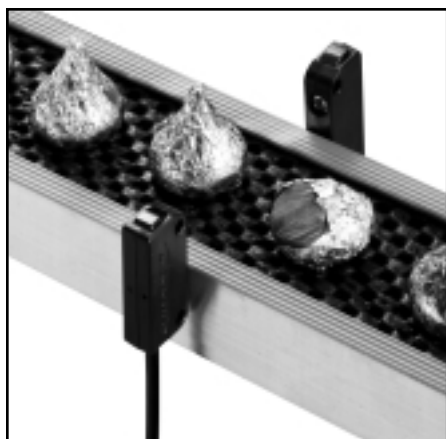




# Q14 Series

Miniature self-contained dc photoelectric sensors



## Q14 Series Features

- Self-contained dc sensors in miniature right-angle housings
- IP54; NEMA 4 construction; hermetically-sealed optics
- 1.8 m (70") opposed range
- Choose models for light operate or dark operate; choose either NPN (sinking) or PNP (sourcing) output models
- Choice of integral cable or quick-disconnect connector
- Mounting bracket is included



Infrared, 880 nm



## Q14 Series Opposed-Mode Emitter (E) and Receiver (R)

Models	Range	Cable*	Supply Voltage	NPN/ PNP	L.O./ D.O.	Excess Gain	Beam Pattern
Q146E Q146EQ	1.8 m (70")	2 m (6.5') 3-Pin Pico-style Pigtail QD	10-30V dc	—	—		
Q14AN6R Q14AN6RQ		2 m (6.5') 3-Pin Pico-style Pigtail QD		NPN	L.O.		
Q14RN6R Q14RN6RQ		2 m (6.5') 3-Pin Pico-style Pigtail QD		NPN	D.O.		
Q14AP6R Q14AP6RQ		2 m (6.5') 3-Pin Pico-style Pigtail QD		PNP	L.O.		
Q14RP6R Q14RP6RQ		2 m (6.5') 3-Pin Pico-style Pigtail QD		PNP	D.O.		

\*A model with a QD connector requires an optional mating cable (see page 4).




### WARNING . . . Not To Be Used for Personnel Protection

Never use these products as sensing devices for personnel protection. Doing so could lead to serious injury or death.

These sensors do NOT include the self-checking redundant circuitry necessary to allow their use in personnel safety applications. A sensor failure or malfunction can cause either an energized or de-energized sensor output condition. Consult your current Banner Safety Products catalog for safety products which meet OSHA, ANSI and IEC standards for personnel protection.

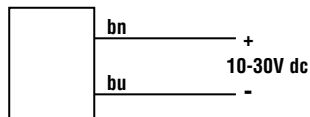
# Q14 Series

## Q14 Series Specifications

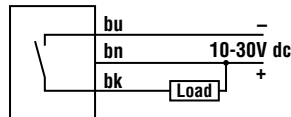
<b>Supply Voltage and Current</b>	10 to 30V dc (10% maximum ripple); Emitter: 15 mA; Receiver: 15 mA (exclusive of load)
<b>Supply Protection Circuitry</b>	Protected against reverse polarity
<b>Output Configuration</b>	SPST solid-state dc switch; Choose NPN (current sinking) or PNP (current sourcing) models Choose light operate (N.O.) or dark operate (N.C.) models
<b>Output Rating</b>	150 mA maximum <b>Off-state leakage current:</b> <10 microamps at 30V dc; <b>On-state saturation voltage:</b> <0.5V at 10 mA dc; <1.0V at 150 mA dc
<b>Output Protection Circuitry</b>	Protected against false pulse on power-up and continuous overload or short circuit of outputs Overload trip point ≥220 mA, typical, at 20°C
<b>Output Response Time</b>	8 ms ON, 4 ms OFF
<b>Repeatability</b>	1.0 ms
<b>Indicators</b>	<b>Receivers have two LEDs:</b> Green and Yellow Green <b>glowing steadily</b> = power to sensor is ON Green <b>flashing</b> = output is overloaded Yellow <b>glowing steadily</b> = light is sensed Yellow <b>flashing</b> = marginal excess gain (1-1.5x) in light condition <b>Emitter:</b> One GREEN LED indicates power to sensor is ON
<b>Construction</b>	Housings are black ABS; Rated UL 94V0 Lenses are hermetically-sealed glass Stainless steel M3 mounting hardware is included; stainless steel mounting bracket is included
<b>Environmental Rating</b>	IP54; NEMA 4
<b>Connections</b>	2 m (6.5') or 9 m (30') attached cable, or 3-pin Pico-style pigtail quick-disconnect fitting. QD cables are ordered separately.
<b>Operating Conditions</b>	<b>Temperature:</b> -20° to +55°C (-5° to +131°F) <b>Maximum Relative Humidity:</b> 90% at 50°C (non-condensing)
<b>Certifications</b>	

## Q14 Series Hookups

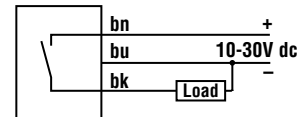
**Emitters**  
Cabled Hookup



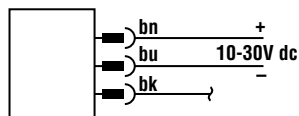
**Receivers with NPN Outputs**  
Cabled Hookup



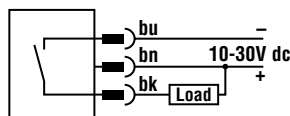
**Receivers with PNP Outputs**  
Cabled Hookup



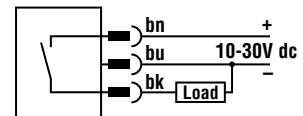
**Emitters**  
Quick-Disconnect Hookup



**Receivers with NPN Outputs**  
Quick-Disconnect Hookup

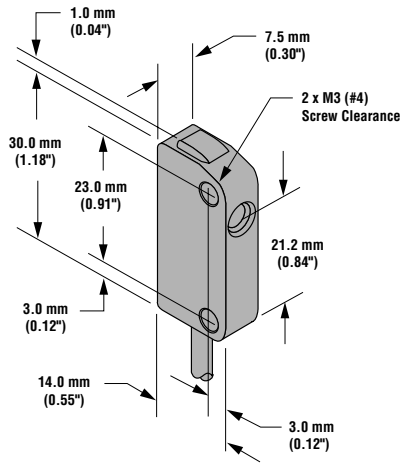


**Receivers with PNP Outputs**  
Quick-Disconnect Hookup

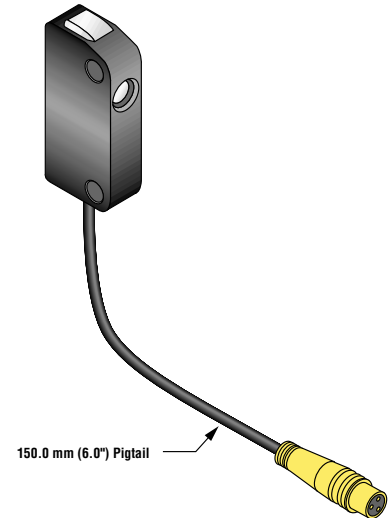


## Q14 Series Dimensions

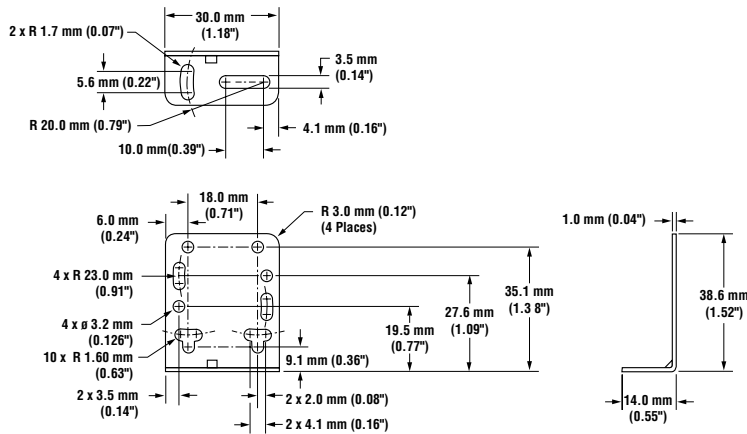
### Cabled Models



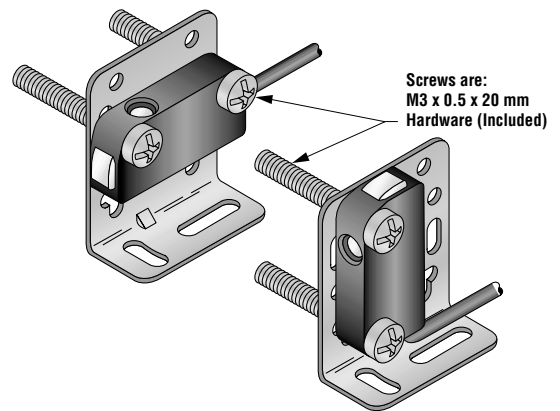
### Quick-Disconnect Models



### Mounting Bracket (included)



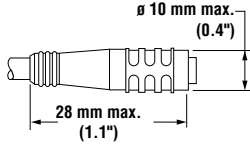
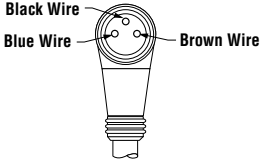
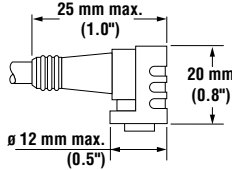
### Mounting Orientation



# Q14 Series

## Accessories

### Quick-Disconnect (QD) Cables

Style	Model	Length	For use with	Dimensions	Pinout
3-pin Pico Style straight	<b>PKG3-2</b>	2 m (6.5')	All Q14 sensors with quick-disconnect fitting		
3-pin Pico Style right-angle	<b>PKW3-2</b>	2 m (6.5')			



**WARRANTY:** Banner Engineering Corp. warrants its products to be free from defects for one year. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture found to be defective at the time it is returned to the factory during the warranty period. This warranty does not cover damage or liability for the improper application of Banner products. This warranty is in lieu of any other warranty either expressed or implied.