

Serial Type Optical Data Transmission Device Long Distance Type

BWF SERIES

High performance in compact and light weight of handy size, 44 x 84 x 130.3mm!
Long distance, 100m and 200m!
400m type is also available in the same size!

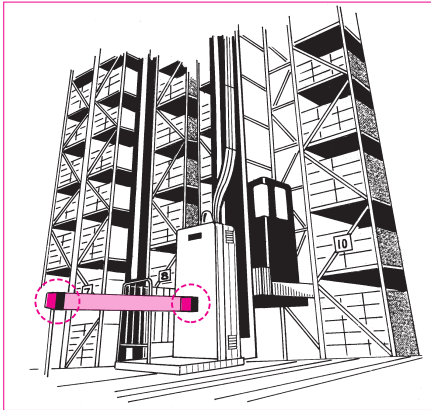


- Actual transmission distance is 2 times or more than rated value and data transmission with high reliability is realized.
- Many kinds of interface are lined up, RS-232C, RS-422, current-loop and RS-422/RS-485 multi-drop, etc.
- Level lowering warning output are provided due to prevent some troubles such as dislocation of optical axis or dirty lens surface.
- It can be easy to check optical axis adjustment with optical checker or checking terminal.

Applications

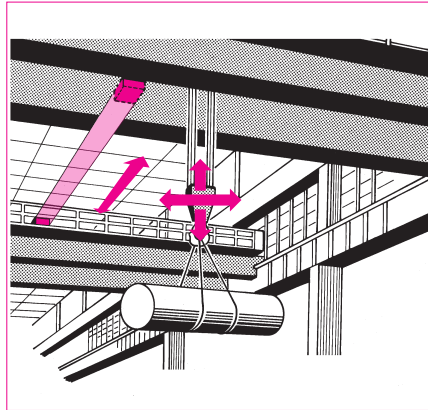
Control of stacker crane for Automated Storage Systems

Instruction of address, main power ON/OFF, traveling and upturn/downturn etc.



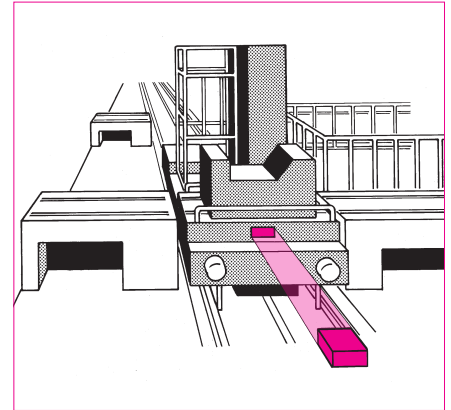
Control of OVERHEAD TRAVELING crane

Instruction of advance, reverse, sideways traveling, hoisting up, winding down etc.



Control of track type A. G. V.

Instruction of address, main power ON/OFF, traveling and etc.



Type/Models

Type	Interface	Model No.	Transmission distance	Power source
Serial type	RS-232C/RS-422	BWF-11A/BWF-11B	100m	10 to 30VDC
		BWF-21A/BWF-21B	200m	
		BWF-31A/BWF-31B	100m	85 to 110VAC
		BWF-41A/BWF-41B	200m	
	Current loop/RS-232C	BWF-12A/BWF-12B	100m	10 to 30VDC
		BWF-22A/BWF-22B	200m	
		BWF-32A/BWF-32B	100m	85 to 110VAC
		BWF-42A/BWF-42B	200m	
	RS-422/RS-485 Multi-drop	BWF-13A/BWF-13B	100m	10 to 30VDC
		BWF-23A/BWF-23B	200m	
RS-232C/RS-422 Multi-channel type	BWF-110	100m	18 to 30VDC	
	BWF-210	200m		

Note) Make sure to use Type A and Type B in pair because transmission system is full-duplex two-way transmission. BWF-110/210 have provided 6kinds of frequency.

★BWF with CE mark and low temperature types are lined-up.

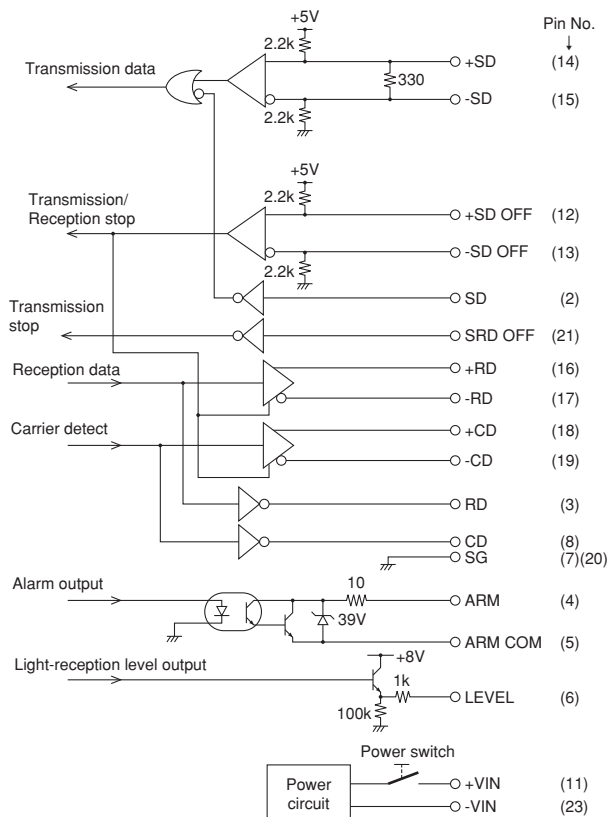
BWF-11/21/31/41

RS-232C/RS-422 type

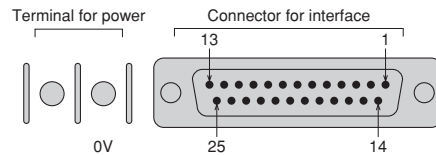
Specifications

Type	Serial type			
Model No.	BWF-11A/11B	BWF-21A/21B	BWF-31A/31B	BWF-41A/41B
Transmission distance	100m	200m	100m	200m
Directional angle	±2°	±1°	±2°	±1°
Transmission method	Full duplex two-way transmission			
Transmission speed	DC to 19.2kbps			
Input/Output interface	RS-232C/RS-422			
Modulation method	FSK modulation			
Modulation frequency	Type A (transmission 5.5MHz, reception 6.0MHz), Type B (transmission 6.0MHz, reception 5.5MHz)			
Power source	12 to 24VDC (10 to 30VDC)		100VAC 50/60Hz (80 to 110VAC)	
Current consumption	150mA or less (at 12VDC), 80mA or less (at 24VDC)		40mA	
Warning output	Photo-coupler (35V, 50mA), ON when light-reception level margin is 1.5 times or more and OFF when light-reception level margin is 1.5 times or less			
Light-reception level Output	0 to 5V (in proportion to light reception amount)			
Indication lamps	Power source, carrier detect, data input, data output, light-reception level margin (Red LED) POW (Power lamp): Light-up when power source ON CD (Carrier detect lamp): Light-up when light-reception, light-reception margin level 1 SD (Data input lamp): Light-up when transmission data input RD (Data output lamp): Light-up when reception data output L1 (Light-reception level lamp): Light-up when margin 1.5 times L2 ((Light-reception level lamp): Light-up when margin 2 times L3 (Light-reception level lamp): Light-up when margin 2.5 times			
Connection	Connector (25pins D-sub connector), but M3 screw terminal at power source			
Ambient illuminance	20,000lux or less (Both sun light and incandescent lamp)			
Ambient temperature/humidity	-10 to +50°C, 85%RH or less (not icing, not condensing)			
Protective structure	IP60 (IEC Standard), available up to IP64 by user's option			
Case material	ABS resin			
Weight	Approx. 500g			

Input/Output circuit



Connection



Terminal for power (M3 screw terminal)

Make sure to connect +V to terminal at left side for DC power. DC power provides on connector for interface too. Connect either one.

Connector for interface (25 pins D-sub connector)

Interface	Pin No.	Symbols	Functions
RS-232C	2	SD	Transmission data
	3	RD	Reception data
	8	CD	Reception carrier detect
	21	SD OFF	Transmission stop
RS-422	14	+SD	Transmission data (+)
	15	-SD	Transmission data (-)
	16	+RD	Reception data (+)
	17	-RD	Reception data (-)
	18	+CD	Reception carrier detect (+)
	19	-CD	Reception carrier detect (-)
	12	+SRD OFF	Transmission/Reception stop (+)
13	-SRD OFF	Transmission/Reception stop (-)	
Level	6	LEVEL	Light-reception level output
	7 · 20	SG (0V)	GND for signal
Alarm	4	ARM	Alarm output
	5	ARM COM (0V)	
Power source	11	+VIN	Power source (10 to 30VDC)
	23	-VIN (0V)	

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