

OPTICAL DATA TRANSMISSION DEVICE  
 (CE MARKING TYPE)  
 SPECIFICATIONS

BWF-11A-CE (WBWF015)  
 BWF-11B-CE (WBWF016)  
 BWF-21A-CE (WBWF017)  
 BWF-21B-CE (WBWF018)

SYMBOL	CORRECTED REASON			PAGES	DATE	CORRECTOR NO.
APPROVED BY	CHECKED BY	DRAWN BY	DESIGNED BY	TITLE	OPTICAL DATA TRANSMISSION DEVICE (CE MARKING) BWF-11A/B-CE, BWF-21A/B-CE SPECIFICATIONS	
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### 1. General

This is a wireless type optical data transmission device. This is suitable for hand-shake between moving device on the rail & fixed station such as AGVs, stacker cranes or overhead cranes.

### 2. Features

\*Unnecessary cable between device

Cable between devices is unnecessary because of optical transmission. This is suitable for the places where cable construction is difficult.

\*No legal control

There is no legal control such as microwave because of optical transmission.

\*Long distance transmission

Long distance transmission can be made. (100m or 200m)

\*Provided level lowering output

Lowering of reception amount can be confirmed.

\*Easy light axis adjustment

It is easy to adjust light axis with analog output for reception amount check and also, optical axis checker is available as option.

### 3. Construction

This transmission system is full-duplex two-way transmission and this device is divided to A type & B type with different frequency due to prevent the interference between transmission signal & reception signal. Be sure to use A type & B type in pairs.



### 4. Specifications

Model No.	BWF-11A-CE, BWF-11B-CE	BWF-21A-CE, BWF-21B-CE
Transmission distance	100m	200m
Directional angle	$\pm 2^\circ$	$\pm 1^\circ$
Power source	10~30VDC	
Current consumption	150mA (12VDC), 80mA (24VDC)	
Transmission method	Full-duplex two-way transmission system	
Transmission speed	DC~19200BPS	
Interface	RS232C, RS422	
Modulated method	FSK	
Modulated frequency	A type:transmission 5.5MHz, reception 6.0MHz B type:transmission 6.0MHz, reception 5.5MHz	
Connection	D-sub connector 25P, M3 terminal only for power source	
Ambient temperature/ humidity	-10°C~+50°C, 85%RH or less(not frozen)	
Ambient illuminance	20000lux or less(Halogen, incandescent lamp)	
Impact resistance	500m/S <sup>2</sup> each 10 time in X, Y & Z directions	
Vibration resistance	Double amplitude 1.5mm 10~30Hz each 2 hour in X, Y & Z directions	
Protective structure	IP60(IP64 is available as option)	
Weight	500g	
Indication lamps	POW:Power lamp CD:Carrier detect lamp(reception level margin 1) RD:Serial reception lamp SD:Serial transmission lamp L1:Reception level lamp(reception level margin 1.5 times) L2:Reception level lamp(reception level margin 2.0 times) L3:Reception level lamp(reception level margin 2.5 times)	

TITLE

OPTICAL DATA TRANSMISSION DEVICE(CE MARKING)  
BWF-11A/B-CE, BWF-21A/B-CE SPECIFICATIONS

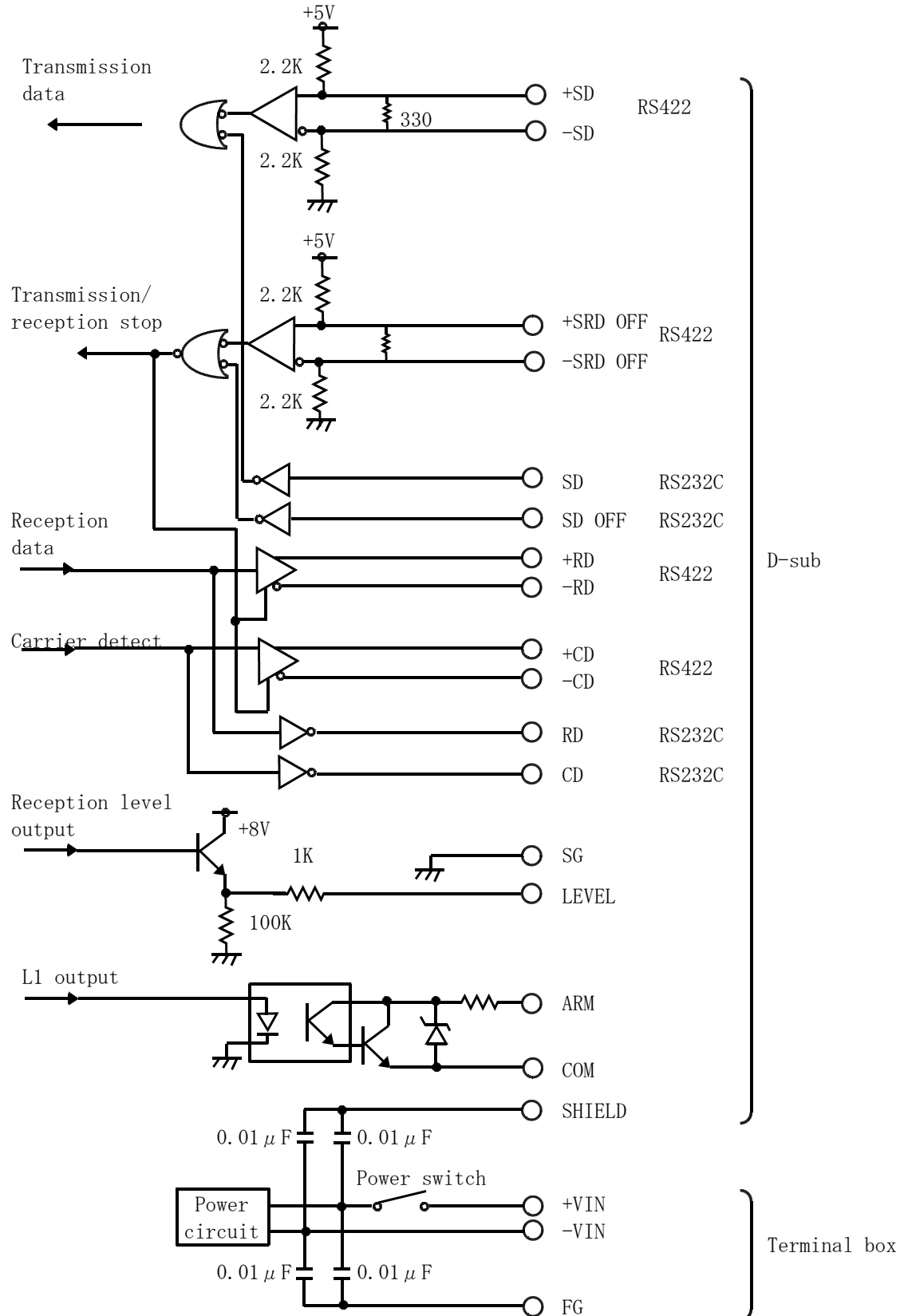
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Alarm output	Executed at 1.5 times or more of reception level margin Photo-coupler open-collector 35V 50mA
Reception level output	0~5V(In proportion to reception amount)
EMC Directive	Emission(EMI):EN55022/1995 Class B Immunity(EMS):EN50082-2/1994
External dimensions	MC-40-2353A

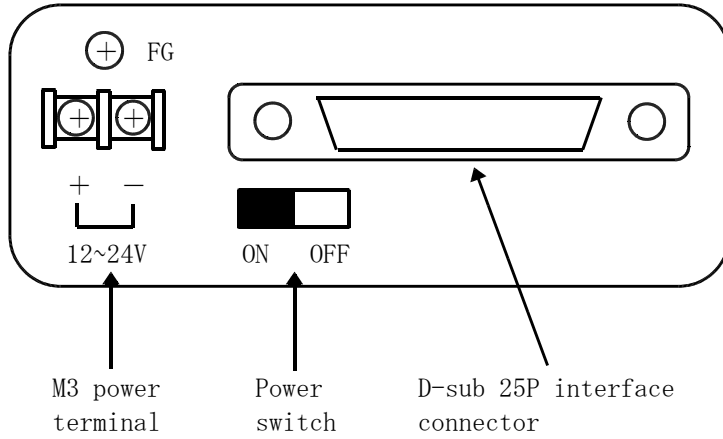
5. Input/output circuit



6. Connection

6-1. I/O panel arrangement

(1) BWF-11A/B, BWF-21A/B



6-2. Interface connector pin arrangement

I / F	Pin No.	Symbols	Functions
RS422	1 4	+SD	Transmission data +
	1 5	-SD	Transmission data -
	1 2	+SRD OFF	Transmission/reception stop +
	1 3	-SRD OFF	Transmission/reception stop -
	1	+RD	Reception data +
	1 7	-RD	Reception data -
	1 8	+CD	Reception carrier detect +
	1 9	-CD	Reception carrier detect -
RS232C	2	SD	Transmission data
	2 1	SD OFF	Transmission stop
	3	RD	Reception data
	8	CD	Reception carrier detect
SGND	7, 2 0	SG	GND for signal
SHIELD	2 5	SHIELD	Shield
ALARM	4	ARM	Alarm output
	5	COM	
ANALOG	6	LEVEL	Reception level output