

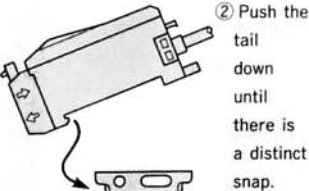
**INSTRUCTION MANUAL**

**JRF-SERIES  
FIBEROPTIC SENSOR**

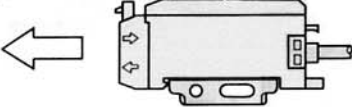
- Thank you for purchasing J-series photoelectric sensor. Check that the specifications agree with yours.
- Please read this manual through before using the sensor, and retain it for future reference.

**● Amplifier unit**

○ Assembling

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

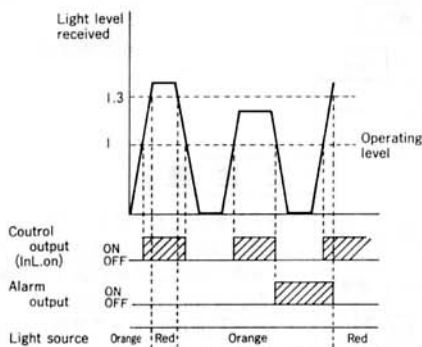
○ Removing

- Ⓐ Pull off the lever (black) of the tail by ⊖ screw-driver.
- 

- Ⓑ Push the sensor toward ⇐ and lift the front.

**● ALARM OUTPUT function**

This function gives a warning when receiving light intensity is reduced less than 130 % of detection level due to some dirt on the lens or wrong alignment. The stable incident indicator is extinguished and alarm output signal comes out.



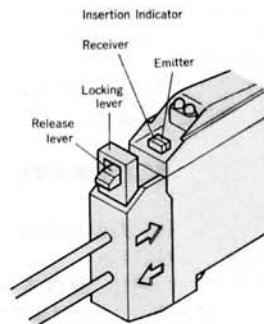
**SPECIFICATION**

Type	JRF—(N,P) (C)
Supply voltage	DC 10~30V Include 10 % of ripple
Current consumption	40mA Max.
Response time	350μs Max.
Hysteresis	12 %
Light source	Red LED
Sensitivity adjustment	4 rotation volume
Indicator	Incident indicator (Red), Stable incident indicator (Green)
Control output	Open collector Max. 100mA/DC30V
Alarm output	Open collector Max. 100mA/DC30V
Test input	Available only in cord type
Circuit protection	Reverse protection, Over current protection.
Timer function	OFF delay 5~100ms
Ambient temperature	Operating : -25~55°C/35~85% RH
humidity	Storage : -40°C~70°C/35~95% RH
Environmental illuminance	Sun light : 10,000 lx max. Incandescent light : 3,000 lx max.
Protection category, material	IEC IP 66 Case : polysulfone Cover : PC
Weight	Approximately 20g (except cord and connector)

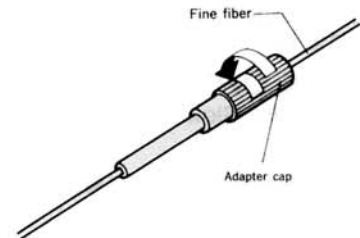
**● Fiberoptics**

○ Assembling

Push the fiberoptic gently until Insertion Indicator raised and check the locking lever was locked



**● Fiberoptic adapter.**



- ① Open the adapter by twisting it to the left, insert the fiber cable to the desired position and lock it by twisting it to the right.
- ② Cut the fiber to length by using the fiber cutter.

**caution** Using the same cutter hole or slow cutting may result in reduced optical performance.

**● TEST INPUT function**

(Available only in cord type.)

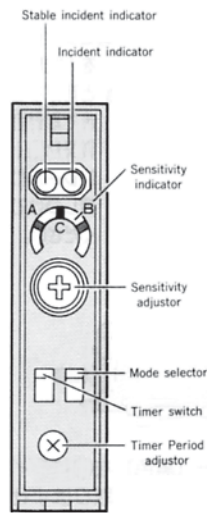
When the TEST INPUT lead wire is connected to 0V (NPN type) or 10~30VDC (PNP type), an interrupted status is electrically invented by stoppage of emission. This function can be used as the operational check of the sensor by electric interrupted state without detectable object.

**● OTHER precautions**

- Be careful not to install the sensor at the following locations, for it may otherwise malfunction :
  - Where a lot of dust, vapor, or the like is present.
  - Where corrosive gases are produced.
  - Where water, oil or the like flies directly onto the sensor.
  - Where strong vibration or shock is caused to the sensor.
- Do not use organic solvent, such as thinner, to remove contaminants from the body case, lid, and lens which are all of plastics. Using a dry rag, just wipe clean.
- When a switching regulator is to be used with a power supply, be sure to ground the frame ground terminal.
- Do not use the sensor in a transient state at power on. (about 100ms)

● Adjusting the sensitivity control

1. Set the detectable object at the detection position and turn the sensitivity control slowly from MIN toward MAX until the incident indicator(Red) lights up. Call it position A.
2. Remove detectable object and turn the sensitivity control from MAX toward MIN position where the incident indicator(Red) is extinguished. Call it position B.
3. Point C midway between A and B is the optimum sensitivity position.



The position A and B may reverse by types and situation of detected.

● Timer function

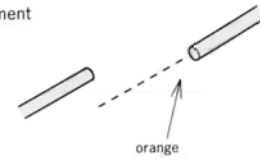
When timer switch is on, possible to extend the output time by OFF delay timer. Fix the time in Timer Period adjustor (limited range 5~100ms)

HOW TO USE

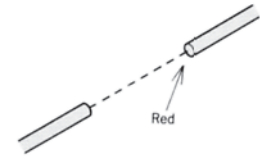
● Adjusting the optical axis

Look the light source of Emitter

No alignment



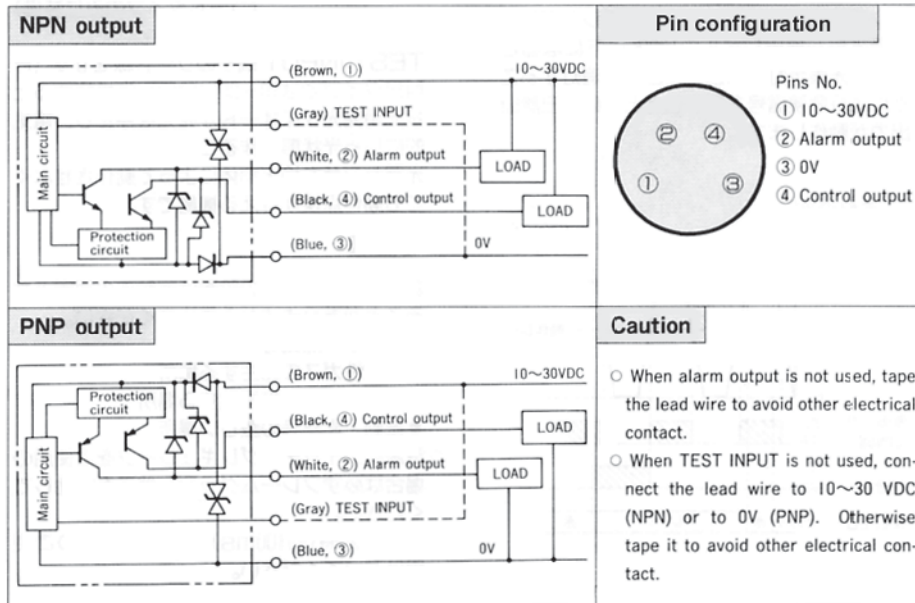
Aligned



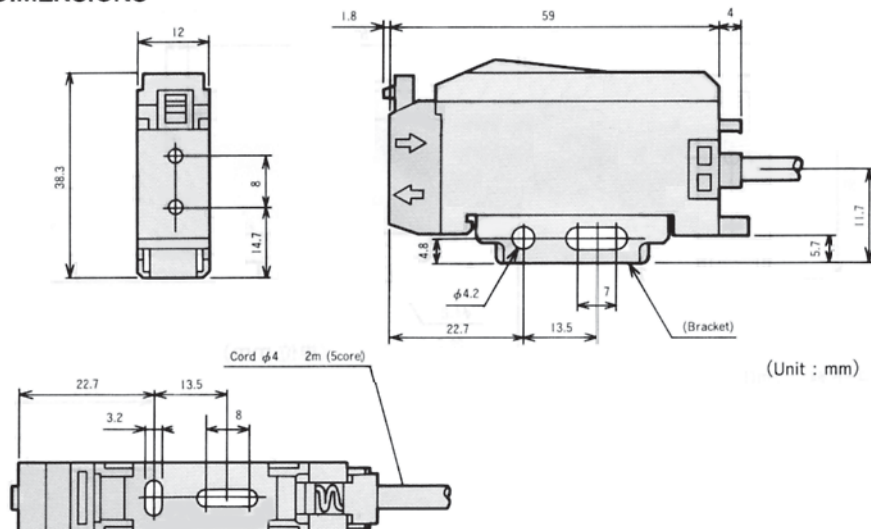
※ In ordinary works,  
Stable incident...Red  
Incident } ...Orange  
Interruption }  
Possible to check Incident condition.

WIRING

※ No Test Input function is involved in Connector types



DIMENSIONS



Developed by

**OPTEX CO.,LTD.**

● Product specifications are subject to change for improvement without notice.

Manufactured and Supplied by



OPTEX CO., LTD.  
4-7-5 Niinohama Otsu 520-0801 Japan  
TEL(077)524-1900 FAX(077)524-3201 TELEX5464852 OPTEX J

2001. 5. 0530800 CHO

Optex-FA U.S. Sales  
Ramco Innovations  
(800) 280-6933  
www.optex-ramco.com