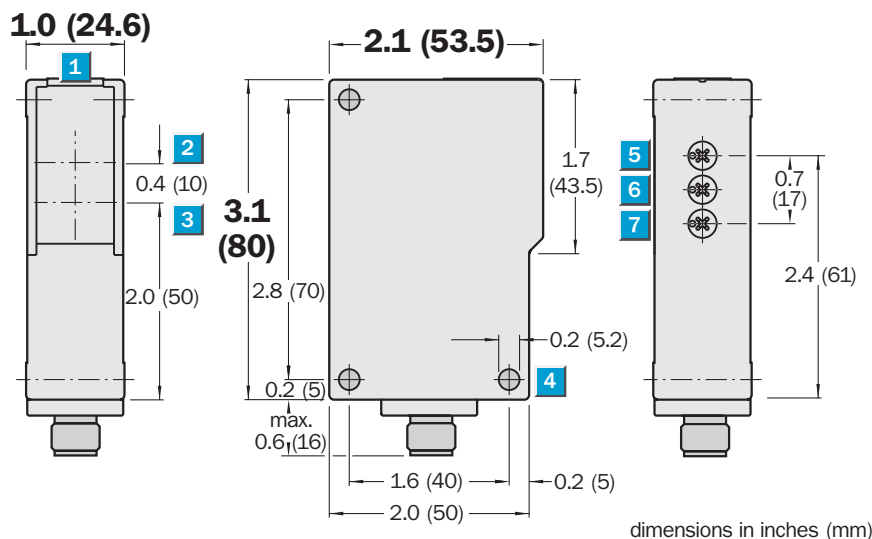
Highlights

- Red light for easy alignment
- Rugged plastic housing
- Selectable time delay
- Crosstalk immunity
- Signal strength indicator
- Models available with integrated lens heater
- Polarizing filters prevent false readings on reflective surfaces
- Cable or M12 quick disconnect versions available

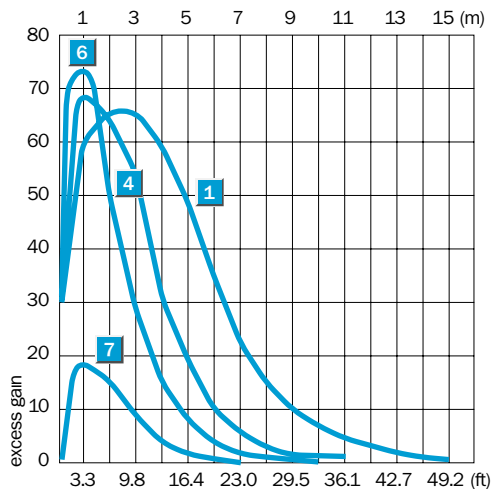
WL 27-2



Dimensional Drawing

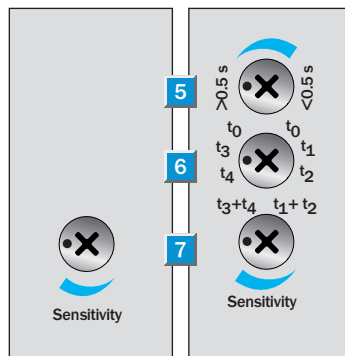


Excess Gain



Adjustments

WL 27-2F132	WL 27-2P630
WL 27-2F430	WL 27-2N630
WL 27-2F440	
WL 27-2F450	
WL 27-2F730	



- 1 LED signal strength indicator
- 2 Optical axis, sender
- 3 Optical axis, receiver
- 4 Mounting hole Ø 5.2 mm
- 5 Time control
- 6 Time delay selector switch
- 7 Sensitivity adjustment

Switch-selectable Time Delay

0.5 – 10 s

- t_0 Without time delay
- t_3 ON-delay from interruption light path
- t_4 OFF-delay from reset of light path
- $t_3 + t_4$ ON- and OFF-delay

0.02 – 0.5 s

- t_0 Without time delay
- t_1 ON-delay from interruption light path
- t_2 OFF-delay from reset of light path
- $t_1 + t_2$ ON- and OFF-delay

Reflector Type	Sensing Range
1 PL 80 A	0.1...14.0 m
2 P 975	0.3...10.0 m
3 PL 50 A	0.1...10.0 m
4 PL 40 A	0.1...9.0 m
5 PL 30 A	0.1...9.5 m
6 PL 20 A	0.1...7.0 m
7 Reflective tape diamond grade	0.3...4.3 m

Order Information

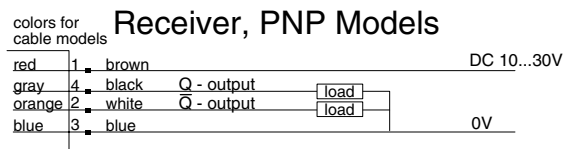
Type	Part no.
WL 27-2F132	1 015 100
WL 27-2F430	1 013 269
WL 27-2F440	1 015 101
WL 27-2F450	1 015 102
WL 27-2P630	1 015 108
WL 27-2F730	1 015 104
WL 27-2N630	1 015 107

Accessories	page
Cables & connectors	909, 914, 915
Mounting brackets	923, 924, 935
Reflectors	936

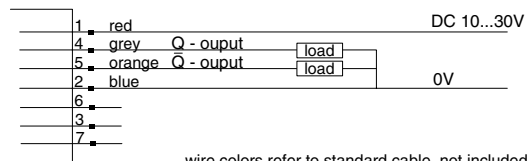
Technical Data		WL 27-2-	F132	F430	F440	F450	P630	F730	N630		
Sensing range	0...45.9 ft (0...14 m)/PL 80 A										
	Adjustable sensitivity										
Light source¹⁾, light type		LED, red light, polarized									
Light spot diameter	Approx. 8.7 in at 0.4 in (220 mm at 10 mm)										
Supply voltage V_S		10...30 V DC ²⁾									
Ripple ³⁾	$\leq 5 V_{SS}$										
Current consumption ⁴⁾	≤ 25 mA										
	≤ 35 mA, front screen heating										
Switching outputs		PNP, Q and $\bar{Q}$									
		NPN, Q and $\bar{Q}$									
Output current I_A max.	100 mA										
Response time ⁵⁾	$\leq 500 \mu s$										
Max. switching frequency ⁶⁾	1000 Hz										
Selectable delay ranges	0.5...10 s/0.02...0.5 s										
Test input "TE", sender OFF		PNP : Test input to 0 V									
		NPN : Test input to V_S									
Connection types		Cable ⁷⁾ , 2 m									
		Plug, M12 4-pin									
		Plug, square 6-pin									
		Plug, square 7-pin									
VDE protection class⁸⁾		☐									
Circuit protection⁹⁾		A, B, C									
Enclosure rating		IP 67/NEMA 6									
		IP 65									
Ambient temperature T_A		Operation -40...140°F (-40...60°C)									
		Storage -40...167°F (-40...75°C)									
Approximate weight		3.5 oz (100 g)									
Front screen heating											
Housing material		Glass fiber reinforced ABS									

1) Average service life 100,000 h at $T_A = 25^\circ\text{C}$
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



WT 27-2F730



wire colors refer to standard cable, not included

