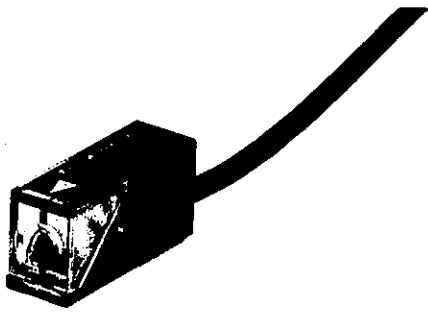


PJ7 Series

Ultraminiature Photoelectric Controls



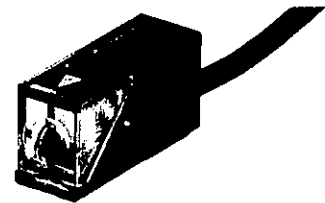
FEATURES

- Ultraminiature self-contained type
- Longer scanning distance of 1 m
- Quick response of 0.15 ms max. (5 to 12 VDC model)
- Easy alignment by means of red LED
- External diagnostic function
- NPN and PNP models available

ORDER GUIDE

Output	Model	Thru Scan	Convergent Beam
		 W/ External Diagnostic Function - Dark Operated	 W/Sensitivity Adjustment - Light Operated
NPN	5 to 12 VDC	PJ7-T1	PJ7-D1
	12 to 24 VDC	PJ7-T3	PJ7-D3
NPN	5 to 12 VDC	PJ7-T5	—
	12 to 24 VDC	PJ7-T7	—
PNP	12 to 24 VDC	PJ7-T4 PJ7-T8	PJ7-D4

THRU SCAN (HORIZONTAL)



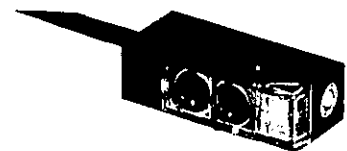
PJ7-T1
PJ7-T3
PJ7-T4

THRU SCAN (VERTICAL)



PJ7-T5
PJ7-T7
PJ7-T8

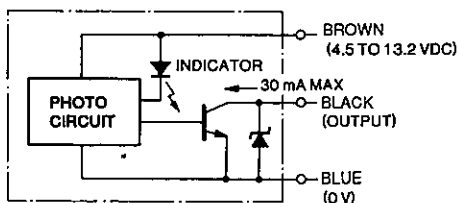
CONVERGENT BEAM (HORIZONTAL)



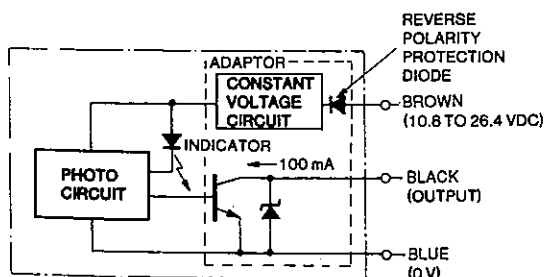
PJ7-D1
PJ7-D3
PJ7-D4

OUTPUT CIRCUIT DIAGRAM

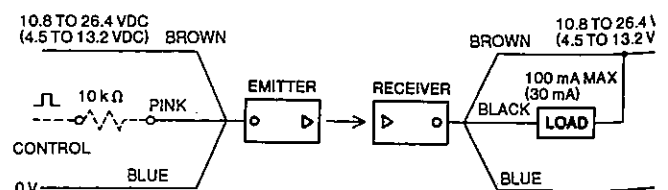
5 TO 12 VDC MODEL (NPN)



12 TO 24 VDC MODEL (NPN)



WIRING DIAGRAM

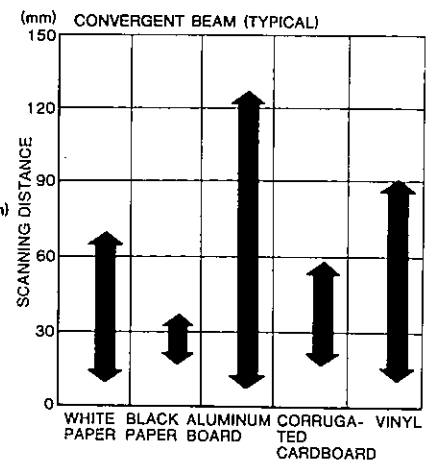
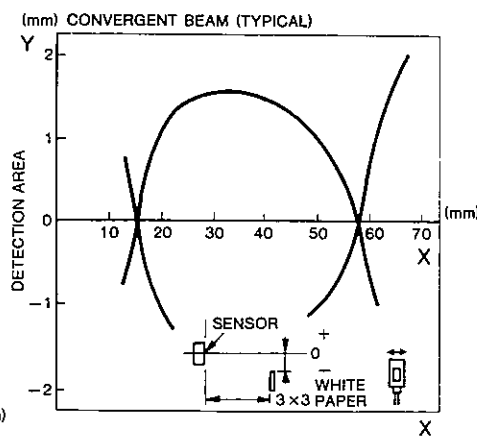
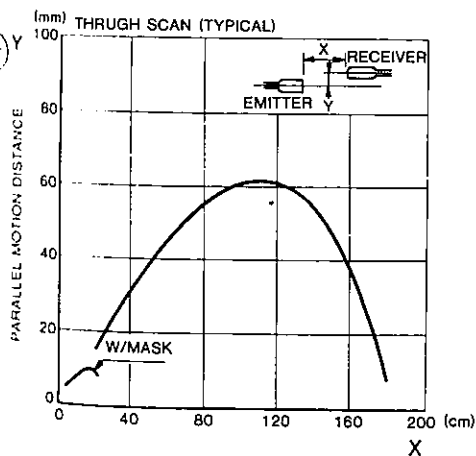


- Notes 1: Figures in () are for 5 to 12 VDC type.
2: When external diagnostic function is not used, it is recommended that pink and blue are short-circuited.

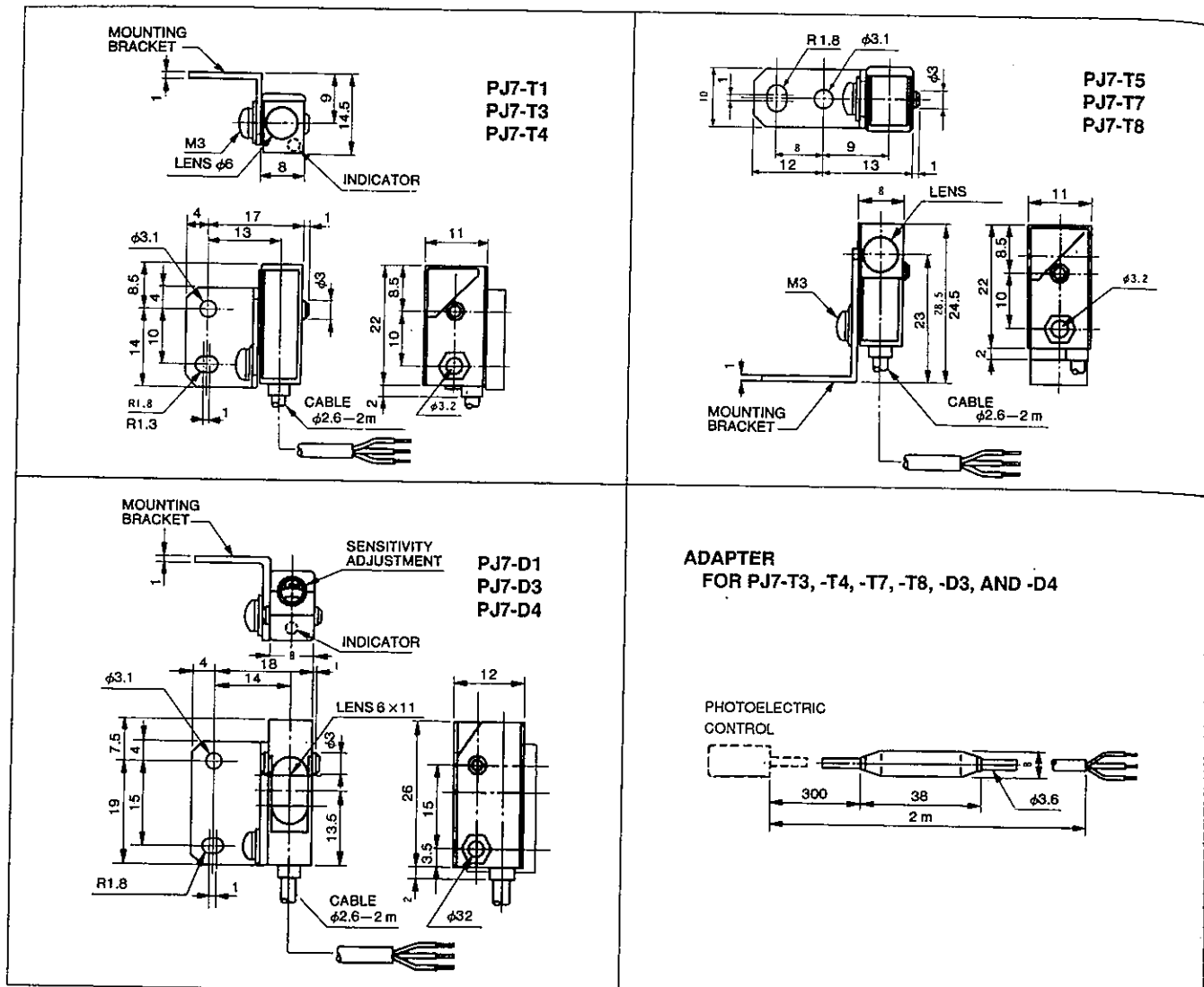
SPECIFICATIONS

Scan type		Thru Scan			Convergent Beam		
Catalog listing		PJ7-T1 PJ7-T5	PJ7-T3 PJ7-T7	PJ7-T4 PJ7-T8	PJ7-D1	PJ7-D3	PJ7-D4
Scanning distance		1 m (15 cm with mask)			2 to 4 cm (3 x 3 cm paper)		
Target size		ø 6 min. (opaque materials) ø 1.5 min. with mask			Opaque or transparent materials		
Beam angle		3 to 15°			—		
Hysteresis		—			10% max.		
LED for emitter		red					
Supply voltage		4.5 to 13.2 VDC	10.8 to 26.4 VDC		4.5 to 13.2 VDC	10.8 to 26.4 VDC	
Current consumption		Emitter: 25 mA max., Receiver: 20 mA max.			40 mA max.		
Output	Type	NPN, Dark operated (open collector)		PNP Dark operated (Open collector)	NPN, Light operated (open collector)		PNP Light operated (Open collector)
	Voltage	1 volt max.					
	Current	30 mA max.	100 mA max.		30 mA max.	100 mA max.	
Response time		0.15 m sec. max.	0.5 m sec. max.		0.15 m sec. max.	0.5 m sec. max.	
Indicator		Red lamp illuminates when beam is not blocked (Light operated) (Thru scan emitter does not have indicator.)					
Ambient light resistance		Incandescent lamp: 3000 lux max.					
Temperature range		-20° to +55°C					
Humidity range		45 to 85% RH (without condensation)					
Protection		IP 65					

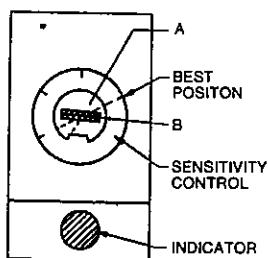
CHARACTERISTICS



EXTERNAL DIMENSIONS



SENSITIVITY ADJUSTMENT



CONVERGENT BEAM MODEL

When an object is present behind the object to be detected or a small object is detected, sensitivity adjustment is required.

- 1) With the sensitivity control turned fully clockwise, place the object to be detected in the predetermined position.
- 2) Turn the sensitivity control counter-clockwise to decrease sensitivity and find a point where the indicator lamp turns off:
This point is A.
- 3) Remove the object to be detected, turn the sensitivity control clockwise to increase sensitivity and find a point where the indicator lamp turns on:
This point is B.
When the indicator lamp does not turn on after fully turning the sensitivity control clockwise, the location of the point is regarded as B.
- 4) The adequate position of sensitivity control is the center between A and B.