

OPTICAL DATA TRANSMISSION DEVICE  
 CWF-11A  
 CWF-11B  
 SPECIFICATIONS



**Europe's Official HOKUYO Distributor**

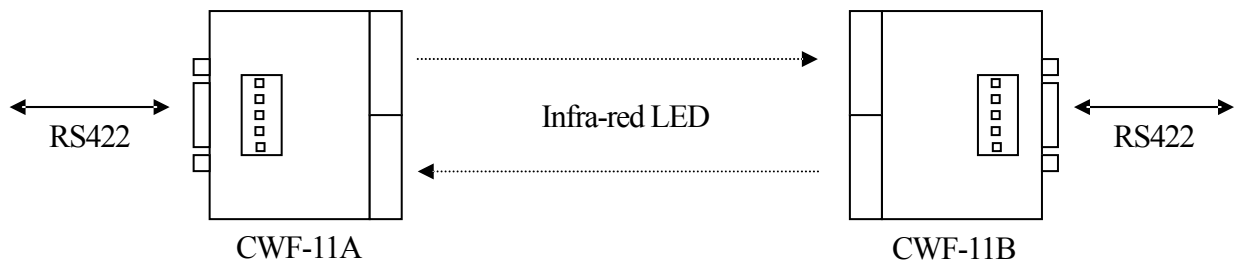
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△ 1	Corrected mis-description			2	Oct.15'01	Ojima	FA-4438
Symbol	Amended reason			Pages	Date	Corrector	Amended No.
Approved by	Checked by	Drawn by	Designed by	Title	Optical Data Transmission Device CWF-11A/B Specifications		
MAEJIMA	KITADA	OJIMA	HOSHINO				

## 1. General

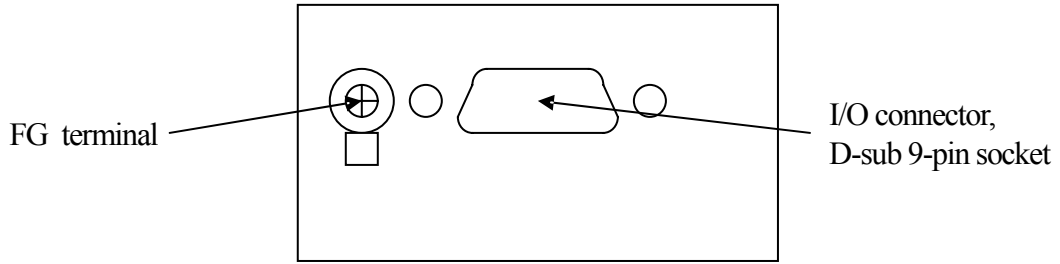
This device is serial type, optical data transmission device with 50m, transmission distance. This device provides A type and B type which can be used oppositely each other. Full-duplex transmission can be made.



## 2. Specifications

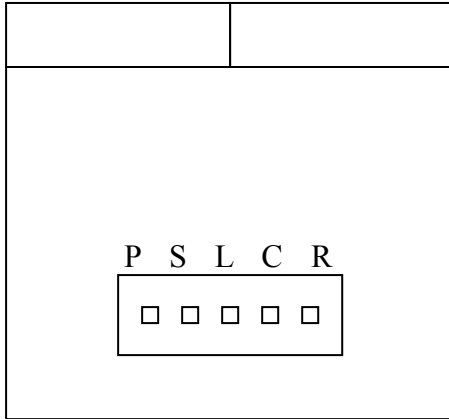
Model No.	CWF-11A	CWF-11B
Transmission distance	50m	
Directional angle	+/- 2 degrees	
Power source	12 to 24VDC(+/- 10%)(10 to 30VDC)	
Current consumption	160mA(12VDC) / 80mA(24VDC) $\Delta$	
Transmission system	Full-duplex two-way transmission device	
Transmission speed	DC to 19200BPS	
Interface	RS-422	
Modulating system	FSK modulation	
Modulated frequency	Transmission : 5.5MHz Reception : 6.0MHz	Transmission : 6.0MHz Reception : 5.5MHz
Connection	D-sub connector 9-pin socket	
Ambient temperature/ Humidity	-10 to +50 degrees C 85%RH or les(Not icing)	
Ambient illuminance	20000lux or less(Halogen/incandescent lamp)	
Impact resistance	490m/s <sup>2</sup> Each 10 time in X, Y and Z directions	
Vibration resistance	Double amplitude 1.5mm, 10 to 55Hz Each 2 hour in X, Y and Z direction	
Noise resistance	Impuls noise simulator, pulse width : 1 $\mu$ s, 100ns, Repetition cycle : 100Hz, Normal mode : 1000V, Common mode : 500V	
Protective structure	IP60	
Alarm output(ARM)	ON when light-reception level margin is 1.5 times or more Photo-coupler open-collector 35V 50mA	

### 3. Connection



Pin No.	Signals	I/O circuit
1	RXD +	<p>RS-422 output</p>
2	RXD -	
3	TXD +	<p>RS-422 input</p>
4	TXD -	
5	SG	GND for signal
6	+ VIN	Power source 12 to 24VDC
7	- VIN	
8	ARM	<p>Alarm output</p>
9	COM	

#### 4. LED



- P : Power lamp
- S : Transmission data lamp
- L : Level lamp  
Lights up when light-reception level margin is 1.5 times
- C : Carrier detection lamp  
Lights up when light-reception level margin is 1 time
- R : Light-reception data lamp

#### 5. Signal logic

Input		Output	
Signals	Level	Signals	Level
TXD +	H	RXD +	H
TXD -	L	RXD -	L
TXD +	L	RXD +	L
TXD -	H	RXD -	H
Interrupted optical path		RXD +	H
		RXD -	L

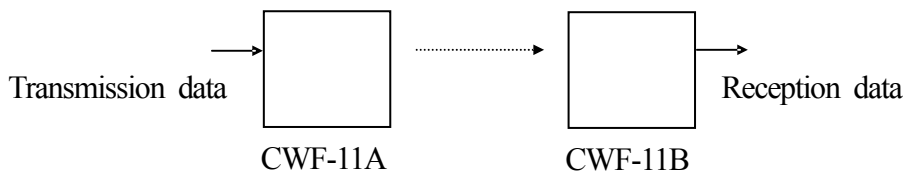
RS-422 output signal level

H : +3V to +4V

L : 0V to +1V

#### 6. Transmission delay time

Measuring structure



Transmission delay time from transmission data to reception data : 50I s or less



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