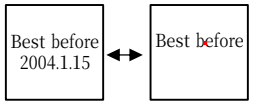
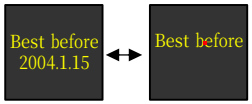
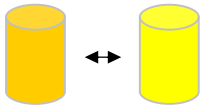
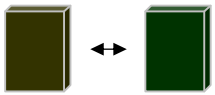
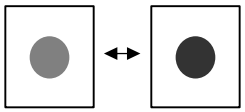
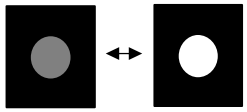
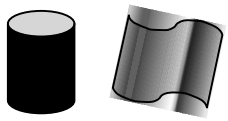
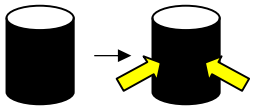
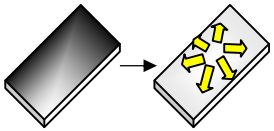
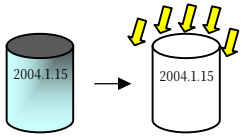
Before making this setting, operations (such as changing set values, changing teaching window, the zoom function, etc.) of CVS1 must be mastered.
If you have not mastered these operations, operate the equipment referring to the separate sheet "Detection of Presence / Absence of Characters & Print".

Marked Part shows a value other than initial value

		Print, Thin line		Work with little difference in color	
					
		Black print on white background	Other colors	Bright color	Dark color
Changing set value	COLRFIL	1 Locates white on the background to the right end in the screen.	0 Corrects the change in brightness by calculating color ratio.	0 Corrects the change in brightness by calculating color ratio.	0 Corrects the change in brightness by calculating color ratio.
	KIL BLK	27 Initial value works for correcting the change in brightness.	27 Initial value works for correcting the change in brightness.	27 Initial value works for correcting the change in brightness.	27-30 Increase until dark color becomes bright in F screen.
	RESOLUT	0 Sets high resolution to detect thin characters.	0 Sets high resolution to detect thin characters.	0 Sets high resolution to detect colors accurately.	0 Sets high resolution to detect colors accurately.
	TEACHMD	1 Sets the dark color inside the teaching window as the detection color.	0 Sets the color inside the teaching window as the detection color.	0 Sets the color inside the teaching window as the detection color.	0 Sets the color inside the teaching window as the detection color.
Teaching	ZOOM function	Enclose only printed portion.	Available only when detection is done incorrectly by imaging portion other than work.	Available only when detection is done incorrectly by imaging portion other than work.	Available only when detection is done incorrectly with four corners in the screen darkened.
	Window size	Normal	Decrease to select only the detection color.	Decrease to narrow the range of detection color.	Decrease to narrow the range of detection color.
	Window position	Enclose characters and background.	Move to the detection color portion.	Move to the detection color portion.	Move to the detection color portion.

		Distinction of gray from black or while		Presence / absence of lustrous item (metal, film)	
					
		White background	Background is other than white	Background is not lustrous	
Changing set value	COLRFIL	1 Locates white on the background to the right end in the screen.	0 Corrects the change in brightness by calculating color ratio.	0 Corrects the change in brightness by calculating color ratio.	
	KIL BLK	27 Initial value works for correcting the change in brightness.	10-22 Adjustment is given so that gray can be distinguished from white or black.	15-25 Slightly decrease value to correct luster only.	
	RESOLUT	1 Low resolution will work since detection is done for difference in brightness but not in color.	1 Low resolution will work since detection is done for difference in brightness but not in color.	1 Low resolution will work since detection is done for difference in brightness but not in color.	
	TEACHMD	0 Sets the color inside the teaching window as detection color.	0 Sets the color inside the teaching window as detection color.	2 Performs teaching with constant brightness (BRIGHT).	
Teaching	ZOOM function	Available only when detection is done incorrectly with four corners in the screen	Available only when detection is done incorrectly with four corners in the screen darkened.	Available only when detection is done incorrectly by imaging portion other than work.	
	Window size	Decrease to select only the detection color.	Decrease to select only the detection color.	Decrease to select only luster.	
	Window position	Move to the detection color position.	Move to the detection color position.	Move to the lustrous portion.	

Application when external lighting is required

	Presence / absence of print on cylindrical surface	Print and hole on metal lustrous surface	Print on transparent bottle
			
External lighting	Light from right and left so that cylindrical surface is evenly bright.	Use diffused lighting (available on market) to obtain even reflected light.	Use back-light (available on market) to surface characters.
LIGHT	1	0	0

Comparison table for traveling work, brightness set value, and detection color

If the shutter time (BRIGHT set value×54.5μs) is long, color cannot be correctly detected due to the mixture with adjacent color.
The following table shows the work travel speed, the brightness set value, and the standard color size.
Colors and characters thinner than the width on this table may not be detected due to the mixture with adjacent color.
Set as follows in order to shorten the shutter time.

	Black print on white background	Other colors	
BRIGHT	Decrease to intended value.	Decrease to intended value.	
COLRFIL	3	2	High sensitivity mode
KIL BLK	27 to 30	27 to 30	Increase according to screen brightness.
TEACHMD	3	2	Brightness constant teaching

Work travel speed	0.1m/s			
Color / character width	2mm or more	1mm or more	0.5mm or more	0.25mm or more
BRIGHT	200	100	50	25
shutter speed(ms)	10.9	5.45	2.725	1.3625

Work travel speed	0.2m/s			
Color / character width	4mm or more	2mm or more	1mm or more	0.5mm or more
BRIGHT	200	100	50	25

Work travel speed	0.5m/s			
Color / character width	10mm or more	5mm or more	2.5mm or more	1.2mm or more
BRIGHT	200	100	50	25

Work travel speed	1m/s			
Color / character width	20mm or more	10mm or more	5mm or more	2.5mm or more
BRIGHT	200	100	50	25