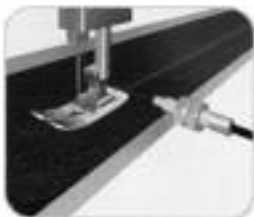


FIBER SENSORS

BRF Series



Applications



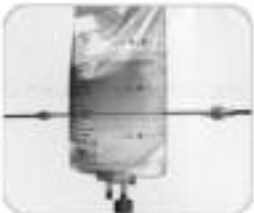
STANDARD TYPE (BRF-N)



HIGH SPEED TYPE (BRF-HN)



MARK DETECTION TYPE (BGF-N)



MOISTURE DETECTION TYPE (BIF-WN)

Standard Type

(Sensing range : 150mm)
Stand alone • BRF-N / P / CN / CP
Interconnection • B2RF-N / P / CN / CP

High Speed Type

(Sensing range : 50mm)
Stand alone • BRF-HN / HP / CHN / CHP
Interconnection • B2RF-HN / HP / CHN / CHP

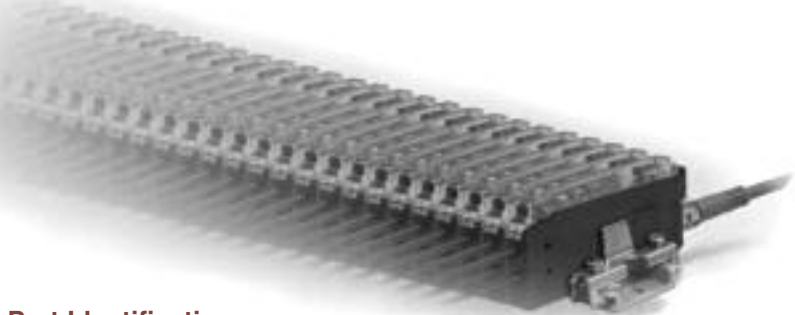
Mark Detection Type

(Sensing range : 40mm)
Stand alone • BGF-N / P / CN / CP
Interconnection • B2GF-N / P / CN / CP

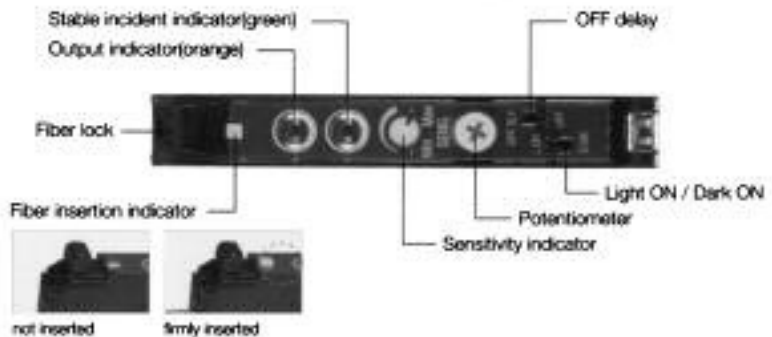
Moisture Detection Type

(Sensing range : 50mm)
Stand alone • BIF-WN / WP / CWN / CWP
Interconnection • B2IF-WN / WP / CWN / CWP

- **4 models: Standard, High Speed, Mark Detection and Moisture Detection.**
- **Unique "Moisture Sensing Type" BIF-W series senses the presence of moisture in a product.**
- **High Speed type (50 micro sec) and Green LED type for Mark Sensing.**

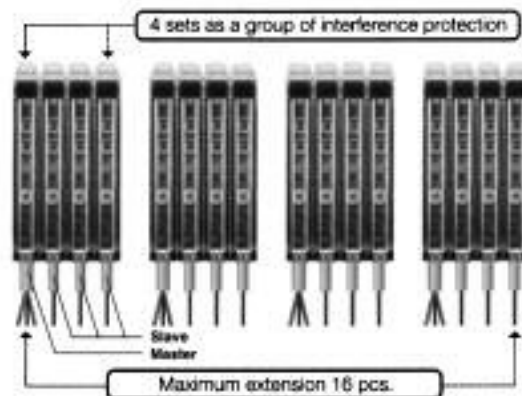


Part Identification



Interference Protection (up to 4pcs)

- Interference Protection functions in groups of 4 amplifiers.
 - Install the amplifiers in multiples of 4 when the interference prevention function is required.
 - Any of Interconnecting type amplifiers can function as the Master or Slave unit.
- ※ Not able to connect Moisture sensing type to other connectable types due to different response time.

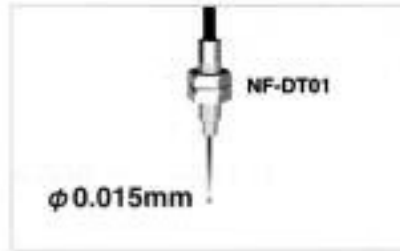


FIBER SENSORS

Long Distance Sensing



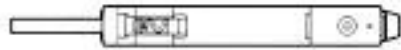
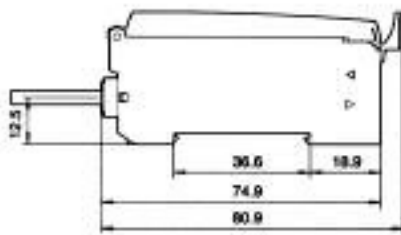
Min Object $\phi 0.015\text{mm}$



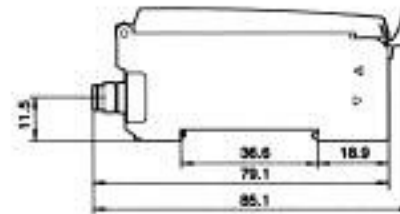
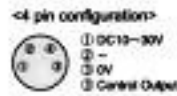
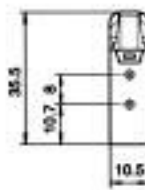
High Speed Response 50 μsec



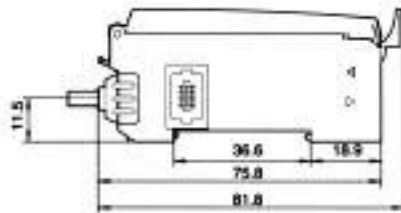
Dimensions



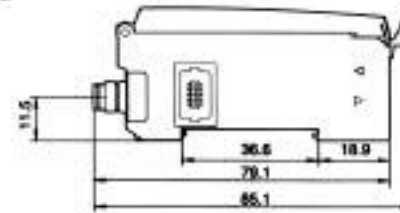
Cable Type Stand-alone



M8 Connector Stand-alone



Cable Type Interconnect



M8 Connector Interconnect

(Unit : mm)

Cable and Accessories (For B2RF / B2GF Interconnection Types)

DOL-LL1903-02M

Master cable 2 meter
(3 conductor cable)



DOL-LL1901-02M

Slave cable 2 meter
(single conductor cable)



STE-WLL190-03P

Extension connector
for M8 connector type



STE-WLL190-05P

for use with
DOL-LL1901-02M



The cables shown above are not included with the B2RF / B2GF amplifiers. Please order these separately. Order the Master or Slave cables as required for your application.
* When using the DOL-LL1901-02M cable, the extension connector STE-WLL190-05P must also be used.



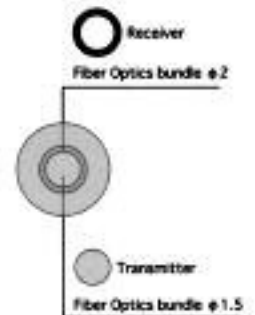
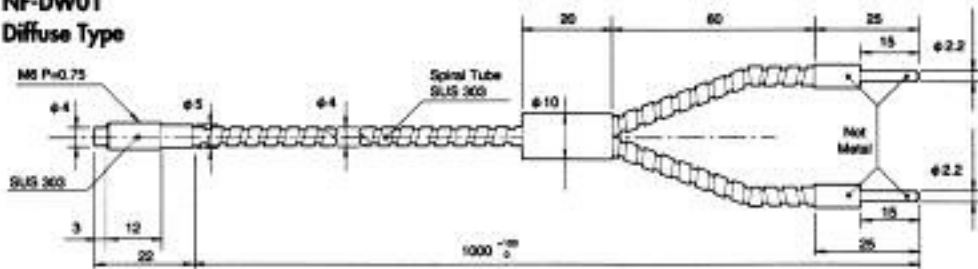
FIBER SENSORS

Specifications

Type	STANDARD TYPE	HIGH SPEED TYPE	MARK TYPE	MOISTURE TYPE	
Stand-alone	Cable type	BRF-(N,P)	BRF-H(N,P)	BGF-(N,P)	BIF-W(N,P)
	Connector type	BRF-C(N,P)	BRF-CH(N,P)	BGF-C(N,P)	BIF-CW(N,P)
Interconnection	Cable type	B2RF-(N,P)	B2RF-H(N,P)	B2GF-(N,P)	B2IF-W(N,P)
	Connector type	B2RF-C(N,P)	B2RF-CH(N,P)	B2GF-C(N,P)	B2IF-CW(N,P)
Sensing distance	90% 255mm x 200mm DK-06 Diffuse Fiber	150mm	50mm	40mm	30mm Diffuse 100mm Thru-beam
Response time		250 μsec	50 μsec	250 μsec	1msec
Output		NPN or PNP Open Collector	100mA/DC30V max. 1.8V/100mA max.		
Light source		Red LED		Green LED	Infrared LED
Indicator	Stable output	Green			
	Output	Orange			
Potentiometer		10 turn			
Dark On/Light On selection		Dark On/Light On selectable			
Timer		Off Delay 40msec fixed			
Supply Voltage		DC10 ~ 30V Inc. 10% ripple			
Current consumption		25mA/30V (30mA/30V Interconnection type)			
Ambient Illuminance	Sunlight	10,000 lx min.			
	Incandescent Lamp	3,000 lx min.			
Ambient temperature		-25 ~ +55°C			
Ambient humidity		35 ~ 85%			
Storage Temp / Humidity		-40 ~ +70°C/35 ~ 95%			
Insulation resistance		Min. 20MΩ/DC500V			
Noise resistance	EMC Test	CE regulation			
	Fallen Test (house test)	Level 3			
Temperature drift		±5% max.			
LED compensation ratio		-10% max./1000 h			
Vibration resistance	IEC68	10 ~ 55Hz, 1.5mm			
Shock resistance	IEC68	500m/s ²			
Protection category	Stand-alone	IP66			
	Interconnection	IP50			
Warm-up period		100ms max.			
Circuit protection		Overcurrent (output), Reverse Polarity, Short Circuit			
VED classification		Class 3			
Material	Housing	PBT G10			
	Cover	PC			
Dimensions		W10.5 x D80 x H35.5mm			
Regulation	UL	cRU recognition			
	CE	CE sign			

Special Fiber Unit for BIF-W Moisture Type

NF-DW01
Diffuse Type



NF-TW01
Thru-beam Type

