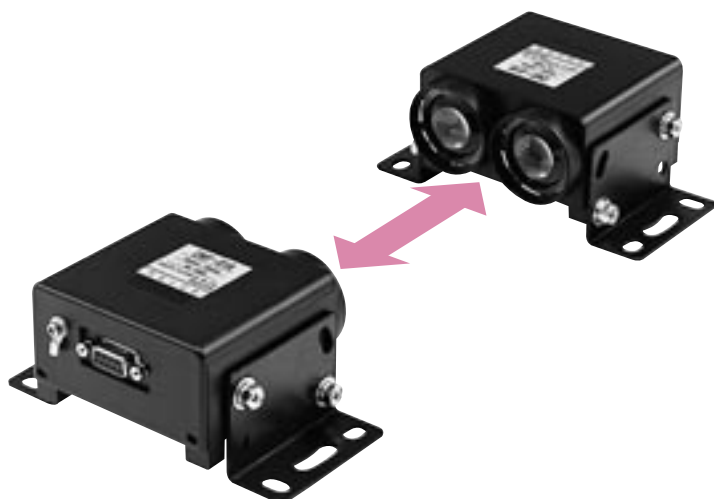


# Optical Data Transmission Device

## CWF SERIES

Small size, light weight & middle distance (50m & 80m)

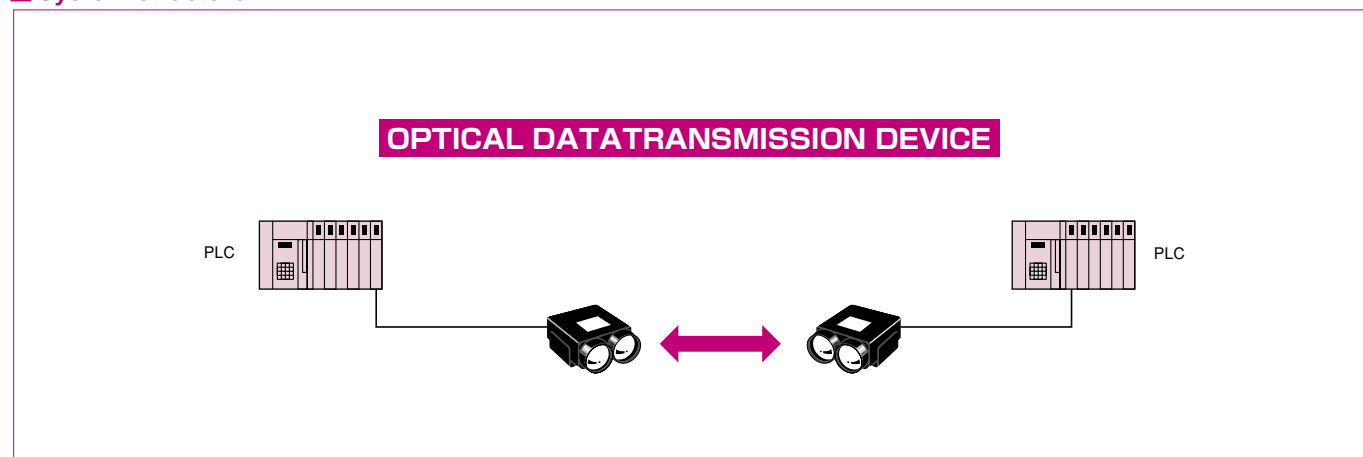
- This is smaller size and lighter weight than BWF series
- This is a middle distance type Serial Data Transmission Device with 50m and 80m.
- I/O signal with max.128 points can be transmitted with exclusive serial/parallel converter, ISP-A1C-C(16 points per unit).



### Specifications

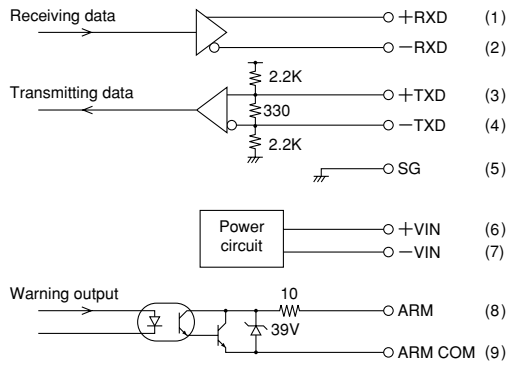
Type	Serial type								
	Model No.	CWF-01A	CWF-01B	CWF-11A	CWF-11B	CWF-02A	CWF-02B	CWF-12A	CWF-12B
Transmission distance		50m		80m		50m		80m	
Directional angle		±2°							
Power source		24VDC(±10%)		12 to 24VDC (10 to 30VDC)		24VDC(±10%)		12 to 24VDC (10 to 30VDC)	
Current consumption		160mA(DC12V)/80mA(DC24V)							
Transmission method		Full duplex two-way transmission							
Transmission speed		DC to 19,200bps				DC to 9,600bps			
Interface		RS-422				RS-232C			
Modulating method		FSK modulation							
Modulating frequency		Type A(transmission 5.5MHz, reception 6.0MHz), Type B(transmission 6.0MHz, reception 5.5MHz)							
Connection		9-pin D-sub connector							
Ambient temperature/humidity		-10°C to +50°C, 85%RH or less (Not icing)							
Ambient illuminance		Halogen·incandescent lamp: 20,000lux or less							
Noise resistance		Impluse noise simulator, pulse width 1μs, 100ns Repeated cycle 100Hz Normal mode 1,000V Common mode 500V							
Protective structure		IP60(IEC standard)							
Warning output(ARM)		ON when light-receiving level margin 1.5 times or more, Photo-coupler, open-collector 35V, 50mA							
Case material		ABS resin(Cover: Polycarbonate)							
Weight		Approx. 240g							

### System structure

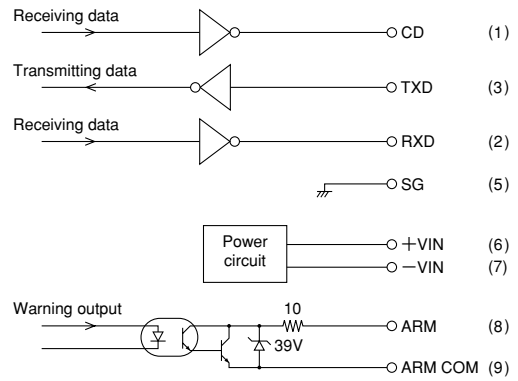


## Input/Output circuit

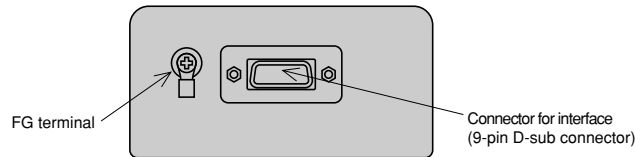
**CWF-01A/01B /11A/11B(Interface: RS-422)**



**CWF-02A/02B /12A/12B(Interface: RS-232C)**



## Connection



**CWF-01A/01B /11A/11B**

Interface	Pin No.	Symbols	Functions
RS-422	1	+RXD	Receiving data
	2	-RXD	
	3	+TXD	Transmission data
	4	-TXD	
	5	SG	Ground for signal
Power source	6	+VIN	DC power(24VDC)
	7	-VIN(0V)	
Warning	8	ARM	Warning output
	9	ARM COM	

**CWF-02A/02B/12A12B**

Interface	Pin No.	Symbols	Functions
RS-232C	1	CD	Receiving data (Carrier detection)
	2	RXD	Receiving data
	3	TXD	Transmitting data
	4	NC	Non connection
	5	SG	Ground for signal
Power source	6	+VIN	DC power(24VDC)
	7	-VIN(0V)	
Warning	8	ARM	Warning output
	9	ARM COM	

Note) Don't connect 0V for power source to ground for signal(SG).

## External dimensions

