

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
Functions	
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
Interfaces	
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
General information	
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

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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.