

IMPACT+ *OBJECT DETECTOR*



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IMPACT+ *OBJECT DETECTOR* is a machine vision turnkey solution for object detection applications in the T&L industry, including the new P14 Smart Camera, infrared illuminators, connection box and cables.

The P14 Smart Camera is an embedded standalone device featuring a dedicated User Interface for configuring object presence/absence inspections over any type of conveyor.

Combined with an easy-to-mount IR bandpass filter, extremely powerful infrared (IR) LED illuminators guarantee an outstanding image acquisition robust against external light variations with no annoying flashing for operators.

Based on the P-Series technology, **IMPACT+ *OBJECT DETECTOR*** is the perfect solution for object detection over cross-belt and tilt-tray conveyors in the T&L industry.



VISION

HIGHLIGHTS

- Turn-key solution for object detection including smart camera, illuminators, connection box and cables
- Ultra-compact P14 smart camera with rotating connectors (0° & 90° form factors) and rugged IP67 rated housing
- Dedicated easy to use software interface for creating object inspection applications
- Image capturing with infrared lighting, no annoying flashing and robust against external light variations
- Configurable I/O messages and digital outputs through Serial and Ethernet communication interfaces
- Outstanding adaptability to different conveyor types: cross-belt or tilt-tray

APPLICATIONS



IMPACT+ *OBJECT DETECTOR*

TECHNICAL DATA

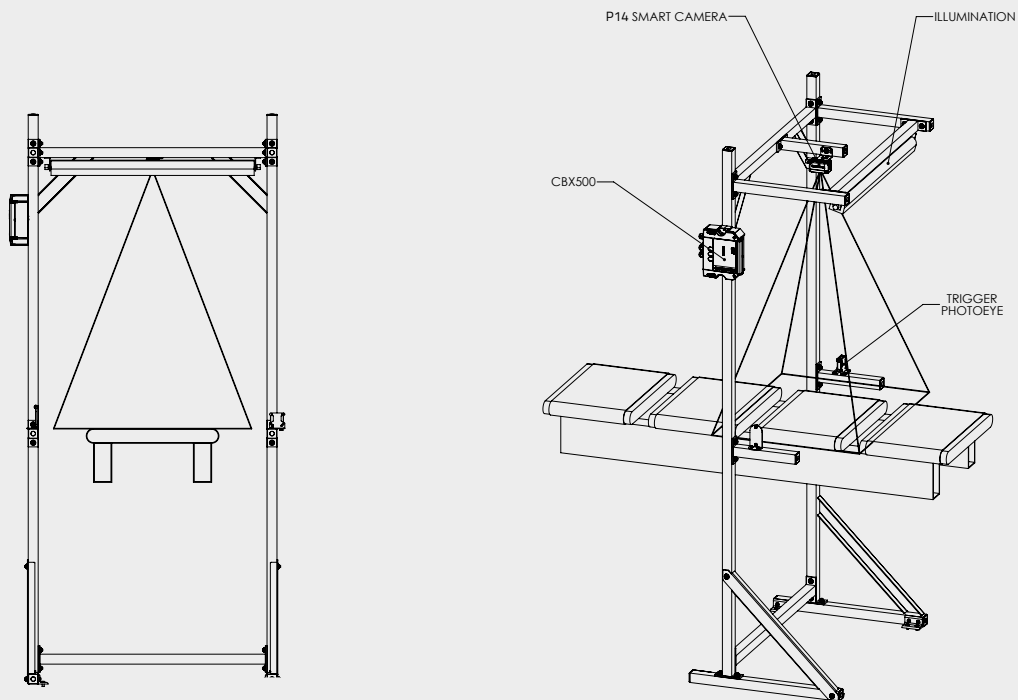
	P14 Smart Camera
Resolution	SXGA (1280 x 1024 pixels)
Imager type	CMOS global shutter
Pixel size	5.3 um
Imager size	1 / 1.8"
Frame rate	60 fps
Lens	9 mm *
Processor	660 MHz DSP
Digital I/O	2 IN/3 OUT
I/O type	Isolated INPUT Non-isolated OUTPUT
External button	Yes
Ethernet	10/100 Mbit/s
RS-232 serial	Yes
Inspection recipes	Up to 10
Power requirements	10 – 30 Vdc
Protection class	IP67
Dimensions	95 x 54 x 43 mm (3.7 x 2.1 x 1.7 in.) – Connector @ 0° 75 x 54 x 62 mm (3.0 x 2.1 x 2.4 in.) – Connector @ 90°
Case material	Aluminium, plastic protective window cover
Operating temperature	0 to 50 °C (32 to 122 °F)
Storage temperature	-20 to 70 °C (-4 to 158 °F)
	SMARTVISION LE SERIES ILLUMINATOR
Electrical Input	24 VDC +/- 5%
Current	750mA – Continuous mode ** 5A (during strobe) / 500mA Max. Avg. **
Power Consumption	18W – Continuous mode ** 120W (during strobe) / 12W Max. Avg. **
Connection	5 pin M12 connector
Operating Temperature	-40 to 50 °C (-40 to 122 °F)
IP Rating	IP65
	CBX500 CONNECTION BOX
Connection	25 Spring clamp connectors
Voltage supply	10 to 30 VDC
Operating temperature	0 to 50 °C (32 to 122 °F)
Storage temperature	-20 to 70 °C (-4 to 158 °F)
Protection class	IP65

*If required a 12 mm lens can be provided instead of a 9mm for both cross-belt and tilt-tray custom configurations

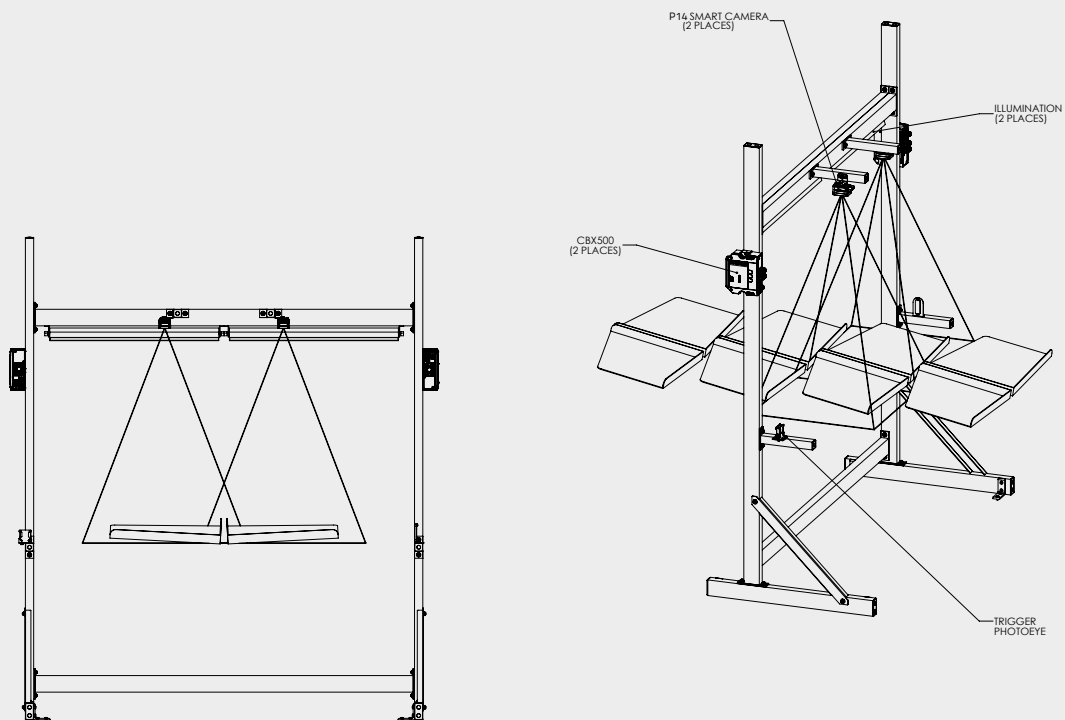
** Technical data refers to 300mm LED segment

DRAWINGS

CROSS-BELT CONFIGURATION

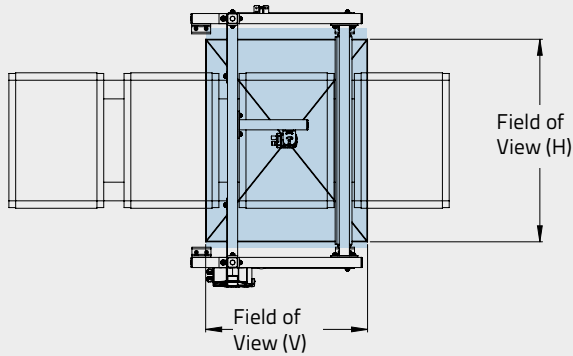


TILT-TRAY CONFIGURATION

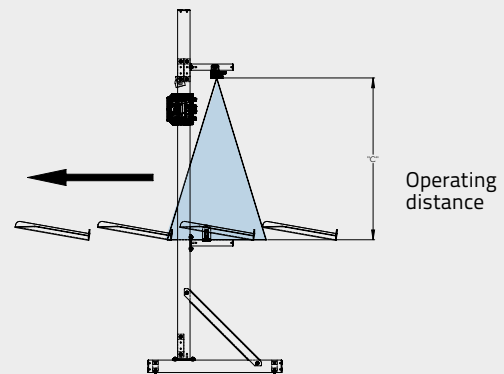
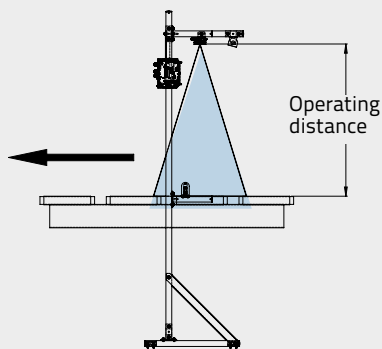
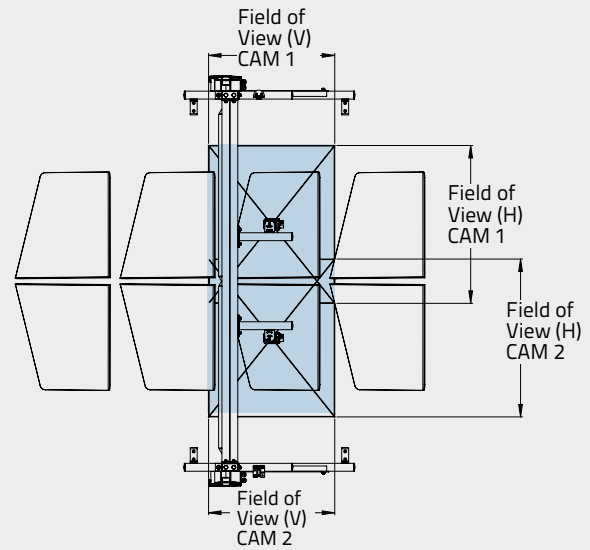


SYSTEM SPECIFICATIONS

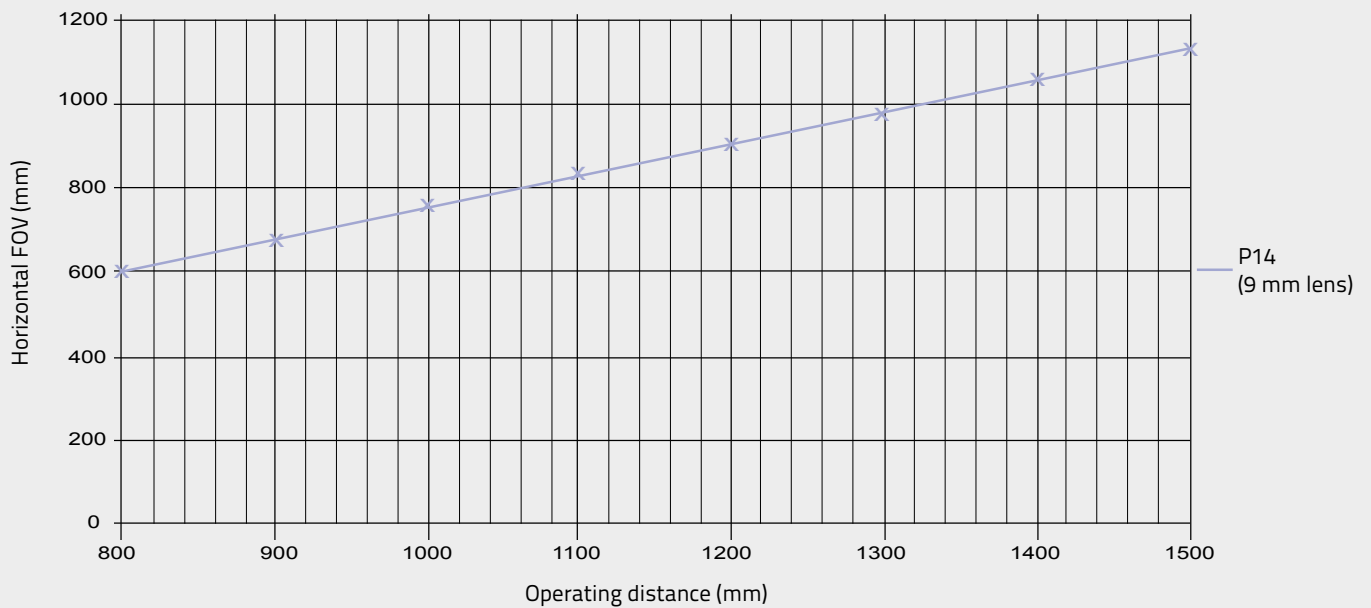
CROSS-BELT CONFIGURATION



TILT-TRAY CONFIGURATION



OPERATING DISTANCE VS FIELD OF VIEW (H)



SOFTWARE INTERFACE

IMPACT+ OBJECT DETECTOR features an easy-to-use dedicated software interface for object detection on conveyor. Intuitive control panels lead users throughout the development of object inspection recipes.

Image Setup

A quick way of choosing the best image acquisition settings.



Noise Reduction

Image noise can be reduced by setting a proper number of image pre-filtering iterations.



Object Detection

Objects are quickly detected on conveyors by easily placing ROI grids on the image. Full/empty inspection result is calculated according to an adjustable contrast threshold.



Input/Output

TCP/IP, RS232, PROFINET and EtherNet/IP input commands can be defined for Auto-Train and Recipe Loading. Messages containing inspection results and digital outputs can be sent quickly to other devices.



Monitor

A monitor displays information on output messages, object detection results and statistics, allowing users to keep under control the inspection process.



IMPACT+ *OBJECT DETECTOR* DATALOGIC

MODEL SELECTION AND ORDER INFORMATION

ORDER NUMBER	DESCRIPTION	QUANTITY	
		Cross-belt configuration	Tilt-tray configuration
937700011	P14 Camera, 1280x1024, 1/1.8" CMOS OIT	1	2
95A901740	Micro Video Lens, P-Series, 9mm *	1	2
95A901850	Filter, P-Series, IR Bandpass filter	1	2
93A050060	Cable, PWR & I/O, CAB-DS05-S, P-Series to CBX (DB25), 5m	1	2
93A051348	Cable, Ethernet, CAB-ETH-M05 M12-IP67 to RJ45, 5m	1	2
95A906871	SmartVision LE Series LE600-850-W **	1	-
95A906872	SmartVision LE Series LE900-850-W **	-	2
941-5PM12-05	Cable, SmartVision LE Series, 5m	1	2
93A301068	I/O Board, P/A/T-Series, CBX500 CONNECTION BOX MODULAR	1	2

*If required a 12 mm lens can be provided instead of the 9mm for both cross-belt and tilt-tray custom configurations; below its order number and product description:
95A901750 Micro Video Lens, P-Series, 12mm.

**Larger conveyors may require bigger illuminators.

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The company endeavours to continuously improve and renew its products; for this reason the technical data and contents of this catalogue may undergo variations without prior notice. For correct installation and use, the company can guarantee only the data indicated in the instruction manual supplied with the products.

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