Expands Inspection Capabilities of Checker Vision Sensors
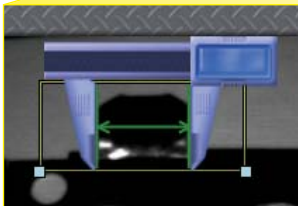
The Checker model 252 includes all inspection capabilities of the Checker vision sensor family, plus additional sensors that verify height, width, and diameter and deliver pass/fail results.
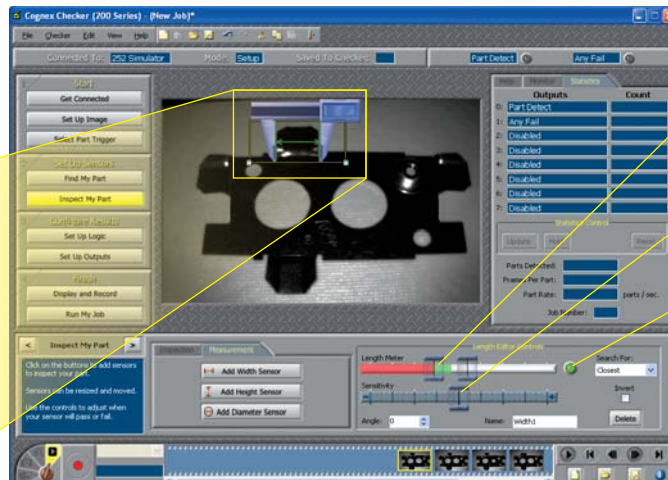
One-Click Setup™

The model 252 brings measurement verification to a new level of simplicity. This is achieved through the use of an innovative Checker caliper on the application setup screen that appears with a single click. With the familiar look of a traditional vernier caliper, the Checker caliper automatically locks on the edges of the feature to be measured, sets the minimum and maximum thresholds, and learns edge polarity. This results in simple, yet reliable, pass/fail results.

Height and width sensors on the model 252 verify the distance between two parallel edges, while the diameter sensor verifies circle diameters.

Applications in Many Industries

The Checker 252 solves a wide array of measurement verification problems. Here are a few examples in two industries:

Automotive
- Detecting double feeds
- Verifying component thickness
- Checking weld thickness
- Verifying correct hole diameter

Packaging
- Checking safety tabs
- Inspecting for out of round parts
- Verifying glue bead thickness

Simply click near the center of the feature that you want to inspect, and the sensor is automatically placed. Checker also automatically locates the edges, sets min/max thresholds, and determines edge polarity. Users may also graphically move the caliper jaws to desired edge locations.

The Checker Caliper provides One-Click setup

Min/Max threshold sliders allow users to set the tolerance around a feature of a good part.

Sensitivity Slider for the detection of low-contrast edges.

Pass/fail results are provided simply and reliably.

Advantages

- **Height, width, and diameter sensors** add simple pass/fail measurement verification to the Checker vision sensor family, for expanded applications

- **One-Click Setup** uses the screen caliper to define startup parameters. User may also graphically move the caliper jaws to the desired edge locations

- **Low-contrast edges** are easily identified, for flexibility of edge selection

CHECKER 252 VISION SENSOR

LIGHTING

Illumination	White LED

EXTERNAL TRIGGER INPUT

Input ON	> 10VDC (> 6mA)
Input OFF	< 2VDC (< 1.5mA)
Protection	Opto-isolated, polarity-independent

OUTPUTS

Output	Solid state switch
Rating	100mA, 24VDC
Max voltage drop	3.5VDC @ 100mA
Max load	100mA
Protection	Opto-isolated, protected from short circuit, overcurrent, and reverse polarity

ENCODER INPUTS

Encoder type	300 kHz (max) quadrature encoder. Open collector and differential output
ON/OFF	50% nominal
Load	50% encoder maximum

TERMINATION

12-Pin M12 connector, USB Mini-B receptacle

POWER

Voltage	+24VDC (22-26VDC)
Current	250mA max

MECHANICAL

Dimensions	67mm (2.64in) H x 41mm (1.61in) W x 60mm (2.36in) D
Weight	100g (3.5oz)

MODES OF OPERATION

Internal part trigger, external part trigger, free running

ENVIRONMENTAL

Operating temperature	0° to 50°C (32° to 122°F)
Storage temperature	-30° to 80°C (-22° to 176°F)
Operating humidity	0%-90%, non-condensing
Operating altitude	4000m maximum
Shock	80Gs for 5ms on each axis (per IEC 68-2-2)
Vibration	10Gs (10-500Hz) per IEC 68-2-6
Protection	IP67

CERTIFICATIONS

CE, cCSAus, FCC, RoHS

MINIMUM PC REQUIREMENTS (Only required for setup)

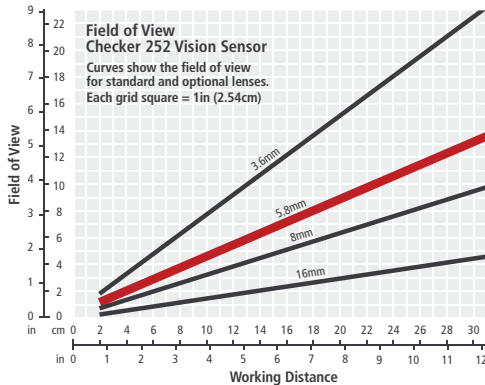|	
Operating systems	Microsoft® Windows® Vista™, XP™, or 2000™ SP4
RAM	128 MB RAM
USB	USB 1.1 (2.0 recommended for best performance)
Screen resolution	1024 x 768 (96 DPI) or 1280 x 1024 (120 DPI) display

PART NUMBERS

Part Number	I/O Cable Included
CKR-252-001	Flying Leads
CKR-252-002	I/O Box

Included accessories

- 5.8mm lens
- Standard USB cable
- Quick Start Guide
- Allen wrench (for focus lock)
- Checker software CD
- USB connector cover
- Mounting screws

Optional Accessories

CKR-200-IOBOX-002	Checker I/O box
CKR-200-BKT	Adjustable bracket
CKR-200-LENSKIT	Lens Kit
CKR-200-CBL-USB	IP67 USB cable
CKR-200-CBL-EXT	I/O extension cable (5m)
CKR-200-CBL-RT-003	Right-angle cable (1m)
SV-350-000	SensorView™ 350 panel-mount display

Field of View
Checker 252 Vision Sensor
Curves show the field of view for standard and optional lenses. Each grid square = 1in (2.54cm)

Field of View / Working Distance — curves labeled 3.6mm, 5.8mm, 8mm, 16mm

67mm (2.64in), 41mm (1.61in), 60mm (2.36in), 39mm (1.54in)

For more information, please visit **www.cognex.com/checker252**

COGNEX

Companies around the world rely on Cognex® vision to optimize quality and drive down costs.