

# SIMATIC MV220 – for fast inspection of color objects



## Highlights

- Optimally suited for use in rough industrial environments
  - IP 65 degree protection
- The control of fast processes is possible thanks to short inspection time of the sensor (approx. 30 inspections per second)
- Short changeover times through simple model switch
  - 16 inspection models teachable
  - Switching of the inspection models takes place via digital inputs
- Flexible adaptation to the application possible
  - Variable setting of the image window and operating distance
  - Variable setting of parameters
- Fast commissioning
  - No image processing knowledge required
  - No programming required

# simatic sensors

The compact color area sensor SIMATIC MV220 is a complete image processing system for the automatic inspection of color objects. The MV220 is designed for applications in industrial manufacturing, packaging applications and food & beverage industry.



**SIEMENS**

## Application area

- Manufacturing and assembly operations for automotive suppliers and car electronics;
- Checking the presence of color components
- Packaging machines for blister packs and combined packs
- Checking for presence, part recognition and checking the location of color objects
- Filling applications in the food & beverages industry
- Print inspection and parts identification for labels and lids.



## Functions

- Teaching in the models using one or more good parts
- Inspecting an object using the features extracted during teach-in
- Inspection can be performed on stationary and moving objects
- Inspection of the object returns a good/bad statement in accordance with the set threshold values
- The results are supplied on two digital outputs:
  - OK: Comparison of the object with the saved model is better or equal to the set threshold value
  - N\_OK: Comparison of the object with the saved model is worse than or equal to the set threshold value

## SIMATIC MV220 – Technology overview

Image sensor	CMOS sensor (color); 640 x 480 pixels
Size of the image field	Continuously variable; depending on the object distance; for object distance of 50 mm: 40 x 30 mm; up to a object distance of 250 mm: 200 x 150 mm
Number of distinguishable colors	Depend. on the inspection resolution; 2048 colors/64 colors/16 colors
Inspection types	Matching, recognition
Inspection triggering	Externally; through digital input
Output of results	„OK“ and „N_OK“; through LEDs and digital outputs
Lighting	Integrated white LEDs
External lighting	Controllable through digital output
<b>Functions</b>	
Operator control	4-character text display and 4 operator buttons
Alignment tool	User laser projection (laser class 2)
Number of models that can be stored	16; through digital inputs
Teach-in of models	with „Teach-in“
Diagnostics messages	using LED; text display and digital output
Operating status display	using LED and digital output
Disabling operation of keys	possible through digital input
<b>Interfaces</b>	
Digital inputs	6 inputs 24 V DC, of which one trigger input
Digital outputs	5 outputs; 24 V DC
Connection of digital inputs and outputs	12 socket and M12 plug, 8-pole
Mounting the sensor	using M4 fixing holes
<b>General information</b>	
Power supply	24 V DC (20.4 DC ... 28.8 V; with reverse polarity protection)
Power consumption max.	2 A
Material	Housing: plastic, aluminum Lens cover: plastic
Dimensions (H x W x D) in mm	113 x 35 x 90
Weight	430 g
Degree of protection	IP65 acc. to DIN EN 60529
Ambient temperature	0 ... 45°C
Mechanical strength (oscillations and shock)	acc. to IEC 61131-2

The information provided in this brochure contains descriptions or characteristics of performance which in case of actual use do not always apply as described or which may change as a result of further development of the products.

An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract.

Availability and technical specifications are subject to change without notice.