






Photoelectric sensor cylindrical(φ 18mm)type.

■ Features

- Photoelectric sensor of cylindrical(φ 18mm)type.
- Built-in protection circuit against reverse power polarity.
- Built-in the adjuster in through type.
- Selectable Light ON/ Dark ON by the cables.
(Through type)
- IP66(IEC specification)



■ Ordering information

Type		Detecting distance	Model	Operating voltage	Operating mode	Output
Through		 4m	BR4M-TDT	DC 	Dark ON	NPN open collector
Diffuse reflective		 100mm	BR100-DDT			
			BRP100-DDT			

■ Specification

Type	Diffuse reflective		Through
Model	BRP100-DDT	BR100-DDT	BR4M-TDT
Detecting distance	100mm(50×50mm white tissue)		4m
Detecting target	Transparent, Translucent Opaque materials		Opaque materials of Min. φ 15mm
Response time	Max. 1mS		Max. 3mS
Power supply	12 to 24VDC ±10% (ripple P-P:Max. 10%)		
Power consumption	Max. 40mA		
Source of light	Infrared LED		
Sensitivity	Adjustable		Fixed
Operating mode	Selectable Light ON or Dark ON by control wire		Dark ON
Control output	●NPN open collector output load voltage Max. 30V, load current Max. 200mA, residual voltage Max. 1V		●NPN open collector output load voltage Max. 30V, load current Max. 100mA, residual voltage Max. 1V
Protection circuit	Short-circuit protection, Reverse polarity protection		Reverse polarity protection
Indicator	Operating indicator : red LED		
Connection	Cable connection		
Insulation resistance	Min. 20MΩ (500VDC)		
Noise strength	Power line ±240V at pulse band 1μs of noise simulation		
Dielectric strength	500VAC 50/60Hz for 1minute		
Vibration	1.5mm amplitude at frequency of 10 to 55Hz in each of X,Y,Z directions for 2 hours		
Shock	500m/s ² (50G) in X,Y,Z directions for 3 times		
Ambient operating illumination	Sunlight:11,000 Lux. Max., Incandescent lamp:3,000 Lux. Max.		
Ambient temperature	Operating: -10 to 60℃ (non-freezing condition), Storage: -25 to 70℃		
Humidity	35 to 85% RH, Storage:35 to 85% RH		
Structure of protection	IP66(IEC specification)		
Material	Case:nylon(black), Lens:Acryl	Case:BrC ₂ (Cr-plate), Lens:Acryl(BR4M-TDT:glass)	
Cable	4P, φ 5mm, length:2m		3P, φ 5mm, length:2m
Weight	About 100g	About 120g	About 300g
Accessories	Mounting Nuts	Mounting Ring, Nuts	

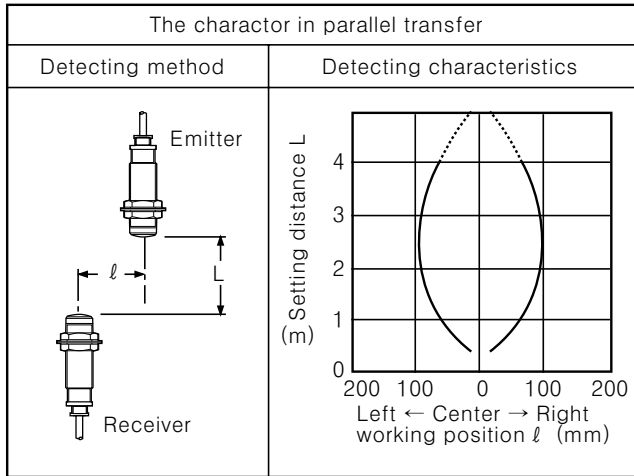
*The weight of above chart is net weight.

BR SERIES

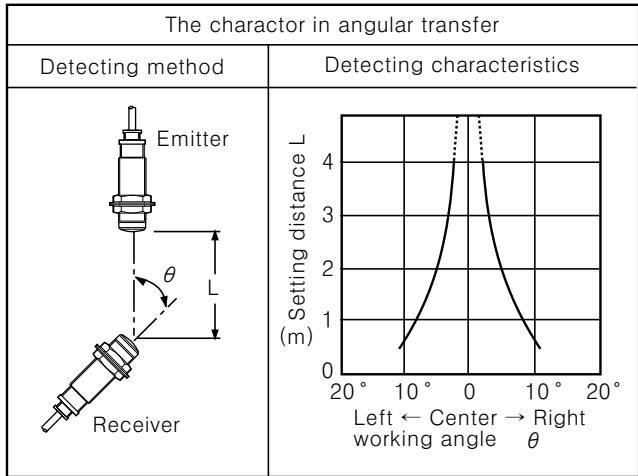
■ Detecting characteristics

◎ Through type

● BR4M-TDT

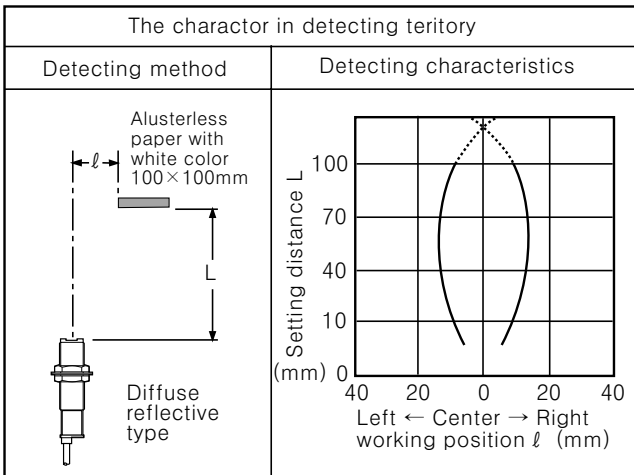


● BR4M-TDT



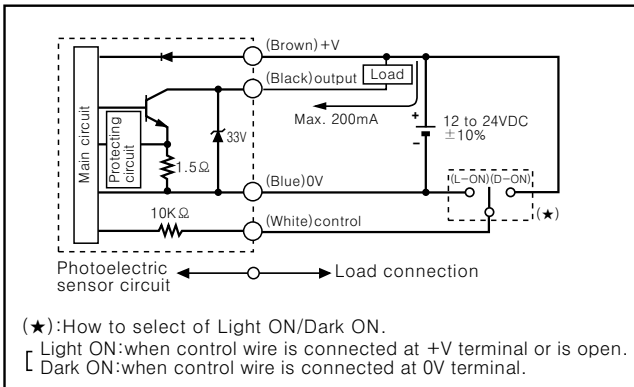
◎ Diffuse reflective type

● BR100-DDT, BRP100-DDT

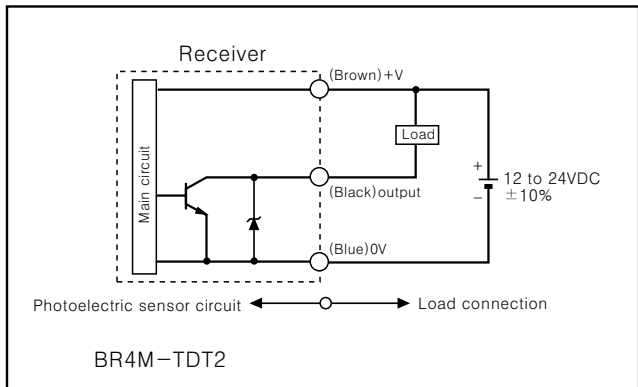


■ Control output circuits

● BR100-DDT, BRP100-DDT



● BR4M-TDT

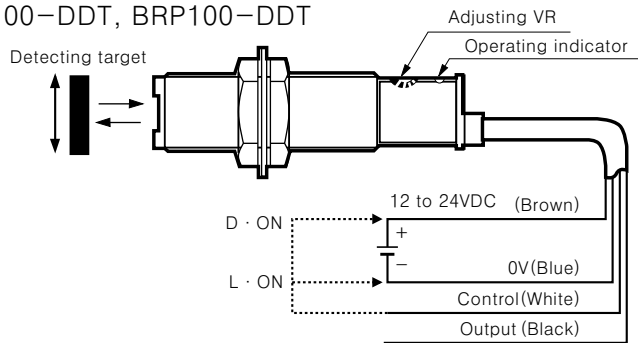


Operating mode and time chart

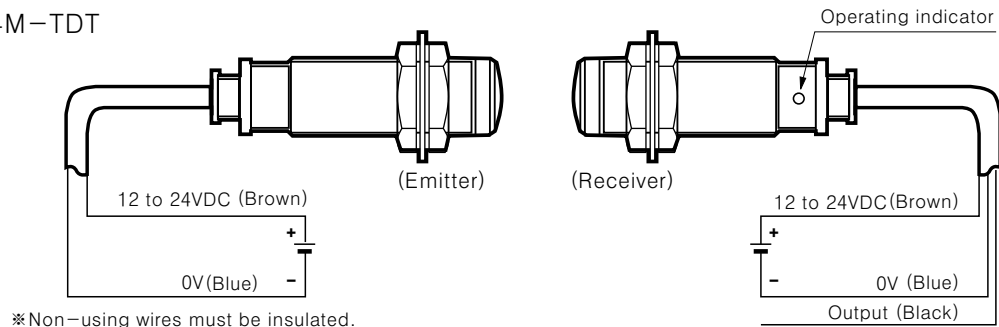
Light ON mode	Receiver operation	Incident	
		Interrupted	
	Operating indicator (LED)	ON	
Dark ON mode	Receiver operation	Incident	
		Interrupted	
	Operating indicator (LED)	ON	
	output TR	ON	
		OFF	
	output TR	ON	
		OFF	

Connections

BR100-DDT, BRP100-DDT



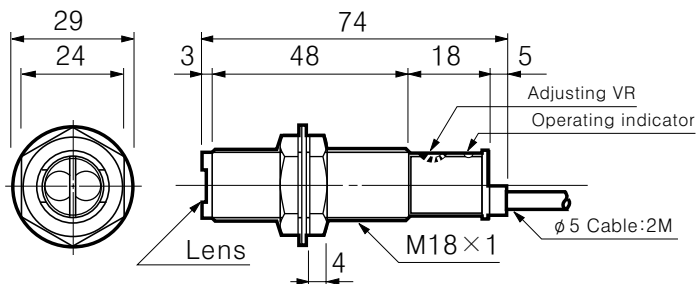
BR4M-TDT



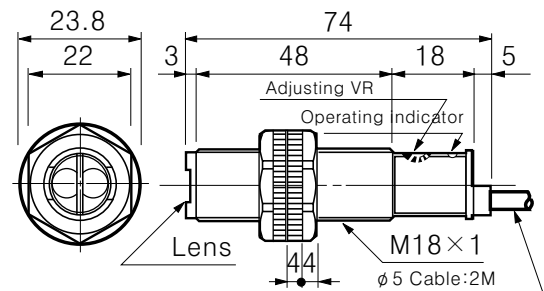
※Non-using wires must be insulated.

Dimensions

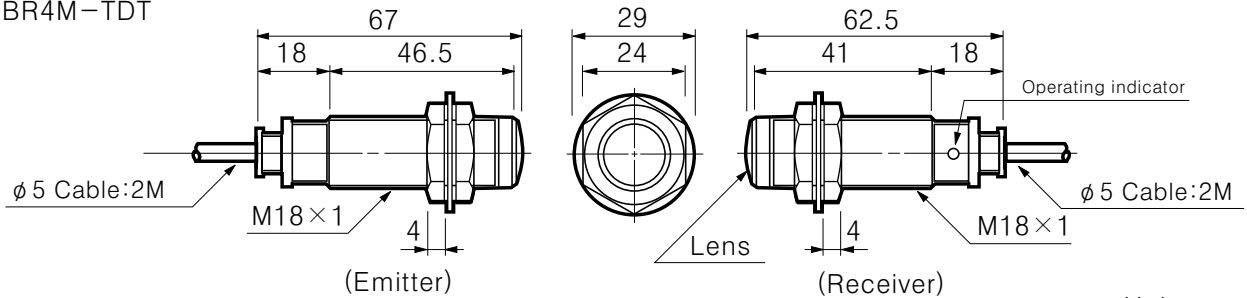
BR100-DDT



BRP100-DDT



BR4M-TDT



Unit:mm