

Photoelectric Sensor Separate type

R SERIES

- RT-□□□□
- RD-□□□□
- RS-□□□□
- RM-□□□□

INSTRUCTION MANUAL

- Confirm if the item meets your needs.
- Before the use, you should first thoroughly read this manual and operate correctly as mentioned.
- You should keep this manual at hand for proper use.

1 SPECIFICATION Amplifier Unit

	Cable type	M8 connector type
Type	RSA-N (P)	RSA-CN (CP)
Supply voltage	DC10~30V including 10% of ripple	
Current consumption	35mA Max	
Response time	NORM mode : 500 μs / MARK mode : 200 μs	
Timer function	OFF delay fixed at 40ms ※1	
Control output	NPN • PNP Open collector MAX 100mA / DC 30V	
Mode	NORM / MARK mode Selectable by switch	
Circuit protection	Reverse protection, Over current protection	
Ambient temperature	-25~55°C / 35~85% (No freezing)	
Protection category • Material	IEC IP40 Case : ABS, Cover : PC	
Accessories	Mounting bracket	

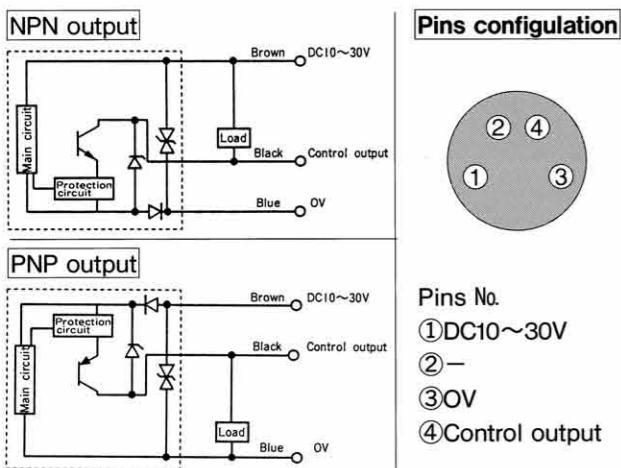
※1 OFF delay timer can be turned off by switch.

Sensor Head

	Through beam		Diffused reflection		Mark Detection			
Type	RT-1500	RT-F300	RD-150	RD-F50	Small Spot		Marking Spot	
Scanning distance	1.5m	30cm	15cm ※1	5cm ※1	RS-20R	RS-16G	RM-16R	RM-16G
Mode of amplifier	NORM mode				NORM/MARK mode	MARK mode	NORM/MARK mode	MARK mode
Light source	Red LED				Green LED	Red LED	Green LED	
Hysteresis			20%		20% (NORM mode)		20% (NORM mode)	
Indicator	Equipped (LIGHT indicator (Red))							
Ambient temperature	-25~55°C / 35~85% (No freezing)							
Environmental illuminance	Sunlight : 10000lx max. Incandescent light : 3000lx max. (Sunlight : 5000lx max. Incandescent light : 1500lx max. For RS-16G RM-16G)							
Spot size					Approx. φ1mm		Approx. 1mm × 4mm	
Protection category • Material	IP66/PC	IP50/PC	IP66/PC	IP50/PC	IP66/PC			
Accessories	Mounting bracket/Screw	Screw	Mounting bracket/Screw	Screw	Mounting bracket/Screw			

※1 10×10cm white paper. ※2 Scanning distance is Shorten to 16±2mm with Mode selector at MARK mode position.

2 WIRING



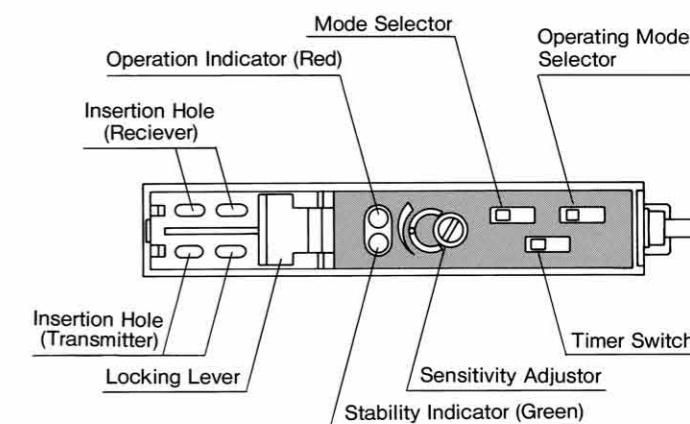
3 OTHER PRECAUTIONS

- Wiring must be done after turning off the power.
- Verify voltage fluctuation so that it does not exceed the rated value.
- When a switching regulator is to be used with a power supply, be sure to ground the Frame Ground Terminal.
- Do not use the R series outdoors, or in a place where extraneous light can enter the light receiving surface directly.
- Do not use the R series in a transient State at power on. (about 100ms)

⚠ Must not use this item as safety equipment for the purpose of human body protection.

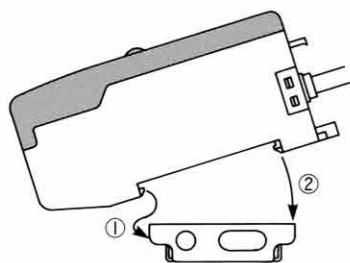
- Be careful not to install the R series at following locations, as it may otherwise malfunction.
 - Where a lot of dust, Vapor, or the like is present.
 - Where corrosive gas is produced.
 - Where water, oil or the like flies directly onto the R series.
 - Where strong vibration or shock is caused to the R series.
- Do not run amplifier cable near a high-voltage lines, or power lines or put them together in the same raceway. This warning should be strictly observed to prevent malfunctions caused by inductive interference.

4 NAME OF PARTS

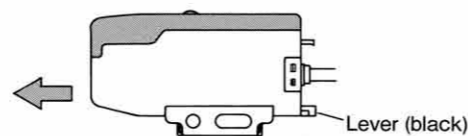


5 INSTALLATION

- Amplifier Unit
- Assembling
 - ① Latch the front on DIN rail or Bracket.
 - ② Push the tail down until there is a distinct snap.

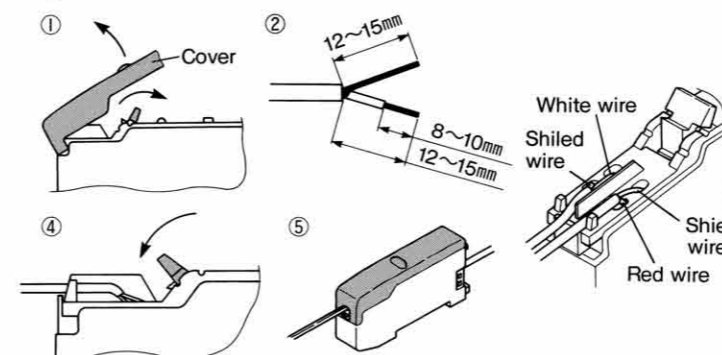


- Removing
 - ① Pull off the lever (black) of the tail by ⊖ screwdriver, or Push the amplifier unit toward ← and left the front.



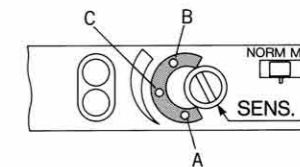
- Sensor Head
 - ① Open a cover and pull up the Locking Lever.
 - ② Process the cable end as shown.

- ③ Put the cables into the amplifier Insertion Holes as shown.
- ④ Bring down the Locking Lever.
- ⑤ Put on the cover.

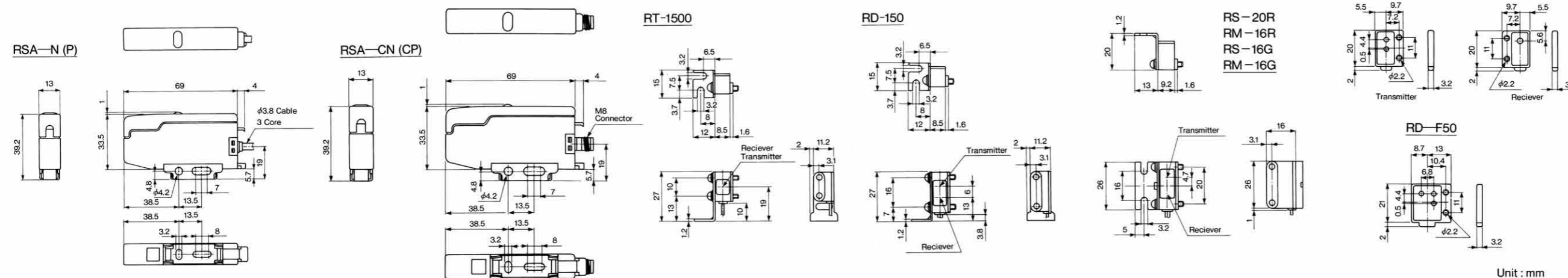


6 SENSITIVITY ADJUSTMENT

- ① Set the detectable object at the detection position and turn the sensitivity adjustor slowly from MIN toward MAX until the Operation Indicator lights up. Call it position A.
- ② Remove detectable object and turn the sensitivity adjustor from MAX toward MIN position where the Operation Indicator is extinguished. Call it position B.
- ③ Point C midway between A and B is the optimum Sensitivity Position.



7 DIMENSIONS



• Specifications and equipment are subject to change without any obligations on the part of manufacture.
 • For more information, questions and comments regarding products, please contact us below.

⑩ → http://www.optex-fa.com/rohs_cn/
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Unit : mm