

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!

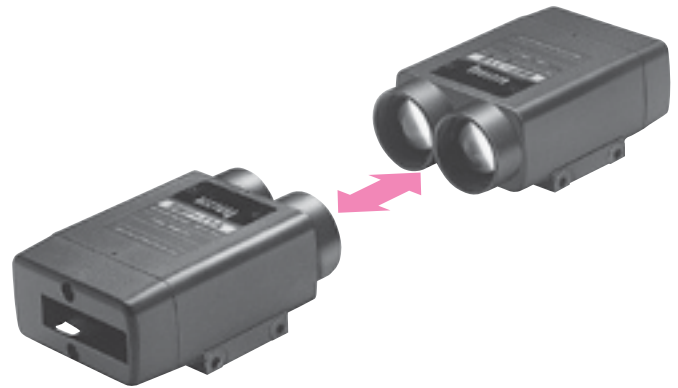
400m type is also available in the same size !

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.

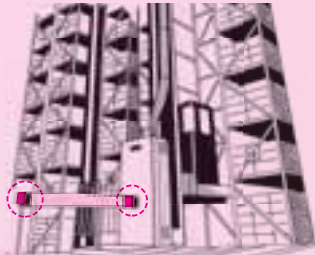
Level lowering warning output are provided due to prevent some troubles such as displacement of optical axis or dirty lens surface.

It can be easy to check optical axis adjustment with optical checker or checking terminal.

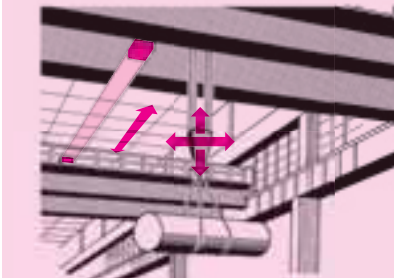


Applications

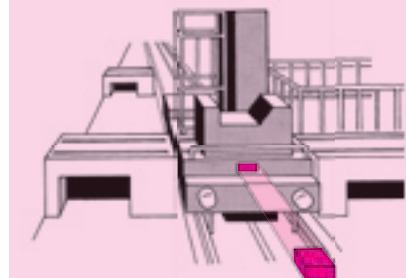
Control of stacker crane for Automated Storage Systems
(Instruction of address, main power ON/OFF, traveling and an upturn/downturn etc.)



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-232 C	BWF-12A/BWF-12 B	100m	10 to 30VDC
		BWF-22A/BWF-22 B	200m	
		BWF-32A/BWF-32 B	100m	85 to 110VAC
		BWF-42A/BWF-42 B	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	
	CC-Link	BWF-17A/BWF-17B	100m	24VDC
		BWF-27A/BWF-27B	200m	
DeviceNet	BWF-1DA/BWF-1DB	70m	24VDC	
Ethernet	BWF-1EA/BWF-1EB	50m		
Controller Link	BWF-1FA-Z/BWF-1FB-Z	70m		
SafetyBUS p	BWF-1SA/BWF-1SB	70m		

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 6 kinds of frequency.

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

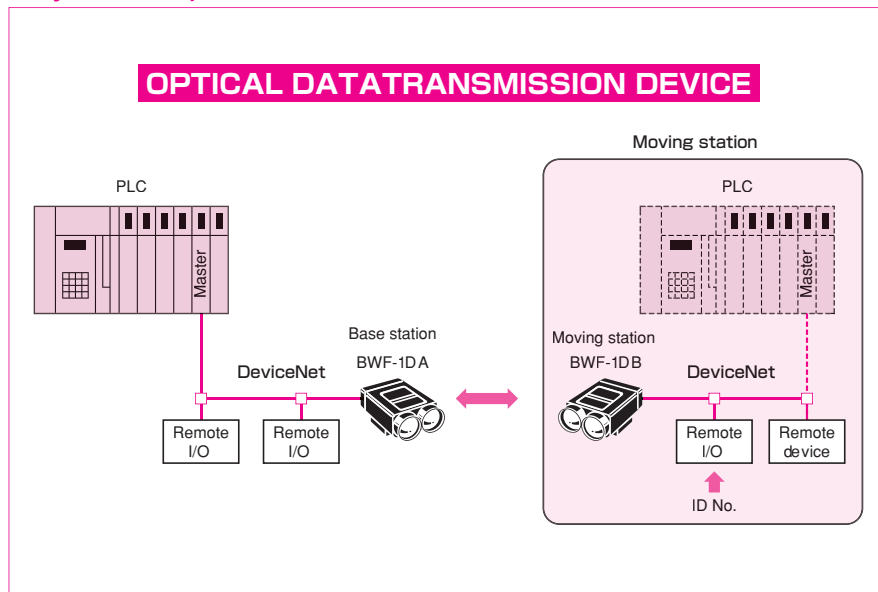
BWF-1D

- To be used for DeviceNet in the main line.
- Communication with moving objects is possible by using Optical Data Transmission device.
- Easy wiring and low cost.

Specifications

Type	Serial type		
Model No.	BWF-1DA	BWF-1DB	
Transmission delay	500nsec		
Optical Transmission part	Transmission distance	0 to 70m	
	Directional angle	Full angle 2°: 50m or less, Full angle 1°: 50m or more	
	Transmission system	Full-duplex two-way transmission device	
	Modulating system	FSK modulation	
	Modulating frequency	30M ±3MHz	45M ±3MHz
	Transmission speed	0 to 500kbps	
DeviceNet part	Connecting system	Multi-drop system	
	Communicating speed	Max. 250kbps	
	Communicating media	Exclusive cable 5 wires(Single 2 wires, power 2 wires, shield 1 wire)	
	Transmission distance	Transmission speed	Max. network length
250kbps		100m or more	
125kbps		350m or more	
Power source	24VDC(±15%)		
Power consumption	Max. 130mA(Input voltage 24VDC)		
Indication lamp	PW: Power lamp, RUN: Normal inner LCA lamp, SD: Carrier output lamp (Optical transmission part), RD: Carrier input lamp(Optical transmission part) S C: Main station carrier detection lamp 1: Main station light-reception level margin 1.5 times 2: Main station light-reception level margin 2.0 times 3: Main station light-reception level margin 2.5 times R C: Sub station carrier detection lamp 1: Sub station light-reception level margin 1.5 times 2: Sub station light-reception level margin 2.0 times 3: Sub station light-reception level margin 2.5 times		
Ambient illuminance	10,000 lux or less		
Ambient temperature/humidity	-10 to +50°C, 85%RH or less(not condensing)		
Protective structure	IP40(IEC Standard)		
Case	ABS resin		
Weight	Approx. 500g		

System composition



Connection

5 pins connector(DeviceNet)

Colors	Signals	Functions	Positions
Red	+24V	Power	1
White	Can+	Signal	2
Shield	Shield	—	3
Blue	Can-	Signal	4
Black	0V	Power	5