

# ColorMax RGB

## COLOR SENSORS

Verify the presence of targets that can be differentiated by color faster and with greater control. The ColorMax™ employs our field-proven, patented technology to provide an easy-to-use system for measuring color in a wide variety of applications. Fast response makes the ColorMax suitable for high-speed automation processes such as printing, packaging and sorting operations. Accurate color measurement and reliable performance makes the ColorMax the perfect choice for automotive, pharmaceutical and plastics industries.

The ColorMax RGB models provide 4 programmable color recognition channels with PNP/NPN outputs, red, green and blue analog outputs for direct connection to PLC and Communications Protocol for high-level integration into your control systems.

ColorMax Application Program provides a comprehensive approach to sensor set-up, color channel management and real-time sample analysis display. Low color variation of 0.5% and a 20kHz switching frequency are the best specs in the industry, providing the performance required by demanding applications. The metal alloy case and glass lens provide robust construction expected in an industrial environment.

# COLORMAX



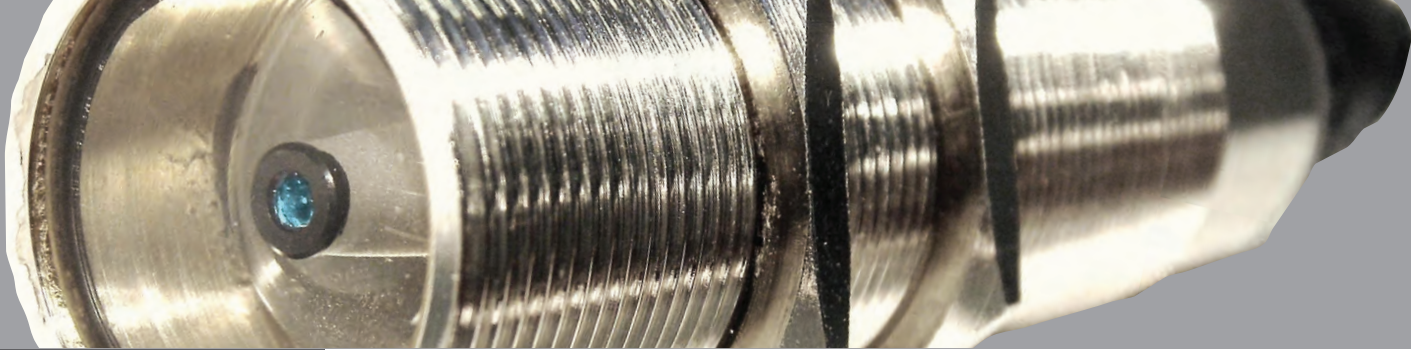
**EMX Industries, Inc.**

4564 Johnston Parkway, Cleveland, Ohio 44128

P. 800 426 9912 F. 216 518 9884

**Sales Inquiries:** [salesupport@emxinc.com](mailto:salesupport@emxinc.com) **Technical Support:** [technical@emxinc.com](mailto:technical@emxinc.com)

[www.emxinc.com](http://www.emxinc.com)



## Applications

- Automotive assembly, parts
- Packaging, pharmaceutical, food
- Plastic and rubber parts
- Electronic components
- Paper labels, printing

## Design & Features

- Fastest response time
- Highest resolution
- Auto-teach and manual functions
- Sophisticated algorithms that ignore luster
- PC-based configuration
- USB / RS232 Interface
- Lock out operator from changing settings
- Red, green and blue analog outputs

## Ordering Information



Model	spot size (mm)
CM1000-4RGB4	4
CM1000-4RGB8	8
CM1000-4RGB25	25

## Accessories



CM1000-KIT2

## Functions

**COLOR RECOGNITION**  
**AVERAGING**  
**TEACH**  
**TOLERANCE**  
**EXTERNAL TRIGGER**  
**ILLUMINATION**  
**RGB VALUE DISPLAY**  
**DISCRETE OUTPUT**

4 channels  
 1 to 64 readings  
 RGB values 1 to 100%  
 0.5% to 50%  
 Level, Edge, Free Run  
 0 to 100%  
 Bar graph - absolute value, Pie chart - relative value  
 High or Low (V<sub>-</sub> or ground)

## Specifications

### Detection Range

4mm spot 30mm-50mm  
 8mm spot 30mm-100mm  
 25mm spot 30mm-150mm  
 50mm

### Recommended Operating Distance Spot Diameter

4,8 or 25mm @ 50mm  
 target distance

### Light Source Switching Frequency

White LED  
 20 kHz

### Receiver

RGB photodiode

### Discrete Outputs

4

### Analog Outputs

Red, green blue (3 channels 0...5V)

### Power

12-30 VDC

### External Trigger

12-30 VDC

### Communication

RS-232C / USB

### Protection Circuitry

Reverse polarity, over current  
 (PTC thermal resettable fuse)  
 (length, diameter) 110mm x 30mm  
 180g (.4lbs)

### Dimensions

316 stainless steel

### Weight

180g (.4lbs)

### Housing

316 stainless steel

### Type of Protection

IP67 NOT FOR PRESSURE WASH DOWN

### Operating Temperature

-10 to 55°C

### Storage Temperature

-20 to 70°C

### Connector Circular

12-pin, IP67

### Accessories

Mounting bracket, jam nuts (two), interface cable assembly, 12 VDC power supply, application software, I/O board with status indicators



- Exclusive PC-based configuration.
- Operator lockout prevents operators from changing the sensor settings in order to avoid reporting manufacturing quality issues.
- Software driven control of discrete output logic



**WARRANTY** EMX INC. the product described herein for a period of 2 years under normal use and service from the date of manufacture. The product will be free from defects in material and workmanship. This warranty does not cover ordinary wear and tear, abuse, misuse, overloading, altered products, or damage caused by the purchaser from incorrect connections, or lightning damage. There is no warranty of merchantability. There are no warranties expressed, implied or any affirmation of fact or representation which extend beyond the description set forth herein. EMX Inc. sole responsibility and liability, and purchaser's exclusive remedy shall be limited to the repair or replacement at EMX's option of a part or parts not so conforming to the warranty. In no event shall EMX Inc. be liable for damages of any nature, including incidental or consequential damages, including but, not limited to any damages resulting from non-conformity defect in material or workmanship.

**NOT INTENDED FOR USE IN PERSONAL SAFETY APPLICATIONS.**

**MADE IN THE USA**

©EMX Industries, Inc. all rights reserved. REV 2.2 08/19/14