



Description

The new Allen-Bradley 45AST Area Array is a compact, easy-to-use nonsafety light screen for small part detection and assembly applications. This transmitted beam array is ideal for use in a variety of applications from counting to process initiation, but it is particularly suited for bin-picking processes.

By installing a 45AST emitter/receiver pair across each bin, interfacing the area array to a controller and adding job lights or acoustic alarms, an error-free bin picking operation can be established that sounds alarms in the event of a misspick or provides visual indication for proper sequencing.

“Two-Dimensional Array Scanning Technology” allows the 45AST to sense an object regardless of its orientation provided that one axial dimension meets the minimum resolution requirements.

Available in three different resolutions in 50mm, 100mm and 150mm sensing heights, the 45AST adds flexibility and efficiency to your small assembly processes.

General Specifications

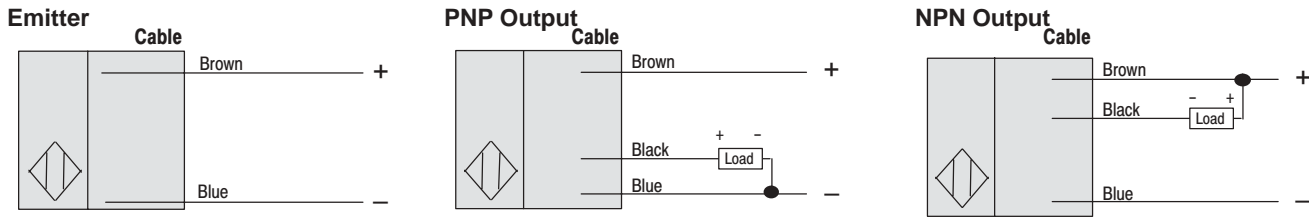
Output Rating	100mA
Supply Voltage	12 to 24V DC \pm 10%, Ripple 10% (Max)
Light Source	Infrared, 860nm
Status Indicators Transmitter Receiver	Power On : 1 Green LED Power On : 1 Green LED, Alignment and Output : 3 Orange LEDs
Short Circuit Protection	Yes
Reverse Polarity Protection	Yes
Operation Mode	Transmitted Beam, Light Operate
Material	Aluminum housing, acrylic window
Wiring	2m (6.4ft) cable
Operating Temperature	-5° C to +55° C (23° F to 131°)
Insulation Resistance	500V, 20M Ω (max)
Ambient Light Immunity	5000 LX (max)
Operating Humidity	35% to 85% RH
Operating Environment	IP 67
Vibration	10-55Hz , 0.5mm (0.01in) amplitude
Shock	Half Sine, 30g, 11ms duration
Approvals	CE marked for all applicable directives

Features

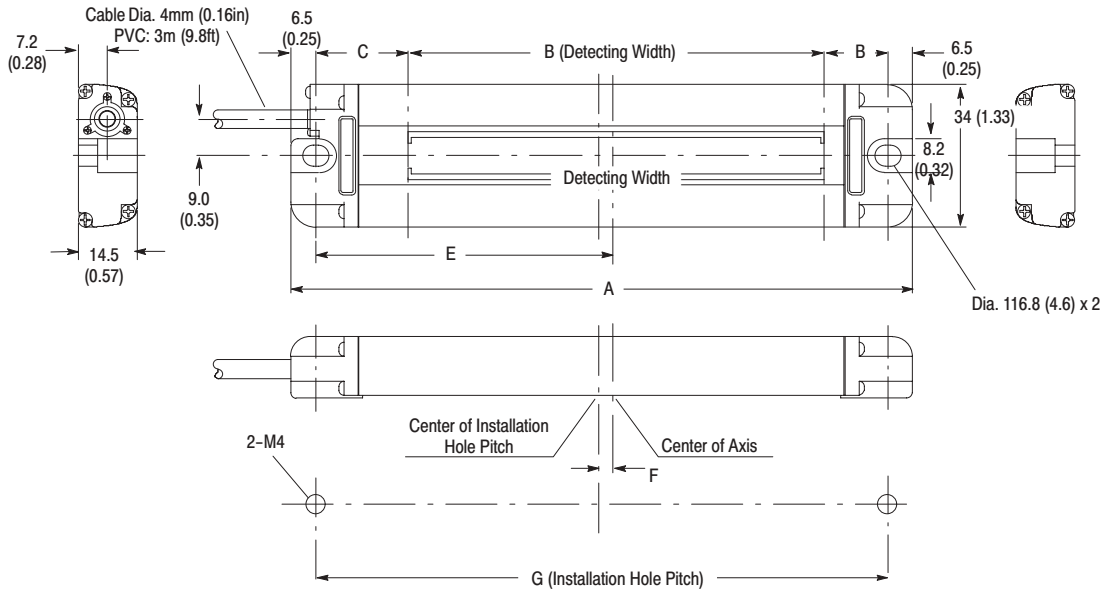
- Introduces Two-Dimensional Array Scanning Technology
- PNP or NPN Output
- Minimum object resolution from 11mm to 17mm (0.43in to 0.66in)
- Sensing ranges up to 2m (6.5ft)
- IP67 rated housing
- CE marked for all applicable directives
- Easy bracket-free mounting
- Highly visible alignment LEDs

45AST Area Array

Wiring Diagrams



Dimensions—mm (inches)



Model	mm (inches)						
	A	B	C	D	E	F	G
45AST-1J P B1-A2	100 (3.93)	50 (1.96)	22.5 (0.88)	14.5 (0.57)	47.5 (1.87)	4 (0.15)	87 (3.42)
45AST-1J P B4-A2	200 (7.87)	150 (5.9)	22 (0.86)	15 (0.59)	97 (3.81)	3.5 (0.13)	187 (7.36)
45AST-1J P B2-A2	150 (5.9)	100 (3.93)			72 (2.83)		137 (5.39)

① N = NPN and P = PNP.

Selection Guide—mm (inches)

Current Consumption (max)		Range	Number of Optical Axis	Response Time (max)	Resolution Diameter	Sensing Height	Output Type	Catalog Number
Transmitter	Receiver							
70mA	65mA	0.5–2m (1.6–6.5ft)	5	4ms	15 (0.59)	50 (1.96)	PNP	45AST-1JPB1-A2
							NPN	45AST-1JNB1-A2 ①
80mA	110mA	150–800mm (5.9–31.4in)	10	8ms	11 (0.43)	100mm (3.93in)	PNP	45AST-1JPB2-A2
							NPN	45AST-1JNB2-A2 ①
					17 (0.66)	150mm (5.9in)	PNP	45AST-1JPB4-A2
							NPN	45AST-1JNB4-A2 ①

① NPN versions available with longer lead times.