

Detect, distinguish and sorting colors



Product description

The color vision sensors perform fast and reliable color detection within a large field of view compared to point color sensors. The CVS2 can store up to fifteen reference colors for detection, sorting and identification. The 2-color match feature give a reliable inspection by securing that two pre-defined colors are present. The user-defined color

thresholds do not only verify that the color is present but also ensure correct fill level of the color. The integrated color display makes it easy to supervise the configuration of the application. With some additional key clicks on the integrated keypad, it is easy to fine tune the color area and the color variance.

At a glance

- Color inspection and sorting on large fields of view
- Inspecting one color, minimum and maximum fill
- 2-color matching
- Sorting up to 15 colors
- Reference capacity of 15 color configurations
- Parameter up- and download to PC
- Compact IP-67 rated housing with integrated display for configuration and monitoring
- Different variants for different fields of view and working distances

Your benefits

- The support for large fields of view ensures reliable color sorting even if your part varies in position
- The minimum and maximum fill tolerance ensures you that there is always correct fill of color on your part before it leaves your line
- The 2-color matching ensures you reliable result on multi-colored objects
- The reference capacity of 15 color configurations gives you the most economic solution for batch production
- Store and restore the configuration from PC will save you time in every repetitive machine installation



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→ www.mysick.com/en/CVS2

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



Detailed technical data

Features

Task	Inspection
Technology	2D, snapshot, image analysis, color
Toolset	Color inspection, color sort, 2-color match
Sensor	CMOS matrix sensor, color values
Focus	Fixed focus
Light source	White
LED class	Risk group 1 (low risk, IEC62471 : 2006)
Spectral range	Approx. 400 nm ... 750 nm
Offline support	Configuration

Performance

Maximum performance	200 frames/s
Typical performance	38 frames/s
Number of inspections	1
Reference images	15
Resolution	208 px x 236 px x 3 px (RGB)

Interfaces

Operator interfaces	External or integrated display
Configuration software	CVS device software, CVS2 Dataloader (PC)
Communication interface	RS-232
Digital inputs	HIGH (corresp. 8 V)
Configurable inputs	External trigger, reference object selection, external teach
Digital outputs	NPN / PNP (depending on type)
Configurable outputs	Auxiliary, sorting
Output current	< 100 mA
Default outputs	Pass
Control elements	5 buttons (setup)

Mechanics/electronics

Connectors	I/O + Vs: cable, 8-wire, 2 m, HRS, 6-pin for external lighting/monitor
Supply voltage min ... max	12 V ... 24 V
Ripple	< 5 V _{pp}
Current consumption	< 220 mA, (at 24 V), without output load
Enclosure rating	IP 67
Housing material	ABS, acryl glass, polycarbonate
Weight	180 g
Dimensions (L x W x H)	95 mm x 42 mm x 34 mm
Lens	Integrated

Ambient data

Ambient operating temperature	0 °C ... +40 °C ¹⁾
Ambient storage temperature	-20 °C ... +70 °C ¹⁾

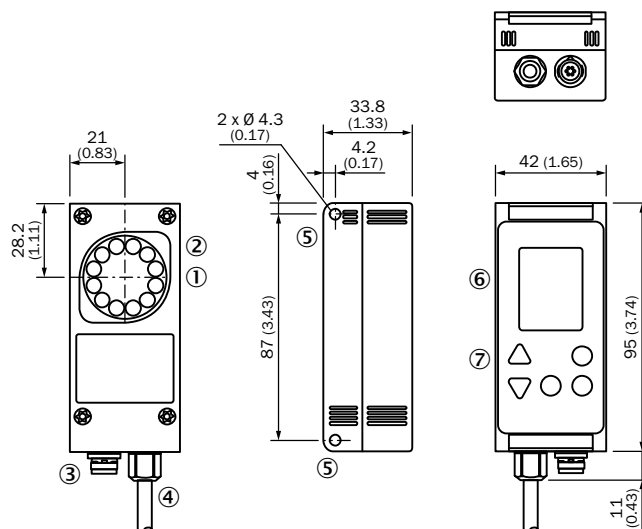
¹⁾ Rel. humidity: 35 % ... 85 %, 95 % at storage.

Ordering information

Digital outputs	Working distance internal illumination (min. ... max.)	Field of view internal illumination	Model name	Part no.
NPN	210 mm ... 270 mm	40 mm x 50 mm ... 55 mm x 65 mm	CVS2-N112	1027329
	90 mm ... 150 mm	40 mm x 50 mm ... 65 mm x 75 mm	CVS2-N122	1027330
	50 mm ... 100 mm	50 mm x 65 mm ... 100 mm x 115 mm	CVS2-N142	1027331
PNP	210 mm ... 270 mm	40 mm x 50 mm ... 55 mm x 65 mm	CVS2-P112	1027332
	90 mm ... 150 mm	40 mm x 50 mm ... 65 mm x 75 mm	CVS2-P122	1027333
	50 mm ... 100 mm	50 mm x 65 mm ... 100 mm x 115 mm	CVS2-P142	1027334

Dimensional drawing

dimensions in mm (inch)




- ① Front screen
- ② Lighting
- ③ Connection: External lighting/monitor/PC
- ④ Connection cable
- ⑤ Fixing hole
- ⑥ Color display
- ⑦ Input keypad

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Recommended accessories

Test and monitoring tools

	Description	Model name	Part no.
	Color vision monitor, external operating unit including keyboard and monitor with 1.5" LCD color display, Hirose plug connector to CVS	CVS-M1	1026355

Plug connectors and cables

Connection cable (female connector-female connector)

	Connection type head A	Connection type head B	Description	Cable length	Part no.
	Female connector, D-Sub, 9-pin, straight	Female connector, HRS, 6-pin, straight	Connection cable for CVS data transfer	2 m	6029801
	Female connector, HRS, 6-pin, straight	Male connector, HRS, 6-pin, straight	Extension cable for CVS-M1	3 m	6028659

→ For additional accessories, please see page E-74