E3X-CLR Easy-Teach Colour Detection Sensor

Quick Start Guide

E3X-CLRX1P-M3J 0.5M Package content (part list)

1 x E32-L15	Fiber sensing head
1 x E3X-DAC8-S	Amplifier
1 x E3X-CN21-M3J-2 0.3M	M8-4 pin amplifier connector
1 x AFBN0044_E3X-CLR	Quick Start Guide

E3X-CLRX4P 2M Package content (part list)

1 x E32-L15	Fiber sensing head
1 x E3X-DAC51-S 2M	Amplifier with 2m PVC cable
1 x AFBN0044_E3X-CLR	Quick Start Guide

Setup

A) Connect the amplifier to power

In case of E3X-CLRX1P connect the E3X-CN21-M3J-2 0.3M amplifier connector to the E3X-DAC amplifier. Use a standard M8 4-pin cable connector to connect to a power source:

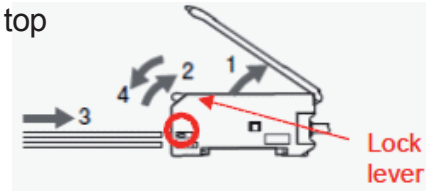
- Pin 1 (brown): +V
- Pin 3 (blue): 0 V
- Pin 4 (black): Output 1

B) Connect the fiber sensing head with the amplifier

1)+2) open the cover and raise the lock lever to release

3) insert the cable of the fiber sensing head, the fiber with the white mark (emitter) has to be on top

4) turn the lock lever back to fix the fiber cables

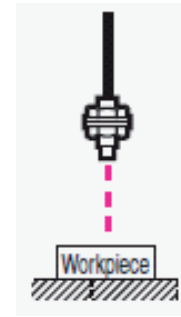


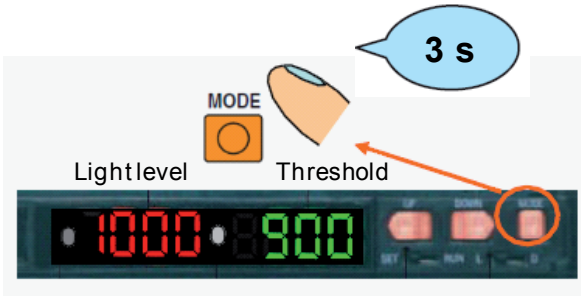
Quick start with pre-selected factory settings

1-button object teach

5) face and position the fiber head to the object max. distance is around 40 mm

6) Push Mode/Teach button for 3 s





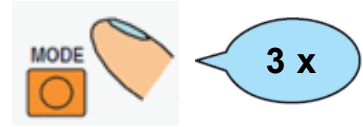
Tolerance setting

With 1-button object teach the tolerances are set automatically suitable for standard applications. For user defined tolerance settings please refer to the methods described on other page.

2-point teaching with object and background (or 2nd object)

The threshold will be set between the values of the object and the background (or 2nd object) and can be used for small differences between objects

1) Switch to SET mode

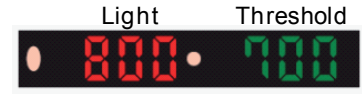


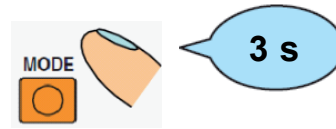
2) Press 3 times Mode key to display

3) Press UP or DOWN button 1 time

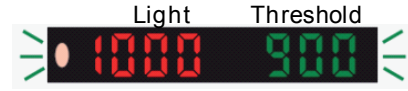
4) 2-point teaching mode is selected
Switch back to RUN mode

5) Teach with workpiece

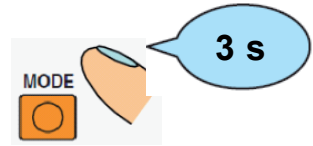




6) The display will flash twice.



7) Teach without workpiece
(or with 2nd object)



8) The display will flash again twice.

Advanced settings

For very challenging applications or advanced detection operations and user defined amplifier settings refer to the included instruction manual of the E3X-DAC_-S amplifier.

Modes

The E3X-CLR colour sensor provides four different detection modes. Each mode is optimised for dedicated applications.

Auto mode (default)

The auto mode automatically selects the best suitable detection mode for most applications.

C-mode

The C-mode compares the captured RGB values of the objects and is ideal for comparing colours with significant differences in the RGB values. This mode is not recommended for objects with similar RGB values or objects with different grey values.

I-mode

The I-mode compares the most differentiating value of the captured RGB values. This mode is recommended for objects where 2 RGB values are very similar.

Black-mode

The black mode compares the intensity value of the returned light and is recommended for black, white or grey objects.

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