



Description

The 45CLR ColorSight is a self-contained color detection sensor with three output channels, allowing for the concurrent sensing of three different colors. The colors to be sensed are taught quickly and easily with the touch of a button on the sensor or through remote teach.

Models are also available with RS-485 communications with the capability of matching up to five colors and communicate true RGB values for remote processing of additional colors.

The 45CLR ColorSight can be set up to detect:

- A single color per channel with adjustable tolerance
- Scan an area of various colors on the same surface
- Detect multiple individual colors per channel

This sensor offers a wide sensing range tolerance for reliable sensing when target distance varies from the taught settings.

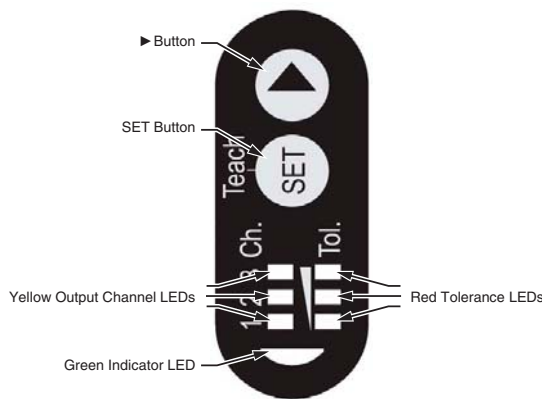
Features

- Wide sensing range tolerance
- Three channel color matching (three outputs)
- Gating input (also known as inhibiting input)
- Adjustable tolerance for high precision to general color matching
- Pulse stretching capability (50 ms off delay)
- Teach colors via pushbuttons
- External teach capability (one output)
- Teach button lockout
- 270° rotatable connector
- Compact size IP67 enclosure

General Specifications

Certifications	cULus and CE marked for all applicable directives
Light Source	White LED
Supply Voltage	18...28V DC
Current Consumption	≤40 mA @ 24V DC
Protection Type	Short circuit, overload, false pulse, transient noise, reverse polarity
Output Type	Discrete: 3 PNP outputs (N.O.)
Output Rating	100 mA max per channel output
Response Time	Output: Normal Teach mode (CH1,CH2,CH3): 1 mS External Teach mode (CH3): 2 mS
Housing Material	Plastic ABS
Lens Material	PMMA
Connection Type	8-Pin DC Micro, 270° Rotatable
Accessory	Cordsets, Mounting Brackets
Enclosure Type Rating	IP67
Vibration	10...55 Hz, 1.5 mm amplitude; 3 planes; meets or exceeds IEC 60947-5-2
Shock	30 g; 11 ms; meets or exceeds 60947-5-2
Operating Temperature—C (F)	-10...+55° (14...131°)

User Interface

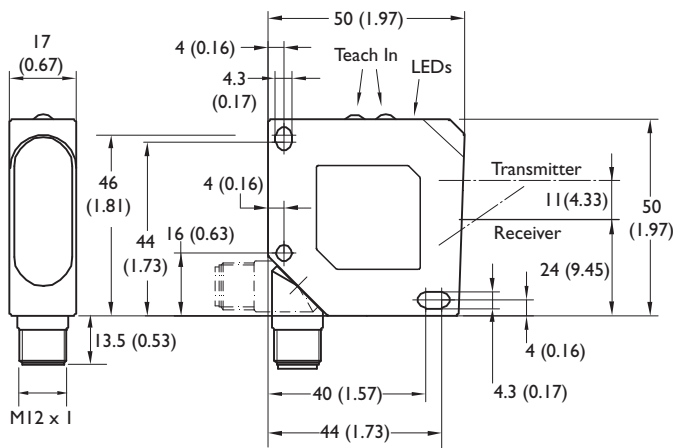


Product Selection

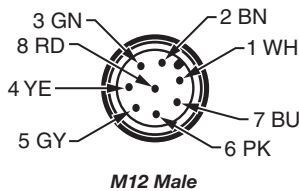
Sensing Range [mm (in.)]	Sensing Range Tolerance *	Spot Size [mm (in.)]	Output Type	Cat. No.
12...32 (0.47...1.26)	±6 mm (0.24 in.)	4 mm @ 22 mm	3 PNP	45CLR-5JPC1-D8
15...30 (0.59...1.18)	±5 mm (0.20 in.)	2 x 2 (0.07 x 0.07) @ 22 (0.86)	3 PNP	45CLR-5JPC2-D8
18...22 (0.70...0.86)	±2 mm (0.08 in.)	5 x 1 (0.19) @ 22 (0.86)	3 PNP	45CLR-5JPC3-D8
12...32 (0.47...1.26)	±6 mm (0.24 in.)	4 mm @ 22 mm	RS-485, 1 PNP	45CLR-5LPS1-D8
12...32 (0.47...1.26)	±6 mm (0.24 in.)	4 mm @ 22 mm	RS-485, 1 NPN	45CLR-5LNS1-D8
15...30 (0.59...1.18)	±5 mm (0.20 in.)	2 x 2 (0.07 x 0.07) @ 22 (0.86)	RS-485, 1 PNP	45CLR-5LPS2-D8
15...30 (0.59...1.18)	±5 mm (0.20 in.)	2 x 2 (0.07 x 0.07) @ 22 (0.86)	RS-485, 1 NPN	45CLR-5LNS2-D8
18...22 (0.70...0.86)	±2 mm (0.08 in.)	5 x 1 (0.19) @ 22 (0.86)	RS-485, 1 PNP	45CLR-5LPS3-D8
18...22 (0.70...0.86)	±2 mm (0.08 in.)	5 x 1 (0.19) @ 22 (0.86)	RS-485, 1 NPN	45CLR-5LNS3-D8

* For medium color tolerance settings within a specified range.

Approximate Dimensions [mm (inches)]

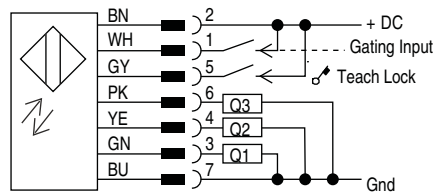


Pinout and Color Codes

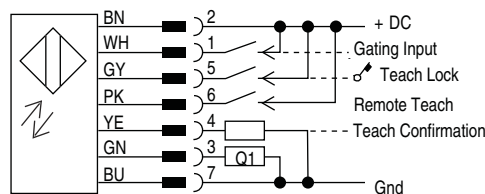


Pin	Color	Connection
1	White	Gate Input
2	Brown	V+ 12...28V DC
3	Green	OUT 1
4	Yellow	OUT 2/Teach Confirmation
5	Grey	Teach Button Lock
6	Pink	OUT 3/Remote Teach
7	Blue	V- 0V DC
8	Red	Not Connected

Wiring Diagrams

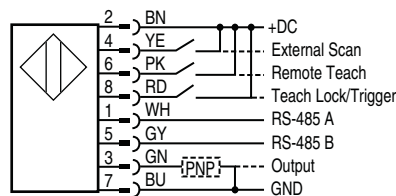


Remote Teach



The control input (pin 5) can be used to lock the ColorSight pushbuttons by connecting it to the +DC (18...28V DC). When working with the sensor in remote teach, we recommend the use of pushbutton lockout to prevent accidental tampering of the configuration.

RS-485 Models



Note: For NPN output models (Pin 3) load should be connected to +DC.



ATTENTION: PIN 1 and PIN 5 are the RS 485 interface connections and must not be connected to the power supply. This can permanently damage the sensor.

Cordsets and Accessories

Description	Cat. No.
DC Micro Style QD Cordset, 8-Pin	889D-F8AB-2
Mounting Bracket	45BPD-BKT1
Protective Mounting Bracket	45BPD-BKT2
Communications Cable (RS-485) for MicroLogix	1763-NC01
MicroLogix Advanced Interface Converter Module	1761-NET-AIC

