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TECHNOLOGY GROUP

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Find the *Banner Engineering P4ORS* at our website: *Click HERE*

PresencePLUS P4 Sealed OMNI

OMNI, OMNI 1.3, and Color OMNI



Optional Lens Enclosure shown mounted on camera

- Ruggedized housing and connectors
- Washdown rating of IEC IP68
- Available for standard, high-resolution 1.3 megapixel, and Color OMNI
- Supports a wide range of lighting
- Supports standard C-mount lenses
- Choice of lens enclosure or integrated IP68 Ring Light LED..R90S Series
- Supports Banner Engineering's standard *Presence*PLUS user interface, image processing, and communications

Models

Model	Description
P4ORS	P4 Omni Right Angle—IP68 640 × 480 gray scale
P4O1.3RS	P4 Omni 1.3 Megapixel Right Angle—IP68 1280 × 1024 gray scale
P4CORS	P4 Color Omni Right Angle—IP68 752 × 480 color and gray scale

NOTE: Models require a Lens Enclosure or Integrated Ring Light, which are available separately.

Specifications

Power

Voltage: 10 to 30V dc (24V dc ± 10% if a light source is powered by the Sensor)

Current:

P4 OMNI: 650 mA maximum (exclusive of I/O load and lights)

P4 Color OMNI: 550 mA maximum (exclusive of I/O load and lights)

P4 OMNI 1.3: 550 mA maximum (exclusive of I/O load and lights)

Discrete I/O

1 Trigger IN

1 Strobe OUT

4 Programmable I/O

1 Product Change

1 Remote Teach

Input/Output Configuration

NPN or PNP software selectable

Output Rating

150 mA

ON-State Saturation Voltage: <1V at 150 mA max. NpN

OFF-State Leakage Current: <100 microamps NPN or PNP

Exposure Time

P4 OMNI: 0.1 to 2830 ms

P4 OMNI 1.3: 0.1 to 1670 ms

P4 Color OMNI: 0.1 to 1000 ms

Imager

P4 OMNI: 4.736 × 3.552 mm, 5.900 mm diagonal (1/3 inch CCD)

P4 OMNI 1.3: 8.576 × 6.861 mm, 10.9829 mm diagonal (2/3 inch CMOS)

P4 Color OMNI: 4.5 × 2.9 mm, 5.4 mm diagonal (1/3 inch CMOS)

Lens Mount

C-mount

Pixel Size

P4 OMNI: 7.4 × 7.4 microns

P4 OMNI 1.3: 6.7 × 6.7 microns

P4 Color OMNI: 6.0 × 6.0 microns

Construction

Die-cast nickel-plated aluminum sensor housing, glass or acrylic window

Weight: Approximately 0.43 kg (0.95 lb)

Environmental Rating

IEC IP68

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Communication

10/100 Ethernet connection for running PresencePLUS P4 software and/or output inspection results. M12, 8-pin, female connector

RS-232 flying leads

Display Options

PC or NTSC video; 9 m (30 ft) max. cable length

Memory

INS Storage Memory: 32 MB

Number of INS Files: 999

Operating Conditions

Stable Ambient Temperature: 0° to +50° C (+32° to +122° F)

Stable Ambient Lighting: No large, quick changes in light level; no direct or reflected sunlight

Certifications

CE IEC IP68

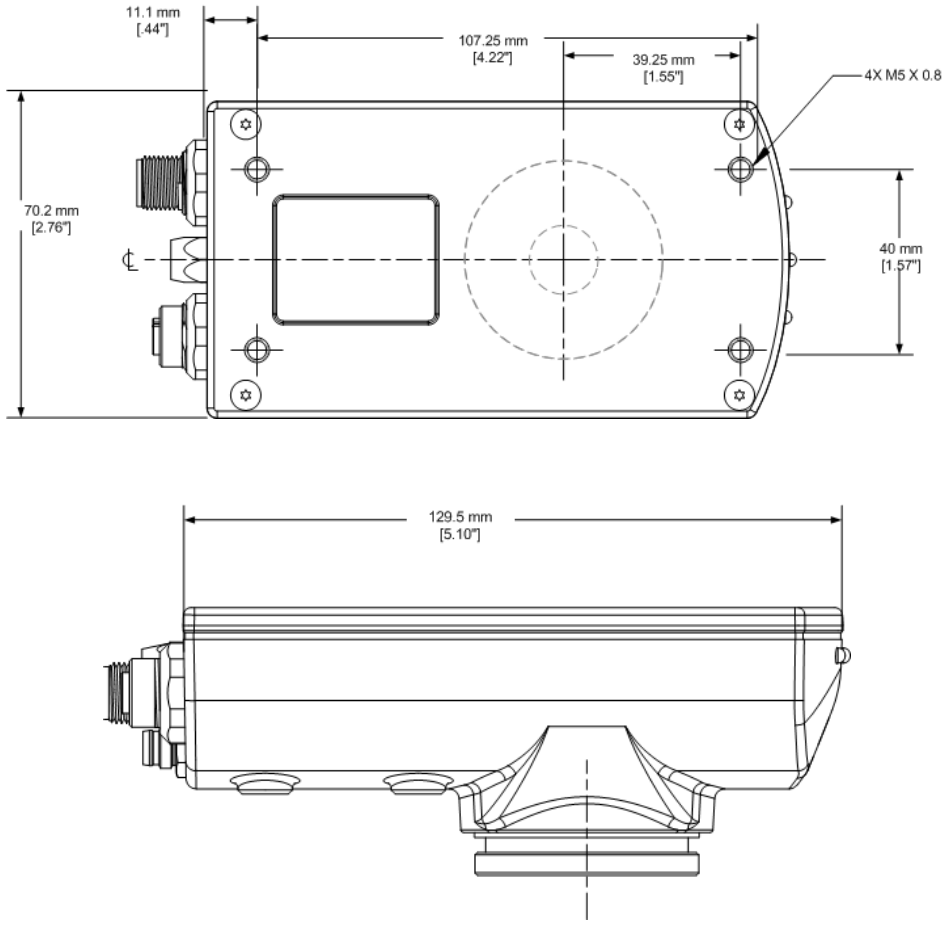
Acquisition

Levels of Gray Scale: 256

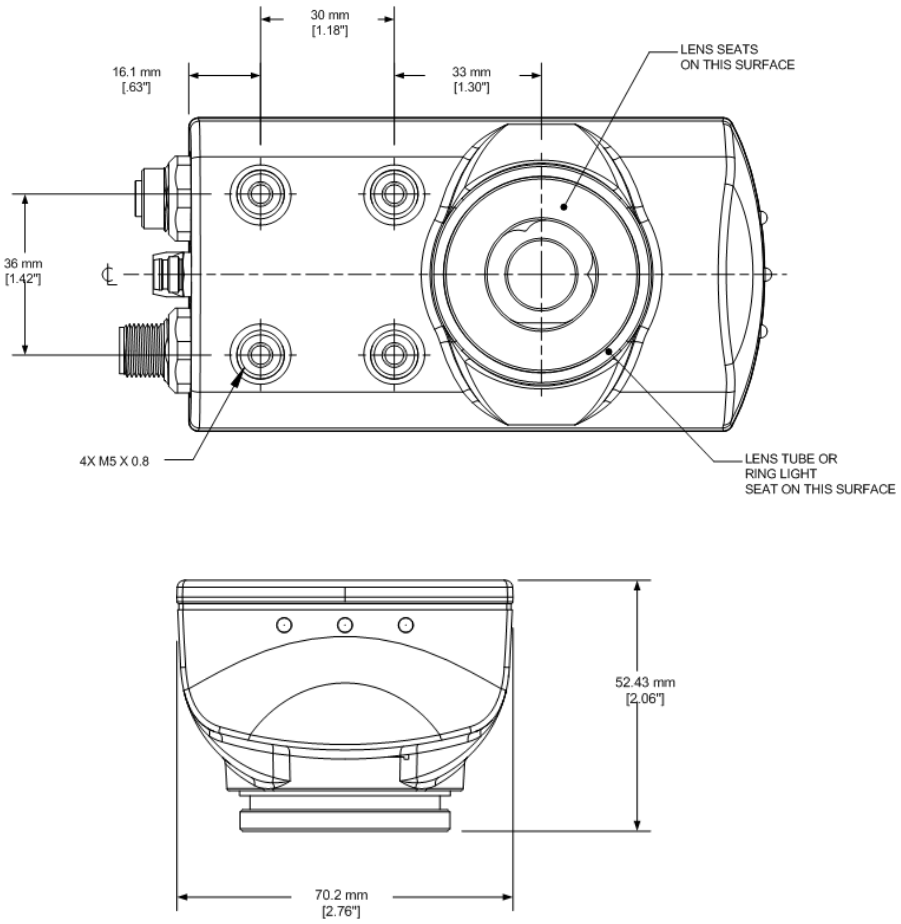
Color OMNI: 256 Red, Green, and Blue

Camera	Frames Per Second	Image Size (pixels)
P4 OMNI	48 max.	640 × 480
P4 OMNI 1.3	26.8 max.	1280 × 1024
P4 Color OMNI	17 max.	752 × 480

Dimensions



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Cable Connections

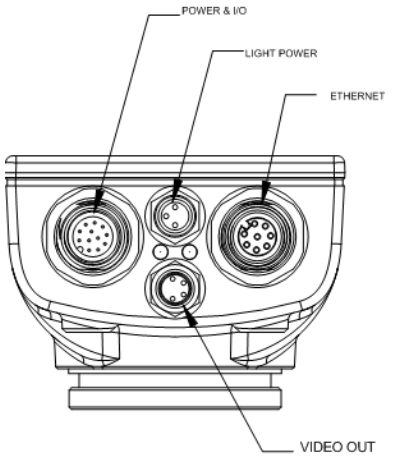


Figure 1. Cable Connections

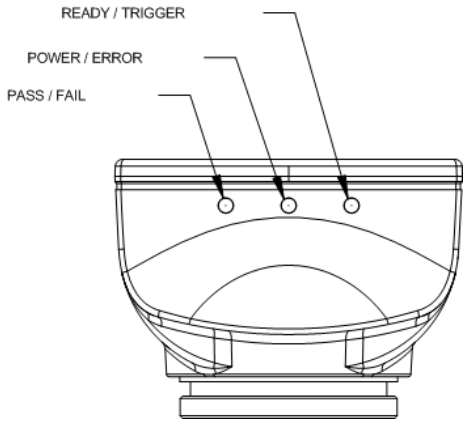


Figure 2. LED Indicators

Power and I/O Pinouts

Pin #	Wire Color	Description	Direction
1	White	Discrete I/O #3	In/Out
2	Brown	+10 to 30V dc	Input

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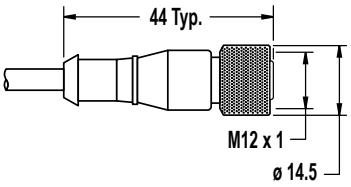
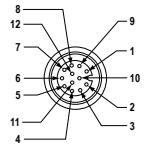
Pin #	Wire Color	Description	Direction
3	Green	RS-232 Ground[1]	Output
4	Yellow	RS-232 Transmit[1]	Output
5	Gray	Remote Teach	Input
6	Pink	Trigger	Output
7	Blue	-10 to 30V dc	Input
8	Red	Discrete I/O #2	In/Out
9	Orange	Product Change	Input
10	Light Blue	Discrete I/O #4	In/Out
11	Black	Discrete I/O #1	In/Out
12	Violet	RS-232 Receive[1]	Input
Shield	Bare Metal	Chassis Ground	

NOTE: All unused inputs and outputs should be connected to ground if configured as PNP, and connected to +24V dc if configured as NPN. Serial input pins should be connected to ground.

Cordsets

Power Cordsets

I/O sealed high-flex cordsets 12 flying leads

12-Pin M12/Euro-Style Cordsets with Open Shield				
Model	**Length**	**Style**	**Dimensions**	**Pinout**
MQDC2S-1206	1.83 m (6 ft)	Straight		 1 = White 2 = Brown 3 = Green 4 = Yellow 5 = Gray 6 = Pink 7 = Blue 8 = Red 9 = Orange 10 = Lt. Blue 11 = Black 12 = Violet
MQDC2S-1215	4.57 m (15 ft)			
MQDC2S-1230	9.14 m (30 ft)			
MQDC2S-1250	15.2 m (50 ft)			
MQDC2S-1275	22.9 m (75 ft)			

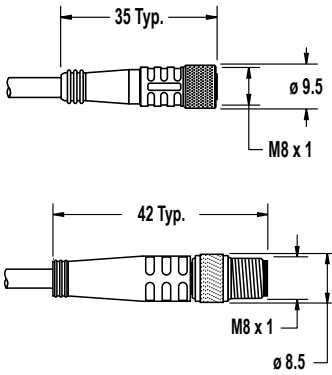
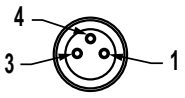
[1] These three wires make up the RS-232 serial connection.

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Camera to IP68 Ring Light Cordsets

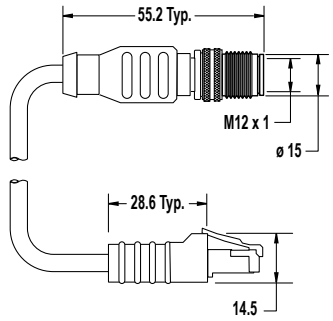
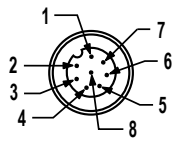
PKG3M-35-PSG3M is a cordset from the Camera to the IP68 Ring Light

PKG3M-2-PSG3M is a Cordset from the Camera to the external light

3-Pin Threaded/Snap M8/Pico-Style Cordsets—Double Ended				
Model	**Length**	**Style**	**Dimensions**	**Pinout**
PKG3M-.35-PSG3M	0.35 m (1.1 ft)	Straight		 **Female**  **Male** 1 = Brown 3 = Blue 4 = Black
PKG3M-2-PSG3M	2.00 m (6.6 ft)			

Ethernet Cordsets

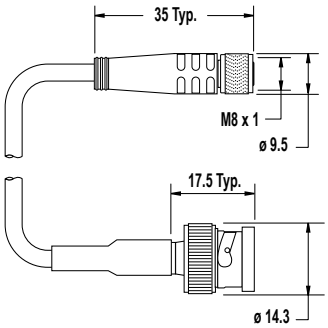
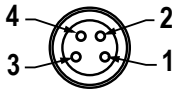
Straight Ethernet Cordset (for use with a hub)

RJ45 Ethernet to 8-Pin Threaded M12/Euro-Style Cordsets				
Model	**Length**	**Style**	**Dimensions**	**Pinout**
STP-MAQDC-806	1.83 m (6 ft)	Cat5e Shielded		  1 = Wh/Bl 2 = Wh/Br 3 = Brown 4 = Orange 5 = Wh/Gr 6 = Wh/Or 7 = Blue 8 = Green
STP-MAQDC-815	4.57 m (15 ft)			
STP-MAQDC-830	9.14 m (30 ft)			

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Video Cordsets

Video Cordset for use with PPM8

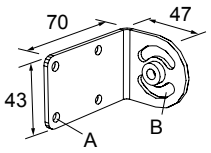
BNC to 4-Pin Threaded M8/Pico-Style Cordsets with Shield				
Model	**Length**	**Style**	**Dimensions**	**Pinout**
PKG4M-2/CS	2.00 m (6.6 ft)	BNC/Pico QD Straight		 **Female** 1 = Brown 2 = Not Used 3 = Blue 4 = Drain  **Male**
PKG4M-5/CS	5.00 m (16.4 ft)			
PKG4M-9/CS	9.00 m (29.5 ft)			

Mounting Bracket

SMBP4SRAF

Bracket includes:

- 4 stainless steel M5 mounting screws
- Allen wrench



A = 4 × ø 5.5; B = 4 × ø 7

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