

■ Highlights



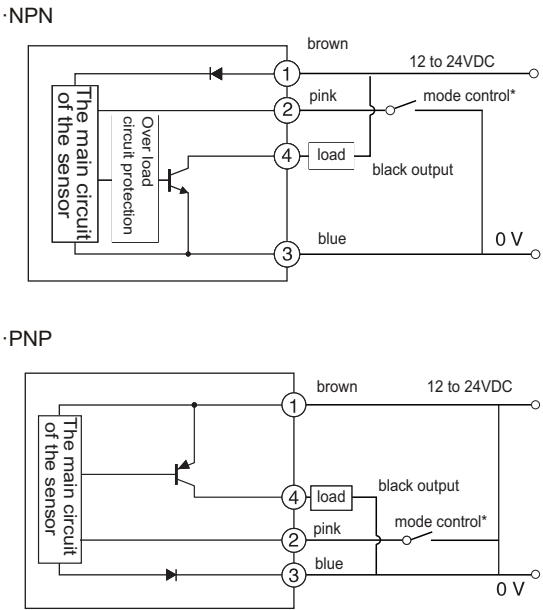
- Built in RGB three color light source, with color mode and mark mode.
- The detection return difference can be adjustable, the effect of vibration of the measured object can be eliminated
- The detection distance is 3 times as high as that of the similar color sensor.
- Light spot size about 1.5*7mm (23mm detection distance)
- Two point setting
- Small volume
- The unique dual mode, with color, color + light intensity detection function, will not be erroneous output in the detection of the edge without background or the critical position without object, and the detection is more stable and reliable.

■ Sensor parameters

Type	Cable type	
Model	NPN	V5EB-S11N
	PNP	V5EB-S11P
Detection distance	18 to 28mm	
Power voltage	24V DC + 10% pulsation less than P-P10%	
Current consumption	Power less than 850mW (power voltage is 24V, the current consumption is below 35mA).	
Mode switching input	mark mode	Low(ON) 0 to 0.6V DC Outflow current below 0.5mA Input impedance about10kΩ Low(OFF) 0 to 0.6V DC or open
	color mode	High(OFF) 12 to +V DC or open High(ON) 12 to +V DC Outflow current below 3mA Input impedance about10kΩ
Output	NPN Open circuit collector transistor ·Maximum inflow current 50mA ·Applied voltage below 30V DC (between output and 0V) ·Residual voltage below 1.5V (when current 50mA) * NPN Open circuit collector transistor ·Maximum inflow current 50mA ·Applied voltage below 30V DC (between output and +V) ·Residual voltage below 1.5V (when current 50mA) *	
Output control	mark mode	mark and light matching ON
	color mode	Color matching ON
Short circuit protection	Equipped (automatic recovery)	
Reaction time	Below 200 μs -10 to +55°C(no exposed,no freezing)	
Ambient temperature)	
Ambient humidity	35 to 85%RH, No condensation	
Optical element	Red / Green / Blue composite LED (Wave peak/wavelength: 640nm/525nm/470nm)	
Material	Cage: PBT operation panel: PC operation button: silica gel lens: PC	
Cable	0.2mm ² 4 core rubber cable standard 2m Distinction (color matching) Brown: +V Black: output Pink: mode conversion input blue: 0V	
Weight	Approx. 104g	

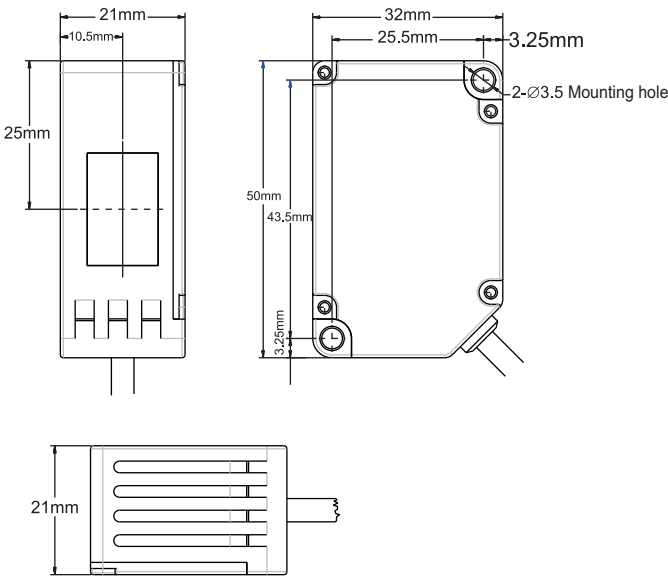
* specified measurement conditions: ambient temperature +23°C.

■ Input / output circuit diagram



Note: the pink line break(OFF), is color mode
the pink line connection(ON), is mark mode

■ Size diagram



Operation setting method

Before making the settings, confirm whether to use the mark mode or the color mode.

"COLOR" green indicator light on is color mode, light off is mark mode.



- Two point setting method
①When the projection light of the sensor against the measured color, presses the "ON" button, and the "GOOD" green indicator lights flicker.
②When the projection light of the sensor against the background color, presses the "OFF" button.
③When the threshold value set between steps ① and ② is stable, the "GOOD" green indicator light is always bright,indicating that it can start normal detection. When the threshold value set between steps ① and ② is not stable, the "ERR" red indicator flashes for 3 seconds and revert to the last set state.

- Threshold value adjustment
①Press the "ON" button for more than 5 seconds until ERR, GOOD and COLOR three indicators flicker simultaneously.
②Press the "OFF" button to adjust the threshold value.

The relationship between the return difference state and the light flicker is as follows:

State	Indicator			The state of the 3 indicator
Return difference value is small	○	○	●	only the COLOR indicator is flicker
Return difference value is medium	○	●	●	The GOOD and COLOR indicator flicker together
Return difference value is big	●	●	●	ERR, GOOD, COLOR 3 indicators flicker together

- Exit threshold value or return difference adjustment
Under the condition of threshold adjustment, press the "ON" button for more than 5 seconds until the three lights of ERR, GOOD, and COLOR stop flashing, that is, the threshold return adjustment is withdrawn.

■ About false information hints

When error messages appear, please follow these methods.

Indicator light state	The "ERR" red indicator is always lit and will not be extinguished automatically.
Error information content	The output line load is short circuited, and the overcurrent goes through.
Handle	After turn off the power supply, check the output line load.