PresencePLUS ®P4
Vision Sensors
Sealed for Challenging Industrial Environments.

Powerful Inspection Tools in a Compact, Robust Housing

The Sealed *Presence*PLUS *P4* solves thousands of applications in your plant.

- ▶ Label alignment inspection
- ▶ Color verification and matching
- ▶ Flaw detection
- ▶ 2D and 1D bar code reading
- ▶ Optical character reading and verification
- ▶ Packaging inspection
- ▶ Assembly verification
- ▶ Fill level detection
- ▶ Adhesive bead inspection
- ▶ Vial stopper inspection
- ▶ Drilled hole inspection
- ▶ Orientation verification
- ▶ Part or model identification
- ▶ Error proofing

Sealed Vision Sensors Deliver the Functionality of Advanced Vision and a Proven Interface into Harsh Environments.

The *Presence*PLUS *P4* OMNI and COLOR OMNI are now available in an IP68-rated housing for machine vision inspections in challenging industrial and washdown environments. Designed to withstand demanding conditions, the new one-piece sealed *P4* models deliver the comprehensive suite of *Presence*PLUS inspection tools into environments that might normally challenge general vision products. The compact, robust sensor is suited for a wide variety of environments including automotive, assembly, food handling, printing, pharmaceutical and packaging.

- ▶ Sealed IP68 housing and connectors to withstand dust, moisture and washdown
- ▶ Compact and durable nickel-plated aluminum housing to tolerate shock and vibration
- ▶ A complete suite of location, inspection, analysis and geometric tools; all can be used simultaneously for inspecting multiple features and complex applications
- ▶ Premium tools for enhanced inspection capabilities; including Bar Code Reading (BCR), Optical Character Reading and Verification (OCR/ OCV), and Bead inspection

- ▶ Standard or high-resolution 1.3 megapixel gray scale, and color models for nearly any inspection challenge
- ▶ Proven user interface common to all *Presence*PLUS sensors
- ▶ Intuitive Wizard-like setup procedure and common graphical interface; supports nine languages
- ▶ Ethernet, serial, flexible discrete I/O and real-time video output in the same full-featured sensor
- ▶ ActiveX utilities for exporting inspections, images and results

40-plus years of sensor design experience, quality control, sales support and cost-effective solutions:

- ▶ Banner quality products with global availability
- ▶ Rapid customization with most products shipping in 3 days or less
- ▶ Industry's largest force of application engineers to solve your toughest challenges
- ▶ More than 3,000 factory and local field representatives to serve you

www.bannerengineering.com
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BANNER ®
more sensors, more solutions

PresencePLUS® *P4* Sealed Vision Sensors, 10 to 30V dc

Models	Vision Tools	Housing	Resolution (pixels)	—	Add Premium Tool to Model (example, **P4ORS-BCOC**)
P4ORS	OMNI Gray Scale		640 x 480		**BC** = Bar Code Reader
					OC = OCR/OCV
P4O1.3RS	OMNI Gray Scale	Right-Angle	1280 x 1024		**BD** = Bead
					BCOC = Bar Code Reader & OCR/OCV
					BCBD = Bar Code Reader & Bead
P4CORS	COLOR OMNI		752 x 480		**BDOC** = Bead & OCR/OCV
					BCBDOC = Bar Code Reader, Bead & OCR/OCV

Dimensions

70.2 mm
44.0 mm
146.2 mm

NOTE: Dimensions do not include optional lens cover. Lens covers available in 50 and 75 mm lengths.

Lens Covers

Model*		Length
P4SLC50-G **P4SLC50-P**		50 mm
PPSLC75-G **PPSLC75-P**		75 mm
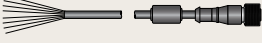
*G = Glass P = Plastic

Brackets
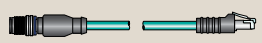
Model	Description
SMBP4SRAF	Right-angle stainless steel bracket

Quick-Disconnect (QD) Cordsets

Power Cordsets

Description		Model	Length
	Sealed 12-pin Euro-style QD (Female) to flying leads, High-flex	**MQDC2S-1206**	2 m
		MQDC2S-1215	5 m
		MQDC2S-1230	9 m
		MQDC2S-1250	16 m

Ethernet Communication Cordsets

Description		Model	Length
	8-pin Euro-style QD (Male) to RJ45	**STP-MAQDC -806**	2 m
		STP-MAQDC -815	5 m
		STP-MAQDC -830	9 m

Video Cordsets
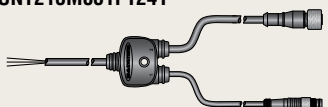
Description		Model	Length
	4-pin Pico-style QD (Female) to BNC	**PKG4M-2/CS**	2 m
		PKG4M-5/CS	5 m
		PKG4M-9/CS	9 m

Lighting Cordsets (Double-Ended)

Description		Model	Length
	3-pin Pico-style QD (Male/Female)	**PKG3M-35-PSG3M**	350 mm
		PKG3M-2-PSG3M	2 m

Lighting Cordsets (Splitter)

Model		Branches	Trunk
CSB-UNT213M831F1241		**Branch 1** 3-pin Pico-style (Male) 0.3 m	Flying Leads 4 m
		Branch 2 5-pin Euro-style (Female) 0.3 m	

P4 OMNI Tools

Gray Scale Tools

Average Gray Scale. Determines the average gray scale value of an area

Blob. Determines the presence, connectivity and location of selected features

Edge. Determines the presence, number, classification and location of edges

GEO Count. Detects the presence and location of target pattern in any orientation

Object. Determines the presence, number, classification, size and location of objects

Pattern Count. Determines the presence, number and location of a pattern(s)

Color Tools

Color Match. Inspects for matching hue and intensity

Average Color. Tests or communicates color content values sensed in a selected area

Color Blob. Determines the presence, connectivity, size and location of selected features with one or more colors

Premium Tools

Bar Code. Finds, decodes and grades 2D and 1D linear bar codes

Bead Tool. Monitors a track of material for width consistency and location

OCR/OCV. Reads and verifies optical characters

A choice of lighting

► A complete selection of lighting, including IP68-rated lights

► Rugged, maintenance-free LED lighting in red, green, blue, white and infrared

► High-intensity lighting with built-in universal strobe control and power regulations; no external controller or power supply required

BANNER®

more sensors, more solutions