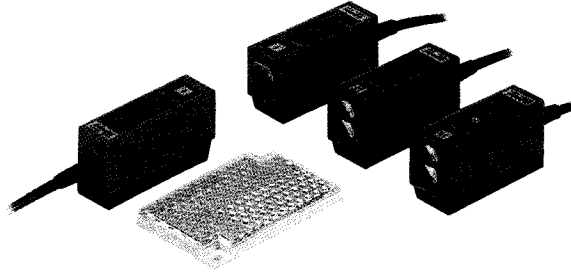


# BM SERIES








Photoelectric sensor of construction easy to mount.

## ■Features

- Compact size.
- Easy to adjust the sensitivity by V.R located at out side.
- Easy-to mount by threads in mounting hole.
- Built-in protection circuit against reverse power polarity



## ■Ordering information

Type	Detecting distance	Model	Operating voltage	Operating mode	Output
Through 	 3m	<b>BM3M-TDT</b>	DC 	Dark ON	TR output
Retro reflective 	 0.1 to 1m	<b>BM1M-MDT</b>		Dark ON	
Diffuse reflective 	 200mm	<b>BM200-DDT</b> <b>BM200-DDTN</b>		Light ON	

## ■Specification

Type	Through	Retroreflective	Diffuse reflective	
			Diffuse reflective	Narrow reflective
Model	<b>BM3M-TDT</b>	<b>BM1M-MDT</b>	<b>BM200-DDT</b>	<b>BM200-DDTN</b>
Detecting distance	3m	0.1 to 1m	200mm <small>(200×200mm white tissue)</small>	200mm <small>(50×50mm white tissue)</small>
Detecting target	Opaque materials of Min. $\phi$ 8mm	Opaque materials of Min. $\phi$ 60mm	Transparent, Translucent Opaque materials	
Hysteresis	Max.10% at rated setting distance			
Response time	Max. 3mS			
Power supply	12 to 24VDC $\pm$ 10% (ripple P-P:Max. 10%)			
Power consumption	Max. 45mA	Max. 40mA		
Source of light	Emitter:infrared LED, receiver:photo TR			
Sensitivity	Fixed		Adjustable	
Operating mode	Dark ON		Light ON	
Control output	NPN open collector output $\Rightarrow$ load voltage 30V, load current Max. 100mA, residual voltage Max. 1V			
Protection circuit	Reverse polarity protection			
Indicator	Operating indicator : red LED, Voltage indicator : red LED			
Connection	Cable connection			
Insulation resistance	Min. 20M $\Omega$ (500VDC)			
Noise strength	Power line $\pm$ 240V at pulse band 1 $\mu$ s of noise simulation			
Dielectric strength	1,000VAC 50/60Hz for 1 minute			
Vibration	1.5mm amplitude at frequency of 10 to 55Hz in each of X,Y,Z directions for 2 hours			
Shock	500m/s <sup>2</sup> (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 $^{\circ}$ C (non-freezing condition), Storage:-25 to 70 $^{\circ}$ C			
Humidity	35 to 85% RH, Storage:35 to 85% RH			
Protection	Case:ABS, Lens:Acryl			
Cable	3P, 4 $\phi$ mm, length:2m			
Weight	About 170g	About 105g	About 88g	About 90g
Accessories	Individual	Mirror(MS-2)		
	Common	Mounting Bracket,Cable holder, Ring,Rubber,Bolts/Nuts		

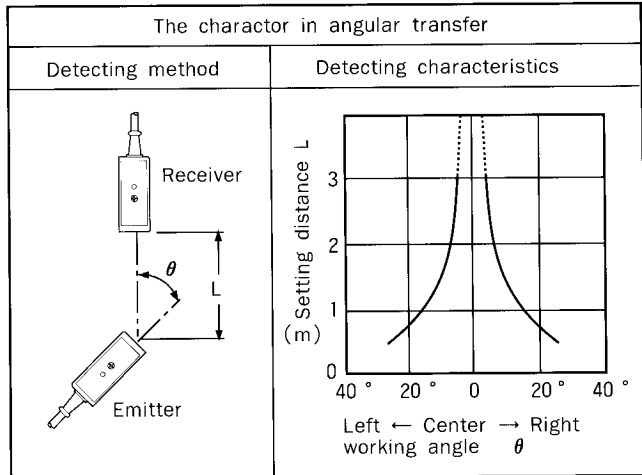
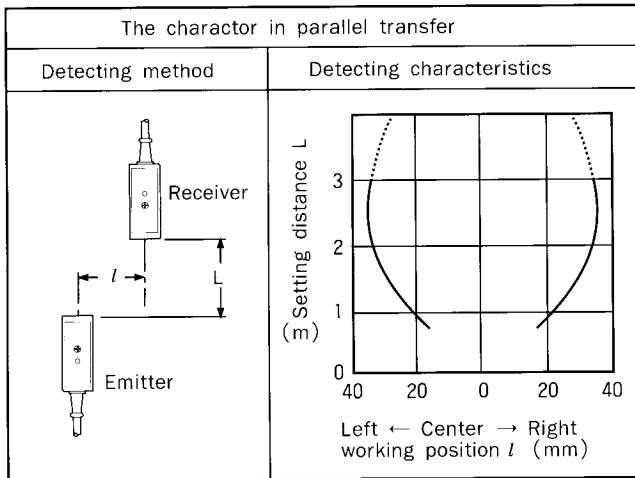
\* The weight of above chart is net weight.

## ■ Detecting characteristics

### ◎ Through type

● BM3M-TDT

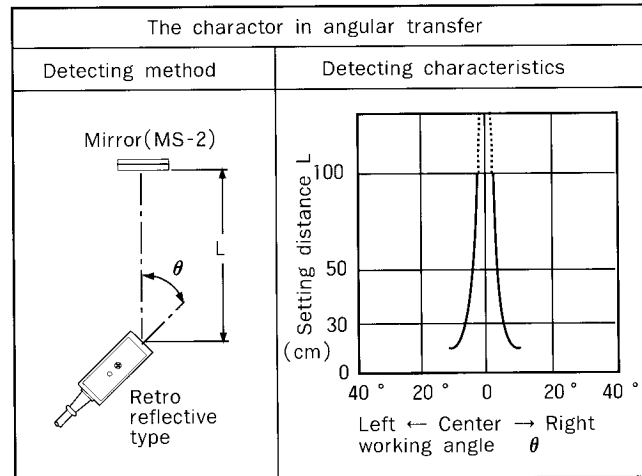
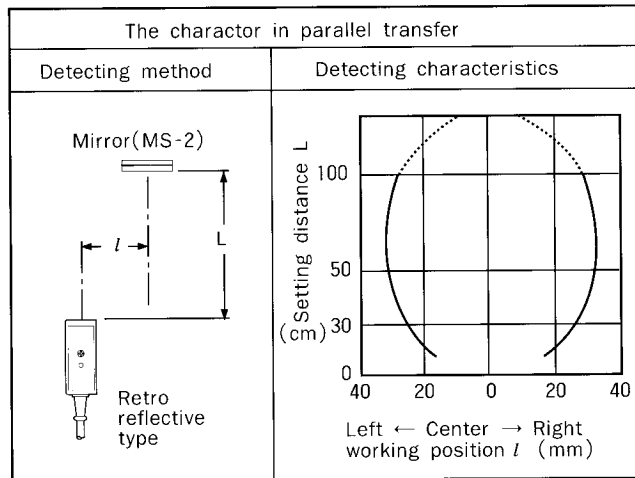
● BM3M-TDT



### ◎ Retroreflective type

● BM1M-MDT

● BM1M-MDT

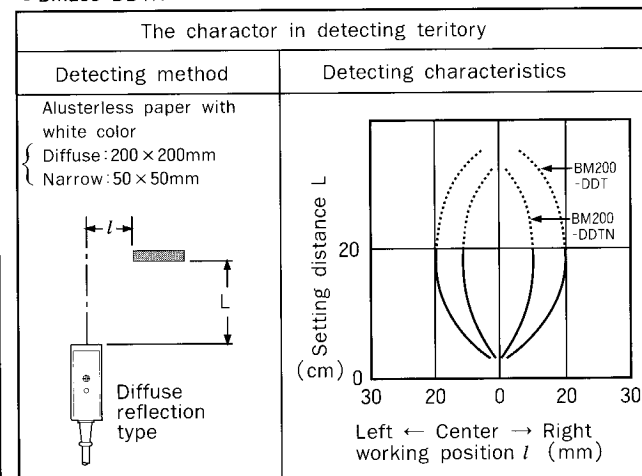
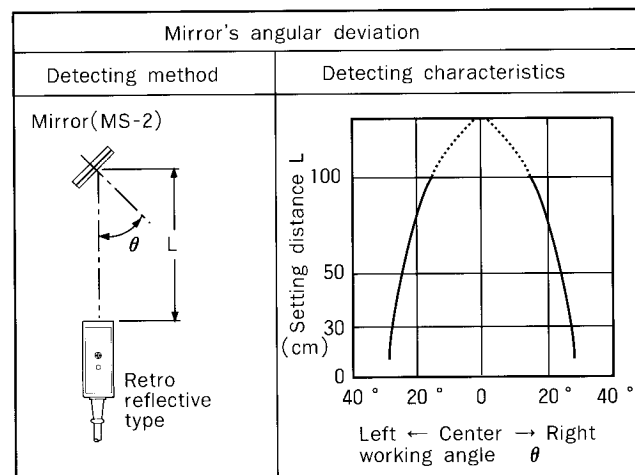


● BM1M-MDT

### ◎ Diffuse reflective type

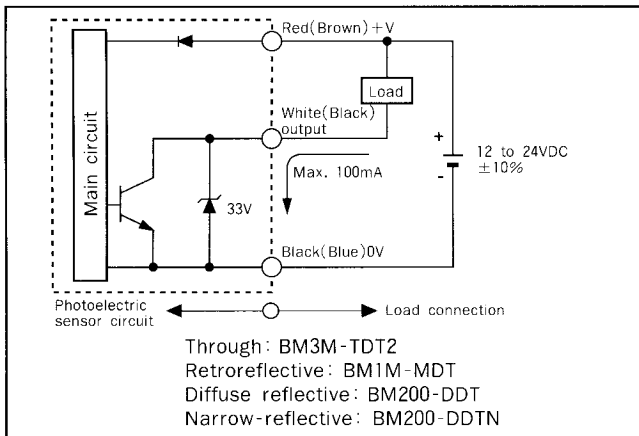
● BM200-DDT

● BM200-DDTN

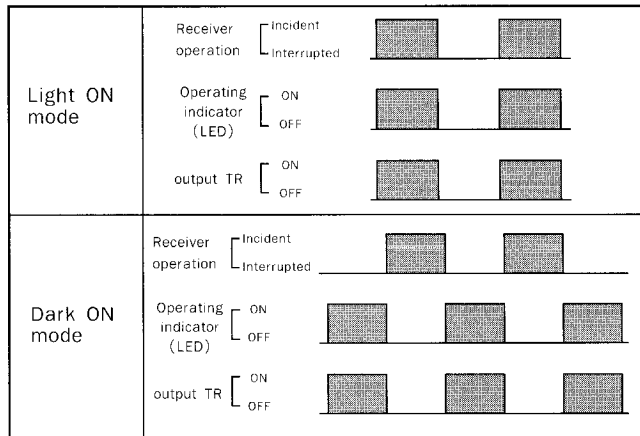


# BM SERIES

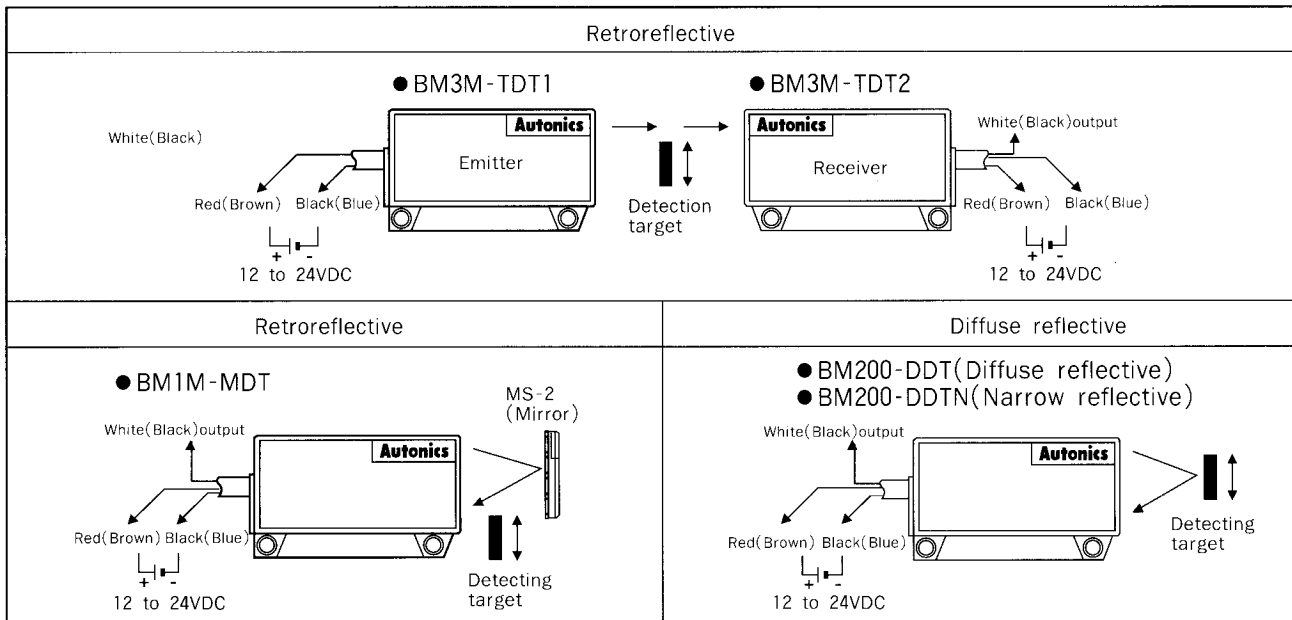
## Control output circuit



## Operating mode and time chart

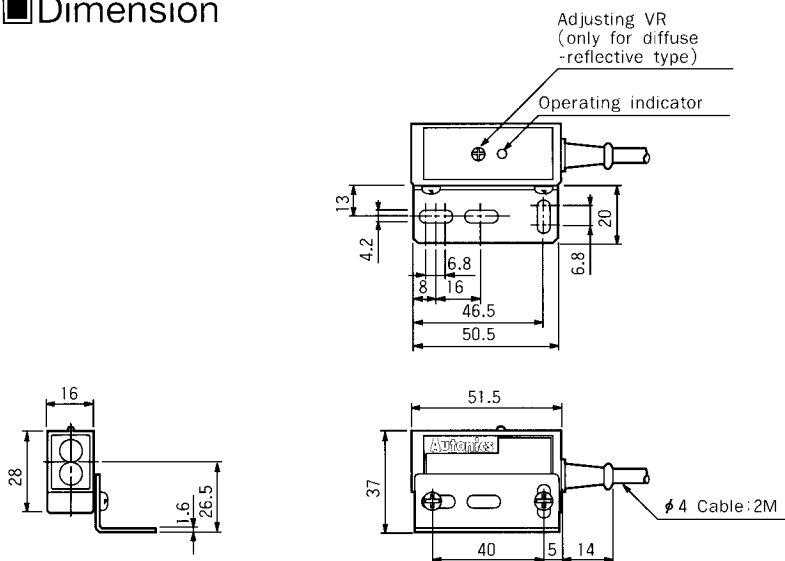


## Connection



\* Non-using wires must be insulated.

## Dimension



## ◎ Mirror (MS-2)

