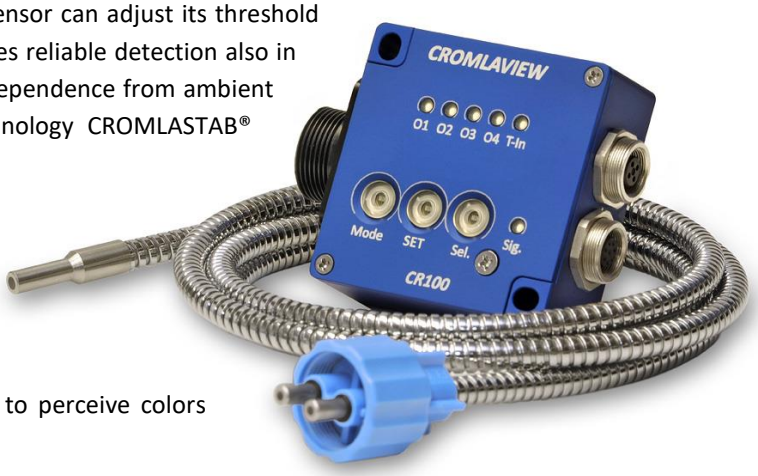
CR100-PM
Color Sensor

Automatic detection of print marks makes the CR100-PM an easy-to-use print mark sensor. Due to the perceptive color processing the sensor can recognize print marks with a low contrast to the background. Thanks to the adaptive control system the sensor can adjust its threshold to fluctuating contrast of the print marks. This ensures reliable detection also in applications with difficult ambient conditions. Its independence from ambient light and the integrated stabilization channel technology CROMLASTAB® ensure reliable operation during the whole life cycle.



The functional principle of the CR100-PM is based on the three range procedure. The measuring light is assessed with the tristimulus value functions and assigned to the three wave length ranges red, green and blue. Through the assessment with these tristimulus value functions the sensor is able to perceive colors similar to the human eye.

The operation of the sensor is comfortable and easy. The user does not have to teach in color marks, as they are automatically recognized and stored by the sensor. After a start signal the sensor scans the background. Deviations are automatically recognized as marks. Corresponding to the number of output channels it is possible to teach in and display 4 different color marks automatically.

Key Features

- **Quick response time from 50 µs**
- **4 color marks can be scanned**
- **Fully automatic teach-in of color marks**
- **Easy adjustment to the size of the mark by optical fibers and optics**
- **Triggering of the start signal via trigger or button**
- **PC software CR-tool and Average Monitor for parameterization and monitoring**

Application

- Print mark detection in Printing machines, banderoling machines, register controls

Options and accessory

- CR-COMBox
- CR-TBox
- Fiber optics
- Optics

Technical Data

Sensing channels	1 Sensing channel 1 Internal stabilization channel
Drift stabilization	CROMLASTAB®, can be switched off
Receiving detector	Three range photo diode
Sensitivity steps	8 (1x, 4x, 20x, 40x, 80x, 200x, 400x, 800x)
Receiving signal resolution	3 x 4096 Steps
Object illumination	Power white light LED, Adjustable (4096 steps) Can be switched off
Displays	9 LEDs for switching outputs
Buttons	3 buttons for Teach-In
Color resolution	$\Delta E_{Lab} < 1$
On-/Off-Delay	0 ms … 65535 ms
Color output channels	4 (up to 15 with binary encoding)
Protection standard	IP 54
Power supply	18 … 28 VDC, max 500 mA
Case temperature during operation	-10 °C … 55 °C
Coupling in signal path	Via optical fiber, optional focus optics
Case material	Aluminium, anodized
Case size	50 mm × 50 mm × 21 mm
Weight	Approx. 80 g

[1)] Limited functionality

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