

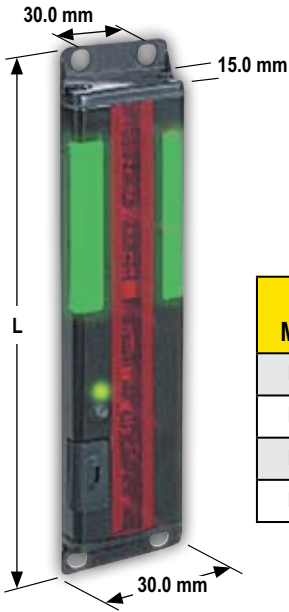
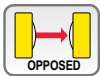
EZ-LIGHT™ PVA

Pick-to-Light Parts Verification Array

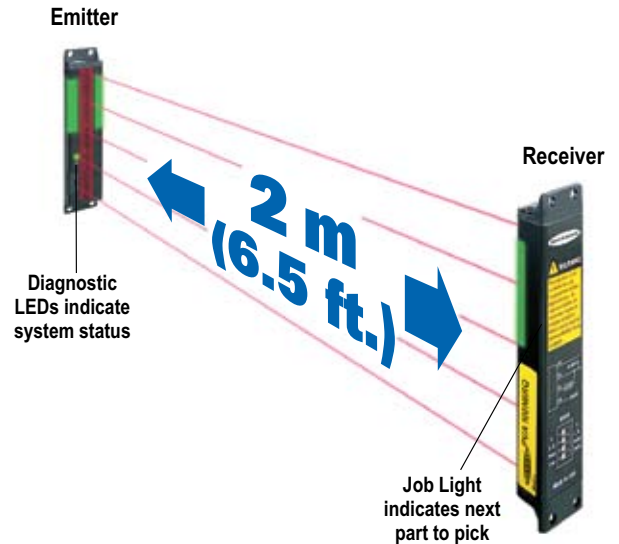
- Highly visible job lights on each emitter and receiver guide assemblers through the correct part-gathering sequence.
- Reduced chance of missed parts and parts assembled in the wrong order increases quality and decreases production costs.
- Asynchronous emitter and receiver requires no controller.
- Sensor can also be used to sense objects larger than 35 mm in diameter.
- Emitter and receiver interface easily with the existing process controller, saving installation time, wiring costs and maintenance.
- Diagnostic LEDs indicate setup and system errors at a glance, and the wide field of view makes alignment easy.
- Operating range is up to 2 m.
- Four lengths are available: 100, 225, 300 and 375 mm.
- A choice of protective brackets are available.



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Models	No. of Beams	Length (L)
PVA100	5	137.8 mm
PVA225	10	266.4 mm
PVA300	13	341.4 mm
PVA375	16	416.6 mm



EZ-LIGHT™ PVA, 12-30V dc

→ Infrared LED

Sensing Mode/LED	Description	Range	Array Length & Response Time	Connection	Job Light Input	NPN Models	PNP Models
	Emitter/Receiver Pair	2 m	100 mm (5 Beams) 20 ms	2 m	NPN: 0V dc PNP: +5 to 30V dc	PVA100N6	PVA100P6
	Emitter					PVA100N6E	PVA100P6E
	Receiver					PVA100N6R	PVA100P6R
	Emitter/Receiver Pair					PVA100N6Q	PVA100P6Q
	Emitter					PVA100N6EQ	PVA100P6EQ
	Receiver					PVA100N6RQ	PVA100P6RQ

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Connection options: A model with a QD requires a mating cordset (see page 440).

EZ-LIGHT™ PVA, 12-30V dc (cont'd)

Infrared LED

Sensing Mode/LED	Description	Range	Array Length & Response Time	Connection	Job Light Input	NPN Models	PNP Models
 OPPOSED	Emitter/Receiver Pair	2 m	225 mm (10 Beams)	2 m	NPN: 0V dc PNP: +5 to 30V dc	PVA225N6	PVA225P6
	Emitter					PVA225N6E	PVA225P6E
	Receiver						
	Emitter/Receiver Pair			2 m 4-pin Euro Pigtail QD		PVA225N6Q	PVA225P6Q
	Emitter						
	Receiver					PVA225N6RQ	PVA225P6RQ
	Emitter/Receiver Pair		300 mm (13 Beams)	2 m	NPN: 0V dc PNP: +5 to 30V dc		
	Emitter					PVA300N6E	PVA300P6E
	Receiver						
	Emitter/Receiver Pair			2 m 4-pin Euro Pigtail QD		PVA300N6Q	PVA300P6Q
	Emitter						
	Receiver					PVA300N6RQ	PVA300P6RQ
	Emitter/Receiver Pair	375 mm (16 Beams)	2 m	NPN: 0V dc PNP: +5 to 30V dc	PVA375N6		
	Emitter				PVA375N6E	PVA375P6E	
	Receiver						PVA375N6R
	Emitter/Receiver Pair		2 m 4-pin Euro Pigtail QD		PVA375N6Q	PVA375P6Q	
	Emitter						PVA375N6EQ
	Receiver				PVA375N6RQ	PVA375P6RQ	

Connection options: A model with a QD requires a mating cordset (see page 440).

- Photoelectrics Sensors
- Fiber Optic Sensors
- Special Purpose Sensors
- Measurement & Inspection Sensors
- Vision
- Wireless
- Indicators**
- Safety Light Screens
- Safety Laser Scanners
- Fiber Optic Safety Systems
- Safety Controllers & Modules
- Safety Two-Hand Control Modules
- Safety Interlock Switches
- Emergency Stop Devices


ACCESSORIES
page 440

- EZ-LIGHT™ INDICATORS
- EZ-LIGHT™ SENSORS**
- K50 & K80
- PVD
- PVA**
- VTB

EZ-LIGHT™ PVA Specifications			
Beam Spacing	25.0 mm		
Sensing Height	100, 225, 300 or 375 mm, depending on emitter and receiver models		
Supply Voltage and Current	12 to 30V dc (10% max. ripple) at less than 62 mA for the emitter and 50 mA for the receiver (exclusive of load)		
Supply Protection Circuitry	Protected against reverse polarity		
Output Configuration	Receivers have one solid-state dc output, programmable for light or dark operate: Models PVA...N6R have current sinking (NPN) open-collector transistor Models PVA...P6R have current sourcing (PNP) open-collector transistor		
Output Rating	150 mA max. OFF-state leakage current: less than 2 µA ON-state saturation voltage: less than 1V dc at 10 mA and less than 1.5V dc at 100 mA		
Output Response Time	Sensor Size	Standard	With Crosstalk from Adjacent Units
	100 mm	20 milliseconds	30 milliseconds max.
	225 mm	40 milliseconds	60 milliseconds max.
	300 mm	52 milliseconds	78 milliseconds max.
	375 mm	64 milliseconds	96 milliseconds max.
Output Protection Circuitry	Protected against false pulse at power-up and continuous overload or short circuit of outputs		
Sensing Resolution	35 mm min. diameter		

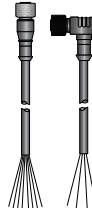
More on next page


EZ-LIGHT™ PVA Specifications (cont'd)

Status Indicators	<p>Emitter: One Green LED to indicate power ON/OFF One Red LED to indicate frequency selected</p> <p>Receiver: One Green LED to indicate power ON/OFF One Yellow LED to indicate output state</p> <p>Emitter & Receiver: Both have two highly visible "job lights" which are turned ON/OFF by applying an external signal to the white wire. The job lights may be programmed for steady or flashing green.</p>
Construction	Black painted aluminum housing; acrylic lenses; PBT polyester end caps; thermoplastic elastomer programming switch cover; stainless steel mounting brackets and hardware
Environmental Rating	IEC IP62; NEMA 2
Connections	<p>Emitter: 3-conductor PVC-jacketed 2 m cable which is either unterminated or terminated with a 4-pin Euro-style quick-disconnect connector, depending on model. Cable diameter is 3.3 mm.</p> <p>Receiver: 4-conductor PVC-jacketed 2 m cable which is either unterminated or terminated with a 4-pin Euro-style quick-disconnect connector, depending on model. Cable diameter is 3.3 mm.</p>
Operating Temperature	0° to +50° C
Certifications	
Hookup Diagrams	Emitters: IN19 (p. 744) All others: IN18 (p. 744)




Cordsets


Euro QD		
See page 658		
Threaded 4-Pin		
Length	Straight	Right-Angle
2 m	MQDC-406	MQDC-406RA
5 m	MQDC-415	MQDC-415RA
9 m	MQDC-430	MQDC-430RA



 Additional cordset information available. See page 655.

Brackets

PVA		
 pg. 643 SMBPVA...	 pg. 643 SMBPVA..C	 pg. 642 SMBPVA2

 Additional brackets and information available. See page 601.

Indicator Hookups

REFERENCE

IN17	PVD with Switch-Selectable Output Current Sinking (NPN)	Key
<p>* See configuration information in data sheet for job light enable input requirements. † For specialized applications requiring custom configuration options. See data sheet and contact your Banner representative for more information.</p>	<p>1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray</p>	
PVD with Switch-Selectable Output Current Sourcing (PNP)		
<p>* See configuration information in data sheet for job light enable input requirements. † For specialized applications requiring custom configuration options. See data sheet and contact your Banner representative for more information.</p>		
5-Pin Euro		

IN18	PVA Current Sinking (NPN)	Key
<p>* See data sheet for Programming information or job light enable requirements.</p>	<p>1 = Brown 2 = White 3 = Blue 4 = Black</p>	
PVA Current Sourcing (PNP)		
<p>* See data sheet for Programming information or job light enable requirements.</p>		
4-Pin Euro		

IN19	PVA Emitter	Key
<p>* See data sheet for programming information or job light enable requirements.</p>	<p>1 = Brown 2 = White 3 = Blue 4 = Black†</p> <p>† Not Used</p>	
4-Pin Euro		

IN20	VTB Current Sinking (NPN) for Solid Job Light—1-Color	Key
	<p>1 = Brown 2 = White 3 = Blue 4 = Black</p>	
VTB Current Sinking (NPN) for Flashing Job Light—1-Color		
4-Pin Euro		

