Non contact online color measurement

Action is currently running

Pin 7 and 8 connected: HLL (High logic level)

Sensor connector

Protection class: IP40 (Controller)

7

white

Function

Supply voltage OK

Pushbutton, LED Teach color

n.c.

LED Measurement

Color recognition from a taught reference list

8

n.c.

Wire color

Pushbutton, LED Dark reference

Light source

Active data transmission

n.c.

black

Wire color

Danger of injury, damage to or destruction of the system

Function

Damage to or destruction of the system

Green

brown

Wire color

Action was successfully

Triggering, Synchronization

When pushbottons are pressed and the pushbot

Action canceled incorrectly

blue

GND (0V)

9

Temperature range:

Ethernet/EtherCAT, RS422, Digital I/O

No data transmission

Function

No error, system ready

Failure of the measurement device

Pin 7 and 8 open: LLL (Low logic level).

On/off switch

Pin 7 and 8 open: LLL (Low logic level).

CAB-M9-7P-St-ge

CAB-M9-8P-St-ge

CAB-M9-4P-St-ge

Grey

green

brown

white

Red

Red

Green

Green

Off

Conform with the EtherCAT guidelines.

Red

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Conform with the EtherCAT guidelines.
If possible, select a higher light source. Use the spectra and / or signal averaging, button.

Operate the controller with exposure mode Power supply. Set the required measuring rate. Exposure sensor and clamp Reduce the brightness of the light source. Controller.

Laptop / PC -> Ethernet Adapter + Ethernet cable. The start screen of the controller software should now be displayed in the web browser. The program searches the available interfaces for connected colorSENSOR ACS controllers. The IP addresses of the controllers that are connected to a PC or network can be queried by using the program.

Run sensorTOOL.exe. The program can be found online at https://www.micro-epsilon.com/service/download/software/. You can record a color manually by their color values   (L*a*b or XYZ color space) into the color table. As an alternative to color teaching you can record a color manually by their color values   (L*a*b or XYZ color space) into the color table.

Commissioning

Select the controller from the list. Connect the components together and mount the sensor into the clamp.

Fine Positioning the Sensor, Placing the Target

Switch to the  measurement program, and select XYZ as your color space. Place a bright measurement object as close as possible to the center of the working range.

Select Measuring Rate

The optimum measuring rate depends on the brightness of light source and the used sensor.

Select the program spectrum and measuring rate automatically. The video signal displays the optimum measuring rate.

Optimum measuring rate: is less than required measuring rate: If possible, select a higher light source. Set the required measuring rate. Exposure mode Manual mode + Measuring rate.

White Balance

This calibration references the controller on the spectrum of a white standard. The white balance is required after replacement of a sensor or a changed measurement environment.

Select the color space and the reference color. Place a white target within the working range.

Teach New Color

Select the colors to be compared.

Enter a description of the new color. Click on the button Measure and Teach color.

As an alternative to color teaching you can record a color manually by their color values   (L*a*b or XYZ color space) into the color table.

Save Setup

Select a setup and click on the button Save setup. Not saved settings will be lost, if you switch off the controller.

Save Data Acquisition button to connect the controller to your standard PC or network.

You can query the IP addresses of the controllers that are connected to a PC or network by using the software Spectrum Program.

Spectrum Program

Go to the Spectrum program and select Commissioning.

Select the colors to be compared.