

PHOTOSWITCH® Photoelectric Sensors  
**42JS & 42JT VisiSight™**  
 20 mm Rectangular

Product Selection

Sensing Mode	Light Source	Sensing Distance	Sensitivity Adjustment	Output Function	Output Type	Cat. No.‡	
Polarized Retroreflective							
42JS		Visible red	No adjustment	Complementary light or dark operate	NPN	42JS-P2MNB1-F4	
					PNP	42JS-P2MPB1-F4	
			Adjustment knob		NPN	42JS-P2MNA2-F4	
					PNP	42JS-P2MPA2-F4	
42JT		Class 1 laser	Teach button	Teachable light or dark operate	Auto PNP or NPN	42JT-P2LAT1-P4	
					42JT-P8LAT1-P4		
Clear Object Detection							
42JT		Visible red	2 m (6.6 ft)Δ	Teach button	Teachable light or dark operate	Auto PNP or NPN	42JT-C2LAT1-P4
Diffuse							
42JS		Visible red	Adjustment knob	Complementary light or dark operate	NPN	42JS-D2MNA2-F4	
					PNP	42JS-D2MPA2-F4	
					NPN	42JS-D2MNA1-F4	
					PNP	42JS-D2MPA1-F4	
42JT		Class 1 laser	Teach button	Teachable light or dark operate	Auto PNP or NPN	42JT-D2LAT1-P4	
					42JT-D8LAT1-P4		
Background Suppression							
42JS		Visible red	No adjustment	Complementary light and dark operate	NPN	42JS-B2MNB1-F4	
					PNP	42JS-B2MPB1-F4	
					NPN	42JS-B2MNB2-F4	
					PNP	42JS-B2MPB2-F4	
42JT		Class 1 laser	Teach button	Teachable light or dark operate	Auto PNP or NPN	42JT-B2LAT1-P4	
					42JT-B2LAT2-P4		
					42JT-B8LAT1-P4		
					42JT-B8LAT1-P4		
Color Mark							
42JT		White LED	12 mm (0.47 in.) ±2.5 mm	Teach button	Teachable light or dark operate	PNP or NPN (push pull)	42JT-F5LET1-P4
Transmitted Beam (emitter and receiver sold separately)							
42JS		Visible red	No adjustment	NA (emitter)	NA	42JS-E2EZB1-F4	
			Adjustment knob	Complementary light or dark operate	NPN	42JS-R9MNA1-F4	
		Infrared	No adjustment	NA (emitter)	NA	42JS-E1EZB1-F4	
			Adjustment knob	Complementary light or dark operate	NPN	42JS-R9MNA2-F4	
42JT		Visible red	No adjustment	NA (emitter)	NA	42JT-E2EZB1-P4	
			Teach Button	Teachable light or dark operate	Auto PNP or NPN	42JT-R9LAT1-P4	
		Class 1 laser	No adjustment	NA (emitter)	NA	42JT-E8EZB1-P4	
			Teach button	Teachable light or dark operate	Auto PNP or NPN	42JT-R8LAT1-P4	
Recommended DC micro (M12) quick-disconnect cordset, straight, 4-pin, 2 m						889D-F4AC-2	
Recommended DC pico (M8) quick-disconnect cordset, straight, 4-pin, 2 m						889P-F4AB-2	

§ Sensing distance with 92-124 reflector.

♣ Sensing distance with 92-125 reflector.

Δ Sensing distance with 92-118 reflector.

‡ **42JS connection options:** The -F4 suffix describes a 4-pin DC micro (M12) QD connector on a 150 mm (6 in.) pigtail. For additional connection options, replace the -F4 suffix with:

-A2 for a 2 m cable without QD connection (for example, 42JS-P2MPB1-A2).

-Y4 for a 4-pin DC pico (M8) QD connection on a 150 mm (6 in.) pigtail (for example, 42JS-P2MPB1-Y4).

**42JT connection options:** The -P4 suffix describes a 4-pin DC pico (M8) integral QD connector. For additional connection options, replace the -P4 suffix with:

-A2 for a 2 m cable without QD connection (for example, 42JT-P2LAT1-A2).

-F4 for a 4-pin DC micro (M12) QD connection on a 150 mm (6 in.) pigtail (for example, 42JT-P2LAT1-F4).



Visit our website: [www.ab.com/catalogs](http://www.ab.com/catalogs)



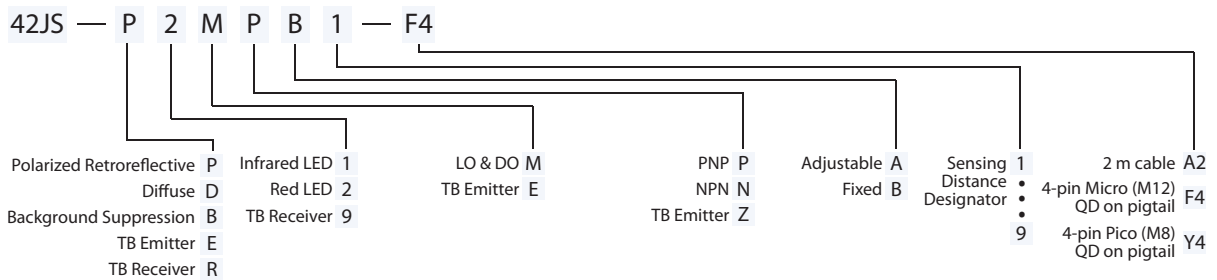
**Optical and Response Time Characteristics**

Sensing Mode	Polarized Retroreflective	Clear Object Detection	Diffuse	Background Suppression	Color Mark	Transmitted Beam
42JS VisiSight—Visible red 645 nm						
Field of View	2.8°	—	5.5° for 250 mm, 4° for 800 mm	14° for 55 mm, 17° for 130 mm	—	4°
Spot Size	175 mm @ 3.5 m	—	40 mm @ 250 mm, 60 mm @ 800 mm	7.6 mm @ 55 mm, 11.5 mm @ 130 mm	—	700 mm @ 10 m
Light Source	Visible red	—	Visible red	Visible red	—	Visible red and infrared
Response Time	1 ms	—	1 ms	1 ms	—	1 ms
42JT VisiSight—Visible red 660 nm (except for color mark models)						
Spot Size	500 mm @ 6 m	40 mm @ 1 m	70 mm @ 800 mm	15 mm @ 180 mm, 27 mm @ 400 mm	1 x 4 mm @ 12 mm (white LED)	1.1 m @ 13 m
Response Time	0.5 ms	0.5 ms	0.5 ms	0.5 ms	50 μs	0.5 ms
42JT VisiSight—Class 1 laser 650 nm						
Spot Size	14 mm @ 13 m	—	0.6 mm @ 250 mm	1.3 mm @ 120 mm	—	13 mm @ 18 m
Response Time	0.25 ms	—	0.333 ms	0.5 ms	—	0.25 ms

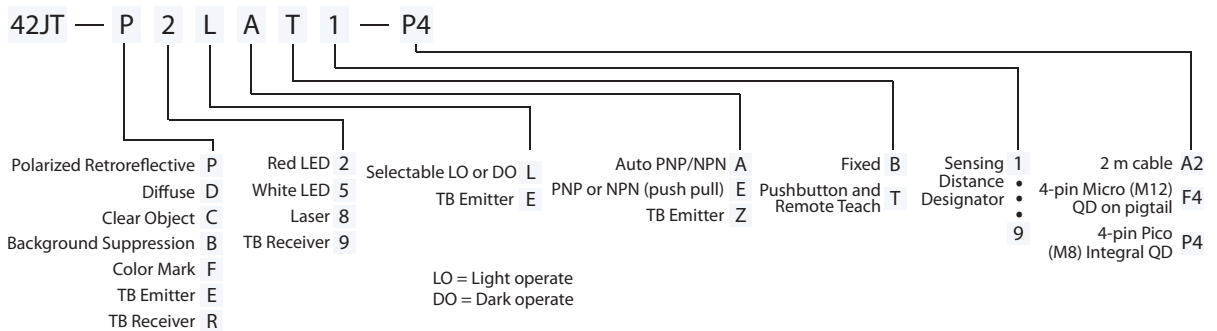
**Note:** For more information on spot size, refer to the typical response curves.

**Cat. No. Structure**

**Product Family**



**Product Family**



The cat. no. structure is for reference only. Please do not use this to create a cat. no. as the result may be unavailable.

2-Photoelectric Sensors

