Optical Fiber Sensor

PVF SERIES CE

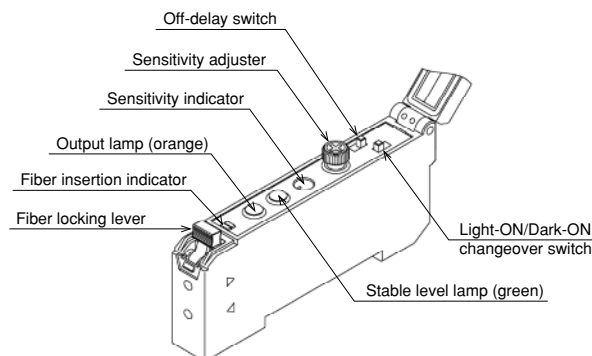## Large & Easy-to-see Indicators!
Large Sensitivity Adjuster!

● Accessory such as screw driver for sensitivity adjuster is not required because large-sized adjuster is provided.
● Fiber insertion indicator is provided.
● It is easy to see stable level lamp and output lamp because of large size.
● NPN and PNP output type are lined-up.
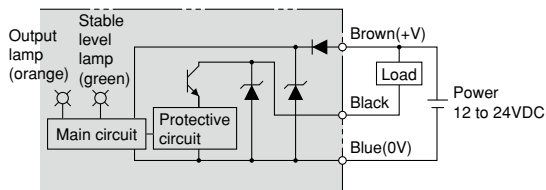● Off-delay timer (40msec) is provided.

■ Specifications

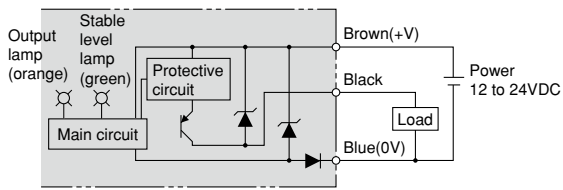| Model No.	PVF-CR	PVF-CRA
Power source	12 to 24VDC (10 to 30VDC,including ripple 10%)	
Current consumption	25mA	
Light source	Red LED	
Operating mode	Changeover of Light-ON/Dark-ON	
Output	NPN open-collector output,100mA/30VDC or less Residual voltage 1.8V or less	PNP open-collector output,100mA/30VDC or less Residual voltage 1.8V or less
Response time	250μs	
Timer function	Provided	
Timer time	OFF-delay (Fixed 40msec)	
Sensitivity adjustment	Provided (10 revolutions adjuster)	
Indication lamps	Stable level lamp (Green LED), output lamp (Orange LED)	
Connection	Cable type (length 2m, ϕ3.8mm, 3 cores)	
Ambient illuminance	Sunlight: 10,000lx or less, incandescent lamp: 3,000lx or less	
Ambient temperature	-25 to +55℃	
Ambient humidity	35 to 85% (35 to 95% when stored), not icing/not condensing	
Insulation resistance	20MΩ or less (by 500VDC)	
Withstand voltage	1,000VAC, 50/60Hz/min.	
Vibration resistance	Double amplitude 1.5mm, 10 to 55Hz	
Impact resistance	500m/s²	
Protective structure	IP66 (IEC standard)	
Case material	Case: PBT resin, cover: polycarbonate	
Weight	Approx. 70g (including cable)	
Accessory	Bracket	
Mounting	DIN-rail	

■ Amplifier

■ Output circuit

NPN output

Output lamp (orange) · Stable level lamp (green) · Main circuit · Protective circuit · Brown(+V) · Load · Black · Power 12 to 24VDC · Blue(0V)

PNP output

Output lamp (orange) · Stable level lamp (green) · Main circuit · Protective circuit · Brown(+V) · Black · Load · Power 12 to 24VDC · Blue(0V)
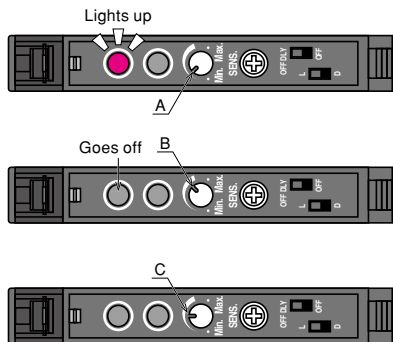
Caution

(1) Don't make a parallel wiring with high voltage line or power line. Also, it may cause a malfunction by induction.

(2) Be sure to make FG (frame ground terminal) and G (ground terminal)if using the commercial switching regulator.

(3) Don't operate it during approx. 100msec after putting power source in.

■ Sensitivity

① After placing the detecting objects at the detecting position, turn the sensitivity adjuster clockwise from MIN. guradually.

Lights up

A

② After removing the detecting objects, turn the sensitivity adjuster counterclockwise from MAX. guradually.

Goes off　B

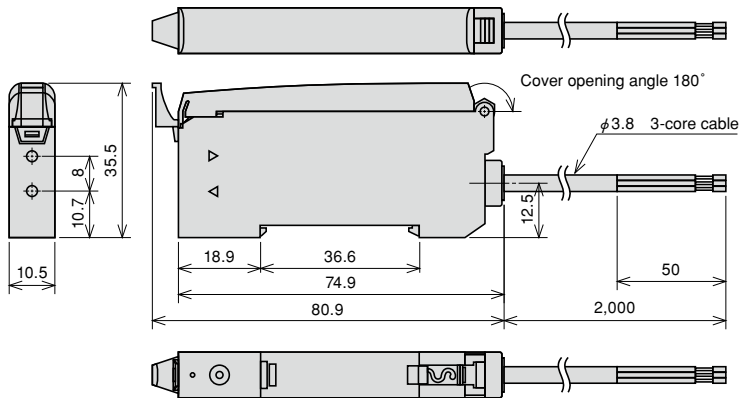③ Suitable position is the intermediate between A and B.

C

Caution

(1) In case of through-beam type,you can use at Max.position but if you would detect semi-transparent objects, Adjust with the above procedure.

(2) A and B position may be reverse depending on a kind of fiber unit or detecting condition.

■ External dimensions

Sensor

Cover opening angle 180°
ϕ3.8　3-core cable
35.5
8
10.7
10.5
12.5
18.9
36.6
74.9
80.9
50
2,000

Bracket

ϕ4.2
2-R2.1
4.3
3.3
4.2
8.2
8.5 $^{+0.2}_{0}$
3.5
10
7
27
4-R1
8.5

35 $^{+0.2}_{0}$
4-R0.5
24
3
3.2
5.8
6.5 $^{0}_{-0.2}$
2-R1.6
3.2
3.5
9.5
8
2-R1.6