CR200E
Color Sensor

The CROMLAVIEW® CR200E color sensor processes colors in a perceptual way (i.e. according to human perception). The two channels allow for applications that demand high standards of the sensor technology. By using the second color sensor channel this sensor can be used in different modes of operation. For easy connections via longer distances the CR200E has been equipped with an Ethernet interface.

In the dual channel mode the sensor can be operated as two single sensors, which work with the same gain and illumination intensity.

With the activated stabilization function (CROMLASTAB®) the sensor can be used with an external stabilization target as a single channel sensor. The symmetric design of the sensor facilitates very high drift stability against age and temperatures.

In the color difference mode, compliance and synchronism between the two sensing channels are crucial. The balancing method CROMLABALANCE® is available for this purpose. It allows for simple and effective channel balancing over the client's entire color space.

Key Features

- **Two color sensing channels**
- **Color differences can be detected and displayed**
- **Up to 350 colors, respectively color differences can be stored**
- **Quick response time from 50 µs**
- **12 channels, with binary encoding up to 4096 output combinations**
- **Finest color differences can be detected (ΔE < 1)**
- **Standard interfaces: USB, RS232, 12 push-pull outputs (24 V/100 mA)**
- **Field bus interface: Fast Ethernet**
- **PC software CR-tool for parameterization and visualization of color values**

Applications

- Print mark detections
- Check the presence of assembly parts
- Checking functional and color coatings
- Color inspection for quality assurance
- Sorting tasks

Options and accessory

- External stabilization target
- Fiber optics
- Optics
- Fiber spacer
- USB cable

Technical Data

Sensing channels	2 Sensing channels
Drift stabilization	CROMLASTAB®, can be switched off
Receiving detector	Three range photo diode
Sensitivity	Adjustable by user
Sensitivity steps	8 (1x, 4x, 20x, 40x, 80x, 200x, 400x, 800x)
Receiving signal resolution	3 x 4096 steps
Object illumination	High-power white light LED, Adjustable (4096 steps) Can be switched off
Ambient light compensation	Can be switched off
Standard interfaces	12 Switching outputs 2 Control inputs Serial (RS232) USB
Field bus interface	Fast Ethernet
Displays	22 LEDs for outputs and status
Buttons	3 buttons for Teach-In
Color resolution	$\Delta E_{Lab} < 1$
Response time	≥ 50 µs [1)]
On-/Off-Delay	0 ms … 65535 ms
Hysteresis	0 % … 250 %
Color output channels	12 (up to 350 at 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
Case material	Aluminium, anodized
Case size	100 mm × 70 mm × 30 mm
Weight	Approx. 295 g

[1)] Limited functionality

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