

Programmable color sensor



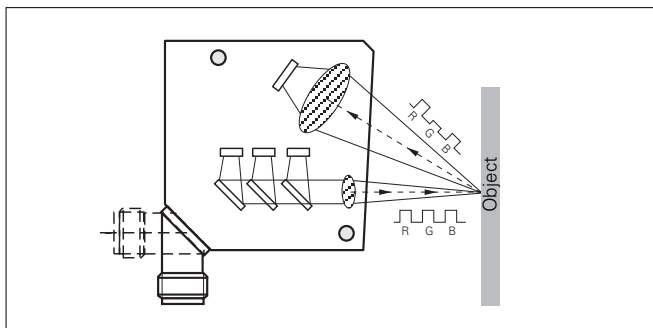
General

With the color recognition sensor, Logipal, you can now use color as a criterion for your sorting, quality monitoring and automation processes. Using the latest technology such as semiconductor light sources in Chip-on-board technology and powerful microcontrollers, we can offer you an ultra-compact sensor which will enable you to distinguish several hundred colors.

Functional principle

Logipal works in a similar manner to our eyes according to the three-color procedure with durable, maintenance-free semiconductor light sources. In the three-color procedure, any colour can be described in relation to the primary colors red, green and blue. If the sensor recognizes the color again when measuring, it activates the relevant output. The tolerances can be adjusted as required to allow you to detect rough or fine color differences.

In the Teach method, the color of an object is stored.



Operation

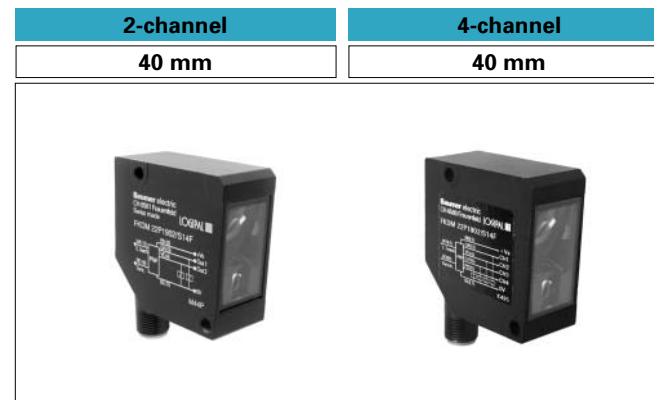
Very simple operation according to the Teach-in procedure: Four different colors can be stored using only three keys. For each color, there are five tolerance levels to choose from. The external Teach signal input allows complete remote control of all storage functions and feedback as well as serial data transfer. A RS 232 interface transducer with galvanic separation is offered as accessory.

Application criteria

Utilization of the color sensor is as simple as the reflection light scanner. Only the two points below should be noted. Ensure that the sensor is tilted approx. 15° to the side when using shiny objects. If you wish to detect very fine differences in color, maintain as accurately as possible a sensing range of 40 mm from the object.

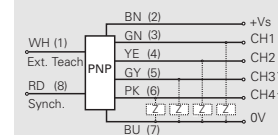
Series 22

- Programmable colors
- Compact housing
- Ready at the press of a button
- 180° rotatable plug
- Very fast response time



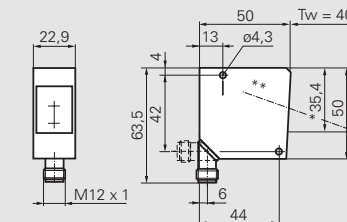
	2-channel	4-channel
PNP	light operate	light operate
NPN	light operate	light operate
technical data		
sensing range	40 mm	40 mm
size of measuring spot	3 mm x 5 mm	3 mm x 5 mm
sensor channels	2 (teachable)	4 (teachable)
tolerance ranges	5-step teachable (LED's)	5-step teachable (LED's)
channel status display	yellow LED per channel	yellow LED per channel
signal display (Teach)	orange LED	orange LED
function display	green LED	green LED
light source	red / green / blue LED	red / green / blue LED
voltage supply	10 - 30 VDC	10 - 30 VDC
max. supply current	80 mA / 24 VDC	80 mA / 24 VDC
max. switching current	100 mA per channel	100 mA per channel
voltage drop	< 1,8 V	< 1,8 V
response time	340 µs	340 µs
short circuit protection	yes	yes
reverse polarity protection	yes	yes
temperature range	-10...+55 °C	-10...+55 °C
housing material	zinc diecast	zinc diecast
device plug	rotatable by 180°	rotatable by 180°
protection class	IP 67	IP 67
synch. input	low active, low: 0 V...1/3 Vs, high: 2/3 Vs...Vs	low active, low: 0 V...1/3 Vs, high: 2/3 Vs...Vs
ext. Teach input	protocol with return signal through channel 1 -output	protocol with return signal through channel 1 -output
accessories		
connectors 8 pin (M12)	ESG 34FP0200B	ESG 34FP0200B
accessory mounting bracket	part nr. 126220	part nr. 126220
Interface transducer RS 232	SIFK 60G/AL	SIFK 60G/AL

connection diagram



* only in the 4-channel version

dimensions



* emitter axis
** receiver axis (20° slanted in relation to the emitter axis)