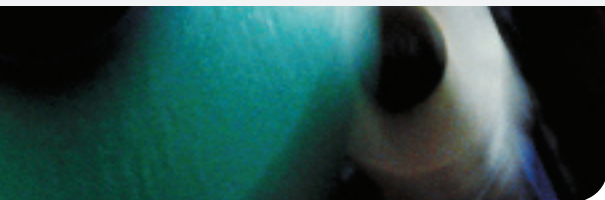


Connected Components

Simple Color Sensing Building Block



Connected Components Building Blocks help reduce the design overhead so you can concentrate on making your machine the best in the market



Connected Components Building Blocks

Connected Components Building Blocks (CCBB) from Rockwell Automation provide you with the information you need to quickly and easily implement common control tasks in your machine design.

Take advantage of best practice based examples with:

- Lists of compatible materials
- Panel and wiring drawings
- Status and diagnostic control programs and HMI screens
- Quick start guide
- All available on CD, CC-QR001A-MU-C

Simple Color Sensing

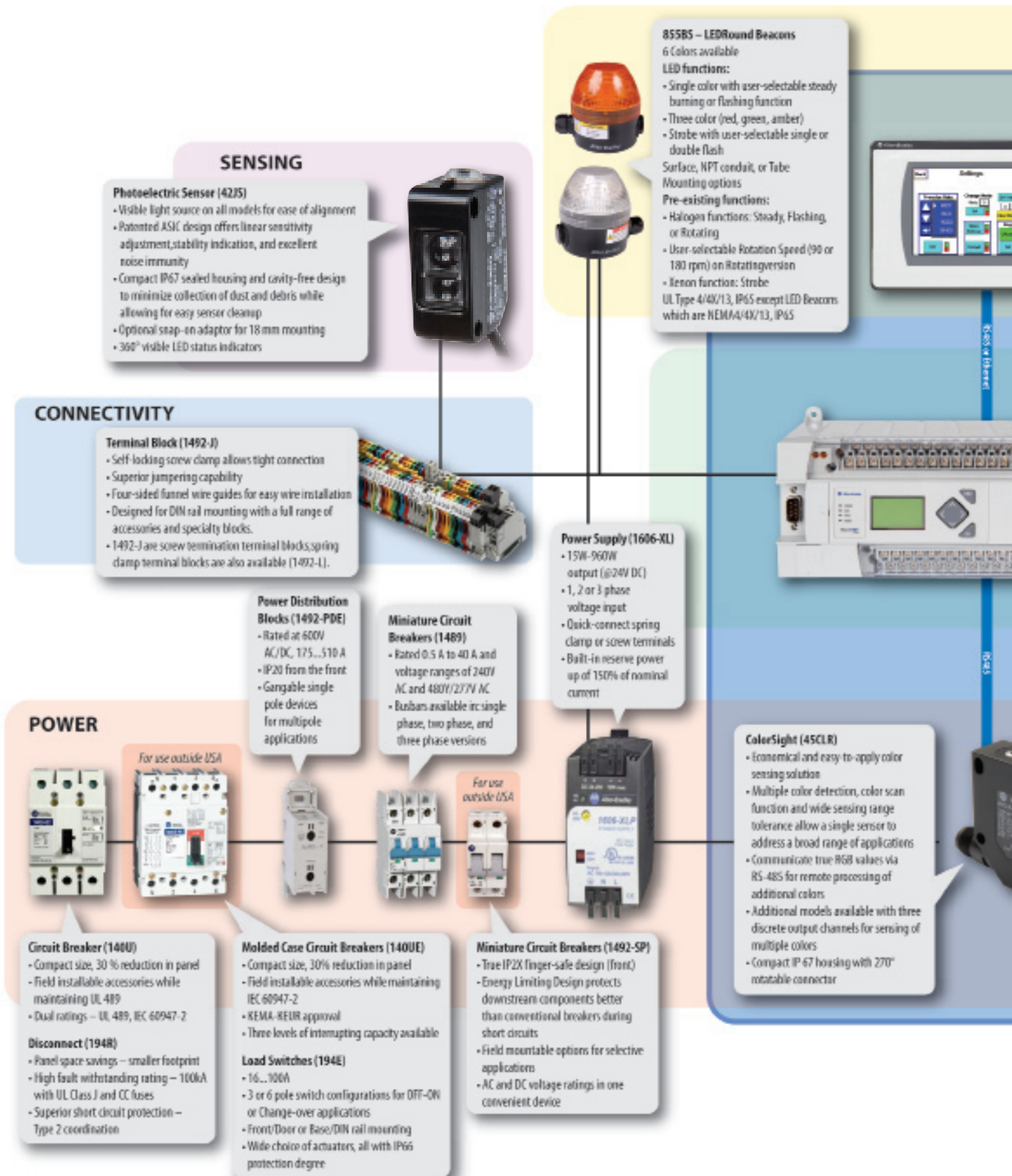
The ability to detect and classify by color in an assembly or packaging operation is a powerful tool that can speed production and assure quality. The Rockwell Automation color sensing solution provides the basic design information to connect a color sensing system and control program. The Simple Color Sensing CCBB allows you to build a stand alone cost-effective component solution or include the sensing building block as part of a more complex machine.

Solution Specific Advantage

- Utilize a ColorSight 45CLR sensor with a MicroLogix controller for simple sensing tasks
- Communication through RS-485
- True values for Red, Green, Blue and Intensity
- Simple setup and commissioning with the activation of commands from a MicroLogix controller
- Uses simple industry standard PLC programming
- Expandable to multiple sensors

LISTEN.
THINK.
SOLVE.

Connected Components For Simple Color Sensing



Above is a typical representation of the components used in this system solution.
Your requirements could vary based on your specific machine needs.

OPERATOR INTERFACE

PanelView Component (2711C)

- Monitor and setup equipment parameters
- Alarm, recipe and security improve diagnostics, reduce errors and protect against unauthorized changes
- Web-browser editor reduces number of software tools
- Displays ranging from 2" monochrome to 10" color
- Serial communication included, Ethernet 10/100 Mbps on 6" and 10"

SAFETY (if required by risk assessment)



Emergency Stop (800FP-MT)

- Trigger action with key release
- Push-pull or twist-to-release styles
- Illuminated or non-illuminated
- Plastic or metal operators available
- NC self monitoring contact block

LOGIC CONTROL



MSR127 Safety Relay (440R-N23)

- Category 4 per EN 954-1
- Stop category 0
- 3 safety contacts 1 auxiliary contact
- Cross fault monitoring
- Monitored or automatic reset
- Removable terminals
- Light curtain, E-stop or safety gate applications

MicroLogix (1761, 1762, 1763, 1764, 1766)

- Five controller versions to choose from
- Available communication options include DeviceNet, Ethernet and Serial protocols
- High-speed embedded I/O with the flexibility of expansion I/O
- Online editing, embedded display and built-in 10/100 Mbps EtherNet/IP on 1760 and 1766
- All controllers use/share one programming software: RSLogixMicro or RSLogix500

Safety Contactor (100S-C/104S-C)

Bulletin 100S-C/104S-C safety contactors provide mechanically linked positively guided contacts, required in feedback circuits of modern safety applications



ArmorStart On-machine Starter

- IP67 or IP69K
- DOL/Rev starter up to 7.5kW
- Softstarter up to 5.5kW
- VFD up to 3kW
- Embedded 4 Inputs/2 Outputs
- DeviceNet connectivity
- DeviceLogix functionality for local control



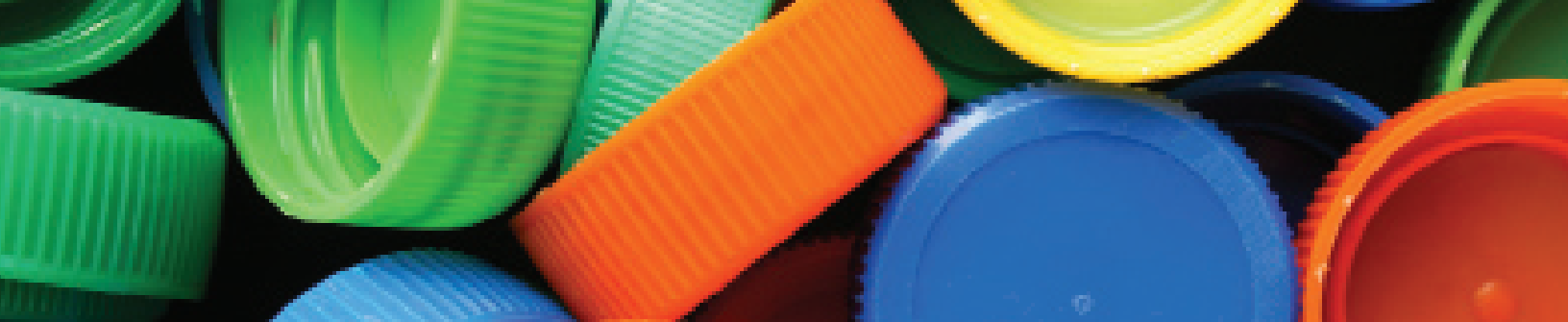
A typical Color Sensing application controls diverter gates, air knives, etc. from a variety of output devices, such as ArmorStart motor control products, air valves and solenoids.

Principle of Operation

The MicroLogix can be programmed to be the RS485 master on the application. The 45CLR ColorSight sensor can communicate up to five internally stored colors or true RGB values for remote processing of additional colors via message instructions that monitor and control the color channels as well as address individual sensors and teach colors remotely.

The PanelView Component provides operator control, status and configuration screens via standard templates, offering an excellent operator interface at a reduced cost. Also included are components for power distribution, circuit protection, sensing and connectivity to round out the requirements for complete control solutions in a cost effective manner.

The 45CLR ColorSight discrete models can also be interfaced with the MicroLogix for control of pneumatic or electrical devices.



Applications

- **Transport Systems**
 - Sorting of packages
- **Bakery**
 - Browning application
- **Automotive**
 - Paint color matching
 - Paint mark detection on tires and brake drums used for balancing
- **Food & Beverage**
 - Color cap presence detection on milk bottles
- **Packaging**
 - Verification of item packaging by color
- **General**
 - Detection of color mark on a metal sheet for cutting purposes
 - Paint marking on lumber to differentiate board quality
- **Paper and Printing**
- **Textile**
 - Multiple color yarn detection

Connected Components Solution

The following sample bill of materials lists core products. For a complete solution bill of materials (includes power circuit components, control circuit components, sensors, pushbuttons, and safety components) order the Connected Components Building Block CD, CC-QR001A-MU-C.

CCBB Color Sensor Control Basic Products		
Quantity	Catalog Number	Description
1	1766-L32BXB	MicroLogix 1400, 24V dc power, (12) digital fast 24VDC inputs, (8) digital 24VDC inputs, (6) relay outputs, (3) fast 24VDC outputs, (3) normal 24VDC outputs
1	45CLR-5LPS1-D8	ColorSight Sensor, 12-28V DC, 4mm @ 22mm Spot Size (+/- 6mm tolerance), 1 PNP w/RS-485, 8-pin DC Micro QD
1	45BPD-BKT1	45CLR ColorSight Mounting Bracket
1	889D-F8AB-2	Cordset: DC Micro (M12), Female, Straight, 8-Pin, PVC Cable, Yellow, Unshielded, 24AWG, IEC Color Coded, No Connector, 2 m (6.56 feet)
1	1763-NC01	Cable: MicroLogix 1400 Channel 0 (8-pin DIN) to RS-485 (6-pin Phoenix)
1	1606-XLP30E	AC/DC DINRail mount Compact Power Supply, Standard Module, 30 W, 24-28V, 120/230V AC Input Voltage
1	2711C-T6C	PanelView Component 6" color touchscreen terminal
1	1585-M8TBJM-2	EtherNet Cable, 8 conductors, RJ45 male connectors, Teal Robotic TPE, 2 meters
CCBB Color Sensor Products for Programming		
Quantity	Catalog Number	Description
1	9324-RLM0100ENE	RSLogix Micro Starter (English) CD-ROM

For additional information, please visit www.rockwellautomation.com/go/connected

www.rockwellautomation.com

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