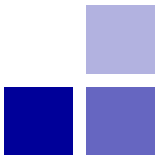


Machine Vision System application notes (Automotive applications)

Panasonic Industrial Devices SUNX Co., Ltd.



Inspection of incorrectly inserted control buttons

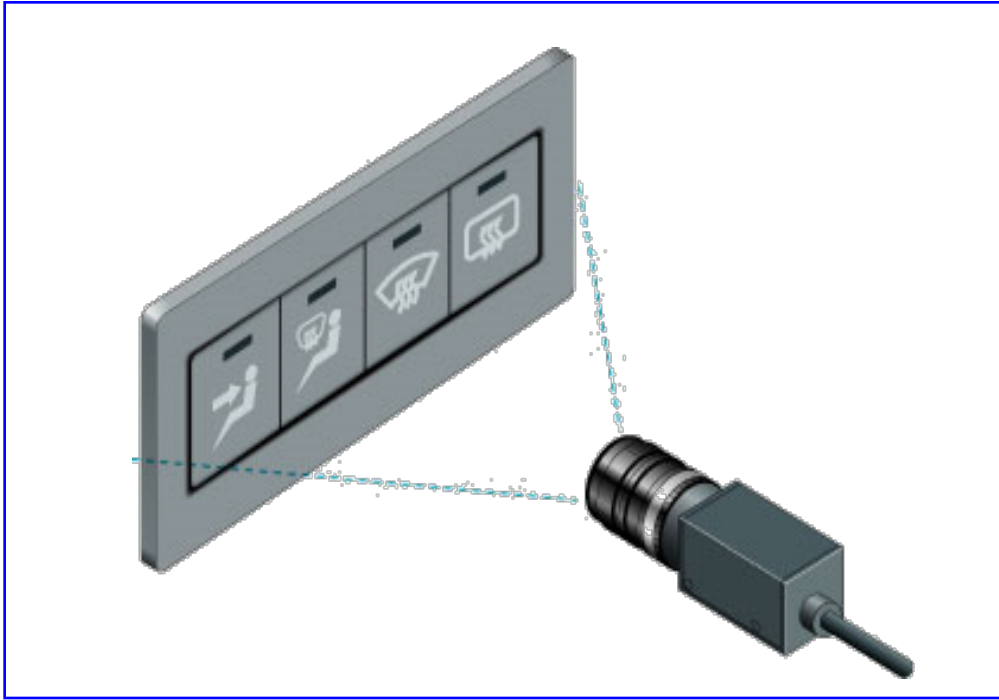


Image illustration



Inspect by comparing registered patterns

Description

- Inspect for incorrect insertion of various kinds of automotive components that differ slightly in shape and color

Merits in purchasing our product

- Inspect by registering several acceptable image templates
- Supports various kinds of components
- Detects subtle color differences through color extraction

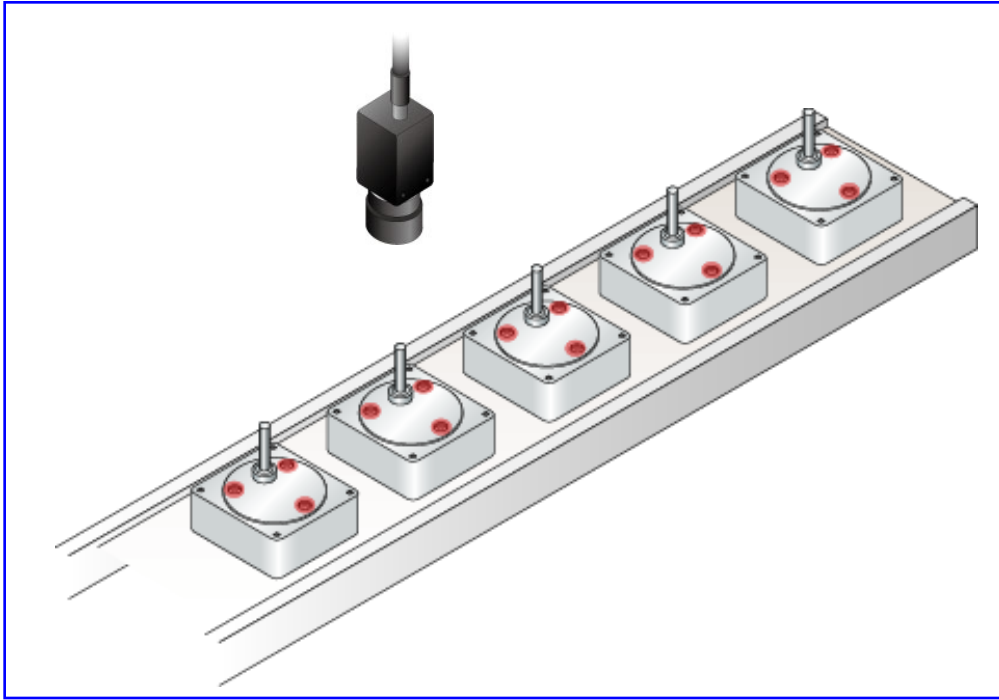
Examples of used functions

- Smart matching

Recommended model

PV200	4 megapixel camera
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Paint lock presence inspection



Description

- Checks the “paint lock” for preventing fastened screws from coming loose

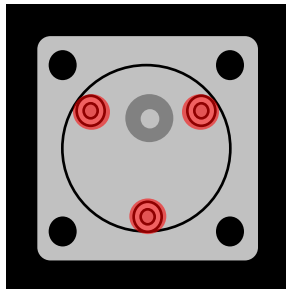
Merits in purchasing our product

- Supports multiproduct and multi-item inspections
- High-speed processing through parallel operation
- Stable detection through color extraction

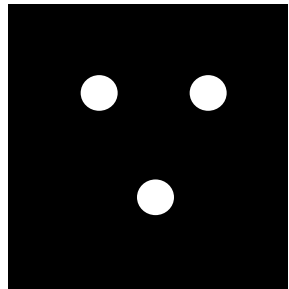
Examples of used functions

- Color extraction
- Feature extraction

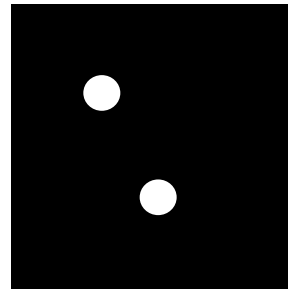
Image illustration



Color image



OK



NG
No paint lock

Recommended model

PV200	
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Product type identification

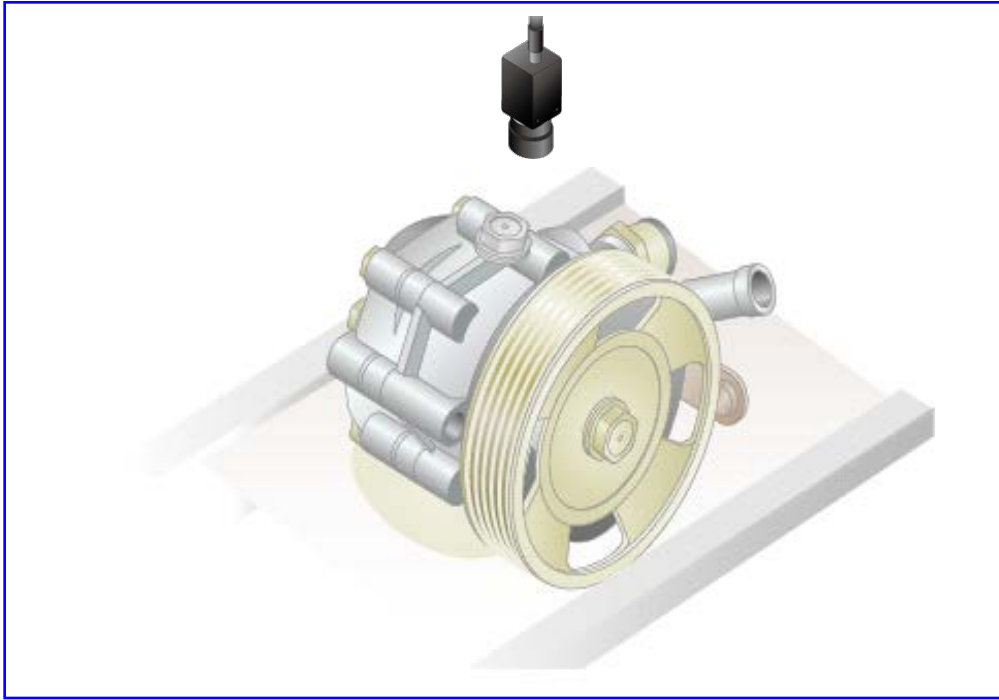
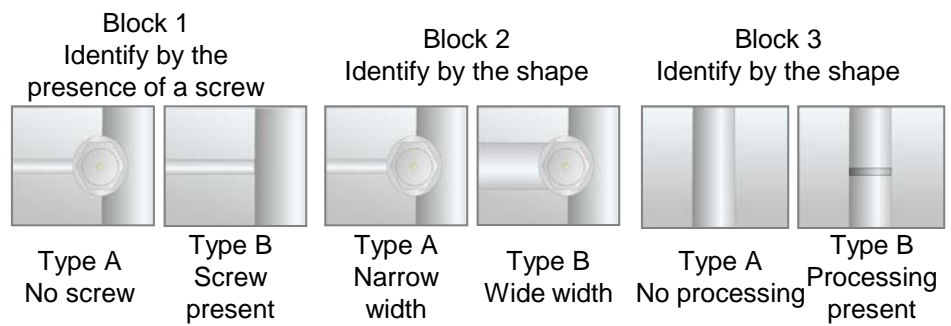


Image illustration

Example of designated execution: Specify block 1, block 2, or block 3 depending on the product to be inspected and execute the inspection



Description

- Identify the product type by the presence or absence of or the differences in assembly components, such as engine blocks and power steering pumps

Inspection / Sensing method

- Detects the presence of screws and other components with a camera

Merits in purchasing our product

- Register up to 10 types of inspection using the designated execution function
Supports production lines that run mixed product types through instant program switching
High-speed processing through parallel operation
- Transfer media image to the PC even during inspection for product type verification

Examples of used functions

- Feature extraction
- Binarization window
- Smart matching

Recommended model

PV200	Combined color and gray inspection
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Metal plate perforation inspection

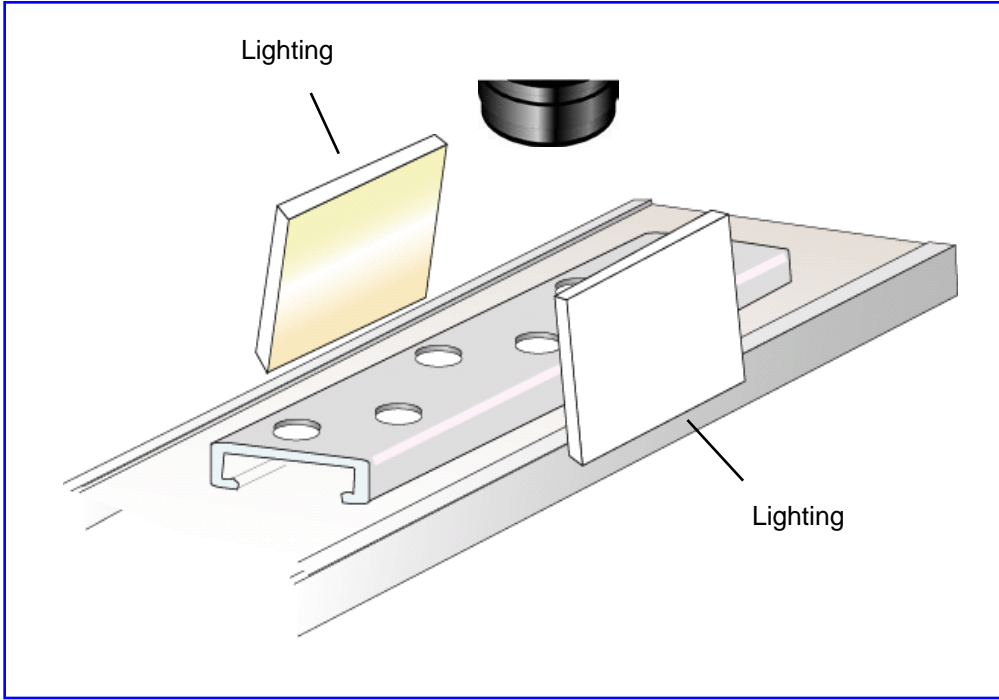
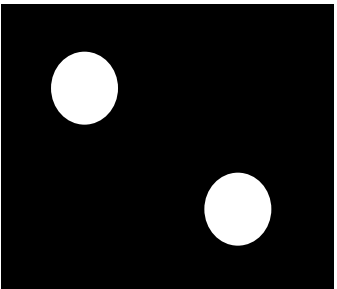
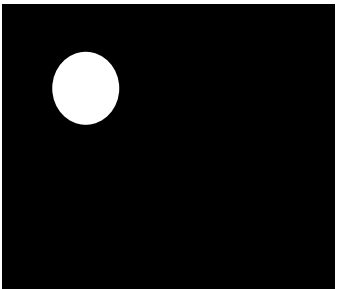


Image illustration



OK
Hole present



NG
Hole absent

Description

- Metal plate through-hole inspection on a production line where transmitted light cannot be used
Direct light from both sides of the object to highlight the detection area and inspect the hole perforation

Merits in purchasing our product

- Inspect two holes at different positions with a single camera
- Because detection is performed on the surface, there is no need to change the camera mount position even when the hole positions change as a result of a product type change or the like.

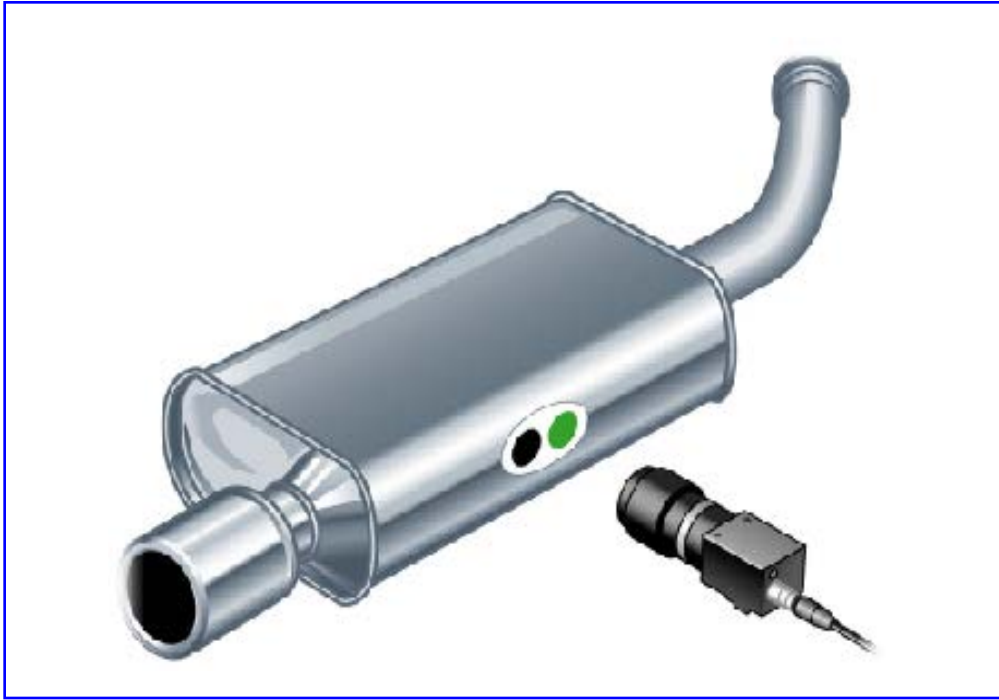
Examples of used functions

- Binarization window
- Smart matching

Recommended model

PV200	
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Metal plate perforation inspection



Description

- Identify color codes provided as a means of distinguishing vehicle types

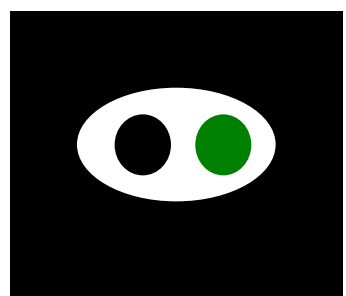
Merits in purchasing our product

- Color extraction minimizes the effects of some degree of change in the color code.
- Supports various kinds of products that differ slightly according to the vehicle type and grade

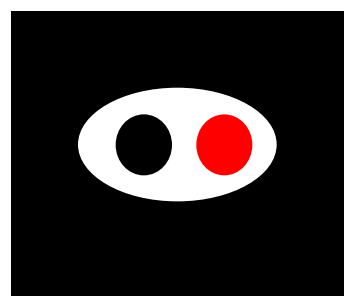
Examples of used functions

- Color extraction
- Feature extraction

Image illustration



Type A



Type B

Recommended model

PV200	
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