

Simple color code sensor
BS-602 User manual

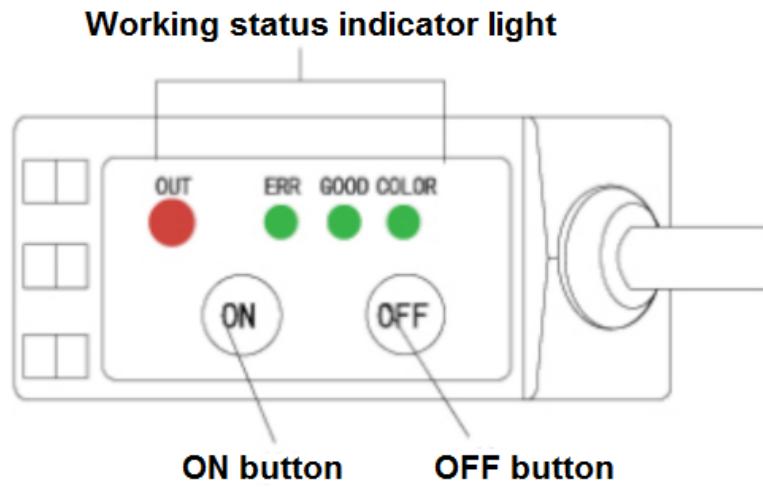


TECHNICAL SPECIFICATIONS

| TYPE | | THE CABLE TYPE | |
|-----------------------------|-------------------|---|---|
| MODEL | | NPN | |
| | | BS-602 | |
| DETECTION DISTANCE | | 18 AND 28 MM | |
| THE POWER SUPPLY VOLTAGE | | DC±10% PULSATION OF 24V BELOW P-P10% | |
| BATTERY CHARGE | | POWER BELOW 850MW (24V POWER SUPPLY, CONSUMPTION CURRENT BELOW 35MA) | |
| MODE SWITCHING INPUT | COLOR SCALE MODEL | LOW (ON) 0 TO 0.6 V DC OUT OF THE CURRENT 0.5 UNDER THE MA THE INPUT IMPEDANCE ABOUT 10 K Ω | LOW (OFF) 0 TO 0.6VDC OR OPEN |
| | COLOR PATTERN | HIGH (OFF) 12 TO +VDC OR OPEN | HIGH (ON) 12 TO +VDC OR OUT OF THE CURRENT 3 UNDER THE MA THE INPUT IMPEDANCE ABOUT 10 K Ω |
| THE OUTPUT | | NPN OPEN COLLECTOR TRANSISTOR • MAXIMUM INPUT CURRENT 50MA • APPLIED VOLTAGE BELOW 30 V DC (BETWEEN THE OUTPUT AND 0V) • THE RESIDUAL VOLTAGE BELOW 1.5 V (WHEN THE CURRENT IS 50MA) * | PNP OPEN COLLECTOR TRANSISTOR • MAXIMUM OUTFLOW CURRENT 50MA • APPLIED VOLTAGE BELOW 30 V DC (BETWEEN THE OUTPUT AND +V) • THE RESIDUAL VOLTAGE BELOW 1.5 V (WHEN THE OUTFLOW CURRENT IS 50MA) * |
| OUTPUT OPERATIONS | COLOR SCALE MODEL | COLOR CODE IS DETECTED ON | |
| | COLOR PATTERN | IN ON | |
| SHORT CIRCUIT PROTECTION | | EQUIP (AUTOMATIC RECOVERY) | |
| THE REACTION TIME | | LESS THAN 200 MICROMETHODS | |
| THE ENVIRONMENT TEMPERATURE | | -10 TO 55 DEGREES CELSIUS (DO NOT DEFROST OR FREEZE) STORE AT +20 TO +70 DEGREES CELSIUS | |
| ENVIRONMENTAL HUMIDITY | | 35 TO 85% RH STORAGE TIME :35 TO 85% RH | |
| CAST LIGHT ELEMENT | | RED/GREEN/BLUE COMPOSITE LED (PEAK WAVELENGTH OF EMITTING LIGHT :640NM/525NM/470NM) | |
| THE MATERIAL | | SHELL: PBT OPERATION PANEL :PC OPERATION BUTTON: SILICONE LENS: PC | |
| CABLE | | 0.2 MM SQUARE 4-CORE RUBBER CABLE STANDARD 2 M LONG DISTINGUISH (MATCH COLORS) BROWN:+V BLACK:OUT PINK: MODE CONVERSION INPUT BLUE: 0 V | |
| THE WEIGHT OF THE | | ABOUT 110 G | |

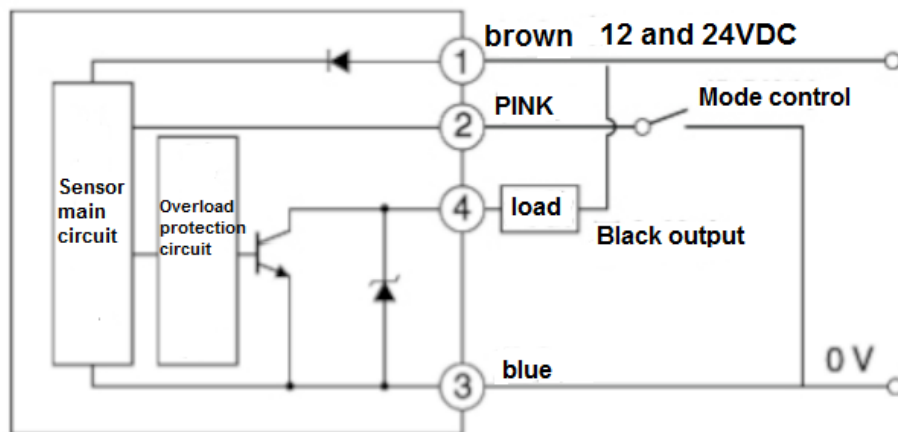
*SPECIFIED MEASUREMENT CONDITIONS: AMBIENT TEMPERATURE +23 ° C

■ Name of each part

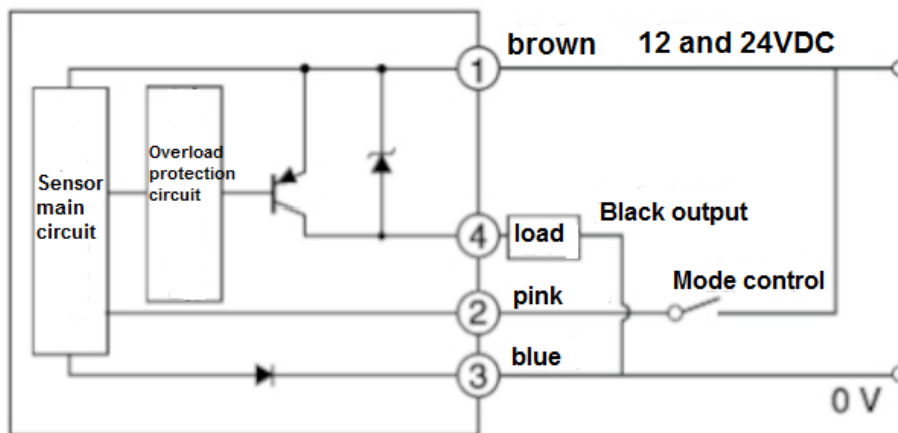


■ wiring

— NPN Output

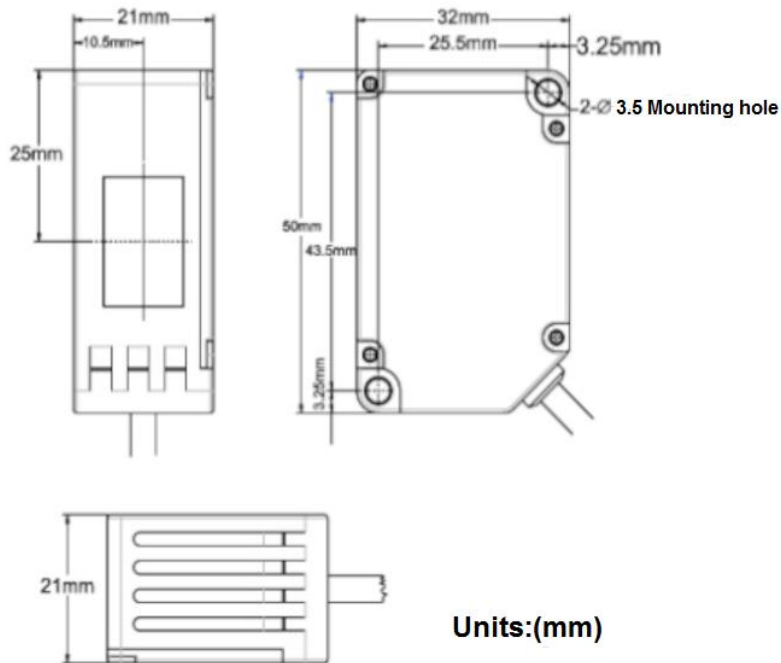


— PNP Output



Note: The pink line disconnect (off) to color mode
 The pink line on (on) for the color mode

■ Size chart



■ Teaching methods

- Before setting for teaching to confirm color scale model or color set "Color" the green light is normally on color patterns, put out for color standard mode















• Two set teaching way

- ① Sensors are projected to be light colour press "ON" button, the "GOOD" green light flashing.
- ② The light projected by the sensor presses the "OFF" button against the backaround color.
- ③ In step ① and ② the threshold can be stable detection set between "GOOD" the green light is normally on, said starting test properly. In step (1) and (2) between the threshold is not stable detection set "ERR" three seconds after the red light flashing back to the last setting state.
- ④ If you want to switch the NO for NC output mode, the need to change the setting steps ① and ② of the order.

● Threshold regression adjustment

- ① Press the "ON" button for more than 5 seconds until ERR, GOOD and COLOR are flashing at the same time.
- ② Press the "OFF" button to adjust the return difference.

The relationship between the backslip state and the indicator light flashing is as follows:

| STATE | INDICATOR LIGHT | | | THREE INDICATOR LIGHTS ARE FLASHING |
|------------------------------|---|---|---|--|
| |  |  |  | |
| BACK TO THE SMALL DIFFERENCE |  |  |  | ONLY THE COLOR INDICATOR FLASHES |
| DIFFERENCE IN THE BACK |  |  |  | BOTH THE GOOD AND COLOR LIGHTS ARE FLASHING AT THE SAME TIME |
| BACK TO THE DIFFERENCE |  |  |  | ERR, GOOD AND COLOR ARE FLASHING AT THE SAME TIME |

● **Exit threshold return adjustment:**

Under the condition of threshold error adjustment, press the "ON" button for more than 5 seconds until the three indicators including ERR, GOOD and COLOR stop blinking and are always ON. In other words, exit threshold error adjustment.

■ **About error message prompt**

When an error message occurs, handle it as follows.

| | |
|-----------------------|--|
| INDICATOR STATE | "ERR" RED INDICATOR LIGHT IS ALWAYS ON AND WILL NOT GO OFF AUTOMATICALLY |
| ERROR MESSAGE CONTENT | THE OUTPUT LINE LOAD SHORTED AND OVERCURRENT PASSED |
| TO DEAL WITH | AFTER POWER OFF, CHECK OUTPUT LINE LOAD |

 **Warning**

- This product is only used for object detection. Do not use this product for the purpose of protecting human body or body parts.
- This product shall not be used as explosion-proof product. Do not use this product in dangerous places or in environments with potentially explosive gases.
- This product adopts DC power supply. Do not use ac power. If ac voltage is applied, the product may explode or catch fire.