

SPECIFICATIONS
OPTICAL FIBER TYPE AMPLIFIER UNIT
PK8-CRA
(PNP OUTPUT)

Corresponding to SI unit

Symbol	Amended reason			Pages	Date	Corrector	Amended No.
Approved by	Checked by	Drawn by	Designed by	Title	Optical Fiber Type Amplifier Unit PK8-CRA Specifications		
			KITADA	Drawing No.	C-42-3142		1/4

1. Kind and model No.				
Kind	Optical fiber type amplifier unit			
Model No.	PK8-CRA			
2. Specifications				
Power source	12 to 24VDC +/- 10% Ripple 10%p-p or less			
Current consumption	45mA or less			
Detection distance (Reflection type)	11cm or more(When using fiber with core in dia. 1.0mm and fiber length 2m) 2.5cm or more(When using fiber with core in dia. 0.5mm and fiber length 2m)			
Operation distance (Through-beam type)	30cm or more(When using fiber with core in dia. 1.0mm and fiber length 2m) 7.5cm or more(When using fiber with core in dia. 0.5mm and fiber length 2m)			
Hysteresis	0 to 20%(Automatic setting)			
Response time	500μsec or less			
Output timer	Changeable for 40msec OFF-Delay or Non-Delay			
Sensitivity adjuster	Automatic setting by push-button			
Operation mode	Changeable for Light-ON operation(L-ON) or Dark-ON operation(D-ON)			
Control output	PNP transistor open-collector output Allowable load voltage : Max. 30VDC Allowable load current : Max. 100mADC Residual(ON) voltage : Max. 1.3V/100mA, 0.5V/10mA Leakage(OFF) current : Max. 10μA			
Protective circuit	Protection against reverse power connection, Protection against output short-circuited, Protection against output counter voltage			
Indication lamp	Output lamp(Orange LED) : (Lights up when output transistor is ON) RUN lamp(Green LED) : (Flickers when operating) Operation mode lamp(Green LED) : (Flickers when Light-ON mode) Timer lamp(Green LED) : (Flickers when output timer is set) Light-reception margin level lamp(Green LED) : (Total 6 points : 5 times, 2 times, 1.15 times, 1/1.15 times, 1/2 times, 1/2 times or less)			
Connection	Cable type(2m, 0.2mm ²) Brown : 12 to 24VDC Blue : 0V Black : Control output			
Installation	DIN rail and bracket installation			
3. Quality				
Insulation resistance	20M ohm or more/500V megger(Between bracket and power line)			
Withstand voltage	1,000VAC 50/60Hz per minute(Between bracket and power line)			
Noise resistance	Pulse width : 1μsec, rise : 1nsec, Wave peak value : 1,000V, Polarity : + and -, Power synchronous phase : 0 to 360 degrees(Between bracket and power line)			
Ambient illuminance	Sun light : 10,000lux or less, Incandescent lamp : 3,000lux or less, Inverter fluorescent lamp : 2m or more away			
Ambient temperature	-25 to 55 degrees C when operating(Not frozen) -40 to 70 degrees C when storing			
Ambient humidity	35 to 85%RH when operating			
Vibration resistance	Double amplitude : 1.5mm, Frequency : 10 to 55Hz Each 2 hour in X, Y and Z direction			
Impact resistance	500m/S ² (Approx. 50G) Each 3 time in X, Y and Z directions			
Protective structure	IP66(When using protective cover)			
Material	Case : Heat resistance ABS, Cover : Polyarylate			
External dimension	Nominal : W11×H30×D65mm			
Weight	Approx. 75g(Including bracket)			
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4. Functions

[1] RUN mode

This is operating status. Control output is active.

(1) Indication lamps

RUN : Flickering

L-ON : Flickers when light-reception operating mode, goes off when light-interruption operating mode

Timer : Flickers when timer mode is ON, goes off when timer mode is OFF

OUT : Lights up when control output is ON

STB 1 to 6 : Real-time light-entering margin level

6 : 5 times or more or saturated

5 : 2 to 5 times

4 : 1.15 to 2 times

3 : 1/1.15 to 1.15 times

2 : 1/2 to 1/1.15 times

1 : 1/2 times or less

(2) It is changed to TEST mode by pushing mode switch for 1 sec or more.

(3) Max. sensitivity adjustment and reset are available.

[2] TEST mode

Each setting and control output are fixed to OFF.

(1) Indication lamps

RUN : Goes off

L-ON : Lights up when light-reception operating mode, goes off when light-interruption operating mode

STB2 : Goes off when light-reception operating mode, lights up when light-interruption operating mode

Timer : Lights up when timer mode is ON, goes off when timer mode is OFF

STB1 : Goes off when timer mode is ON, lights up when timer mode is OFF

OUT : Goes off

STB 3 to 6 : Light-entering margin level when completing sensitivity adjustment

6 : 5 times or more or saturated

5 : 2 to 5 times

4 : 1.15 to 2 times (Waiting for first teaching when flickering)

3 : 1 to 1.15 times (Waiting for second teaching when flickering)

(2) It is changed to RUN mode by pushing mode switch for 1 sec or more

(3) Max. sensitivity adjustment and reset are available but it is returned to RUN mode after indicating reception sign.

[3] Max. sensitivity adjustment : Set to Max. sensitivity by pushing set switch for 1 sec or more

[4] Reset : All setting is reset by pushing both mode switch and set switch simultaneously and it is returned to initial value (Standard).

	Setting when shipment (Initial setting)
Output operation mode	Light-reception operating mode (L-ON)
Timer mode	Non-timer
Timer time	40msec
Sensitivity adjustment	Max.
Hysteresis	13%

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[5] Connection diagram

