


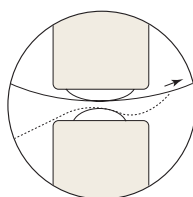
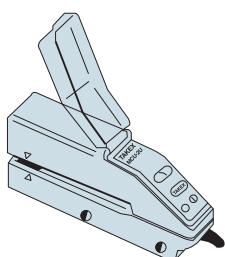
CE



- A Blue LED type is now available (ideal for detecting yellow register marks)
- Lens surface is constantly cleaned
- Large curved Glass lens will not cause damage to work
- Water resistance to IP 67 standard for washability, multi-turn manually adjustable without tool for fine adjustment

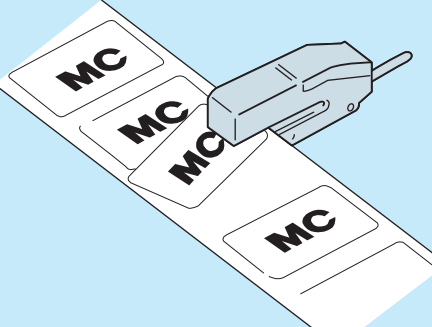
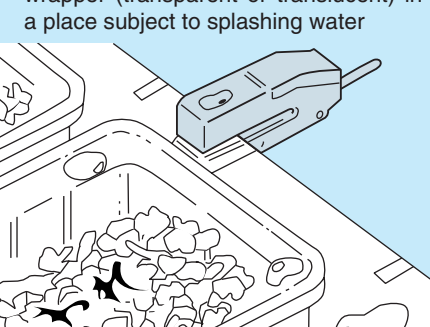
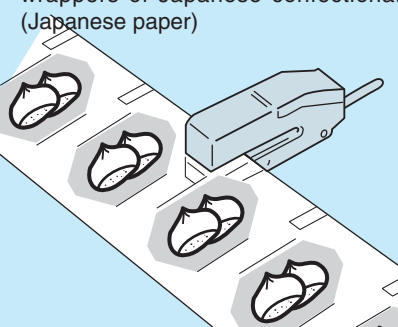
Type

Detection method	Detection interval	Model	Light source	Operation mode	Output mode	Remarks	
 U-shaped through-beam	2 mm fixed	MC-U2R	Red LED	Light-ON/Dark-ON selector switch	Open collector	NPN	For detection of labels
		MC-U2R-TC				NPN and PNP outputs	
		MC-U2G	Green LED			NPN	For detection of register marks
		MC-U2G-TC				NPN and PNP outputs	
		MC-U2B	Blue LED			NPN	Effective for detection of yellow marks
		MC-U2B-TC				NPN and PNP outputs	



- The center of detection is constantly cleaned for stable detection, even with Japanese paper, etc., that generates a large amount of dust.
- The top lens is also cleaned by the “spring effect” of work caused by release of tension that occurs when the work runs out.

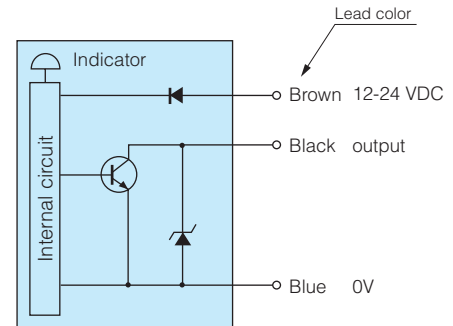
Sample Application

<ul style="list-style-type: none"> ● Detection of overlapped labels 	<ul style="list-style-type: none"> ● Positioning of register marks on film wrapper (transparent or translucent) in a place subject to splashing water 	<ul style="list-style-type: none"> ● Detection of register marks on wrappers of Japanese confectionary (Japanese paper) 
--	---	--

Rating/Performance/Specification

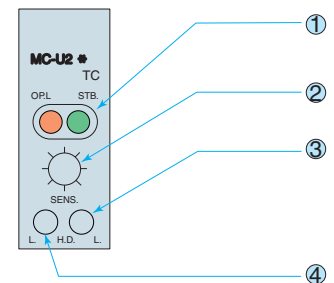
Rating/performance	Type	For detection of labels		Register mark detection		
	Model	MC-U2R	MC-U2G	MC-U2B	MC-U2B	
	Detection method	U-shaped through-beam				
	Detection interval	2 mm fixed				
	Power supply	12 – 24 VDC ±10% Ripple: 10 % max.				
	Current consumption	20 mA max.	28 mA max.	22 mA max.	22 mA max.	
	Output mode	NPN open collector output Rating: sink current 100 mA (30 VDC) max. (*1)				
	Operation mode	Light-ON/Dark-ON selectable (with switch)				
Response time	0.5 us max.					
Specification	Light source (light wavelength)	Red LED (680nm)	Green LED (570nm)	Blue LED (450nm)		
	Indicator	OPL: Operation indicator (Red LED), STB: Stability indicator (Green LED)				
	Volume (VR)	SENS: 4-turn sensitivity adjustment without stopper provided				
	Switch (SW)	● Light-ON/Dark-ON selector switch provided L: Light-ON, D: Dark-ON		● Emission intensity selector switch provided L.: low powered, H: high powered		
	Short-circuit protection	Provided				
	Material	Case: heat-resistant ABS, Lens: Glass				
	Connection	Permanently attached cord (outer diameter: dia.4) 0.2 mm2 x 3 cores, 3 m, black				
	Mass	120 g max.				
	Notes	(*1) Models that provide PNP and NPN outputs are also available. Model Nos.: MC-U2R-TC and MC-U2G-TC.				

Input/Output Circuit and Connection



- The output transistor turns off when load short circuit or overload occurs.
- Check the load and turn the power back on.

Panel Layout



① Indicators OPL: operation indicator (red LED)
STB.: stability indicator (green LED)

② Sensitivity adjustment: 4-turn volume without stopper

③ Light-ON, Dark-ON selector switch D: Dark ON
L: Light ON

④ Emission intensity selector switch L.: low powered
H: high powered

Environmental Specification

Environment	Ambient light	5,000 lx max.
	Ambient temperature	-25 - +55 °C (non-freezing)
	Ambient humidity	35-85%RH (non-condensing)
	Protective structure	IP67
	Vibration	10-55 Hz / 1.5 mm amplitude / 2 hours each in 3 direction
	Shock	100 m/s ² / 2 times each in 3 directions
	Dielectric withstanding	500 VAC for 1 minute
	Insulation resistance	500 VDC, 20 MΩ or higher

Dimensions (in mm for all models)

