


# Diffuse Reflective Type with Long Sensing Distance

## Small, diffuse reflective type with long sensing distance


### ■ Features

- Realization of long sensing distance (2m) by special optical design.
- Built-in stable light ON indicator.
- Includes sensitivity adjustment function.
- 2 color LED display.

 Please read "Caution for your safety" in operation manual before using.



### ■ Specifications

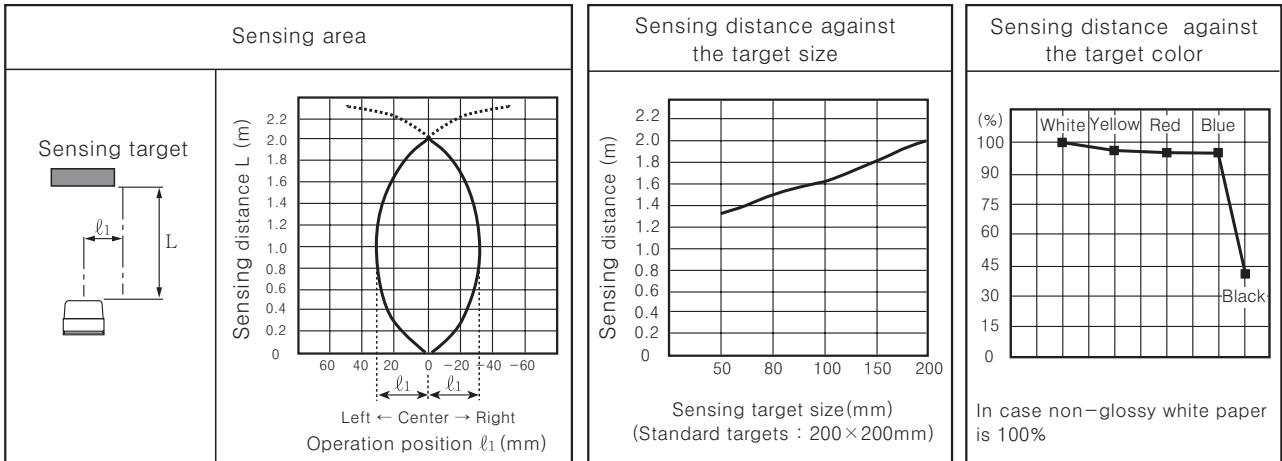
Model	BA2M-DDT	BA2M-DDT-P
Sensing type	Diffuse reflective	
Sensing distance (★)	2m	
Sensing target	Opaque, Translucent, Transparent material	
Hysteresis	Max. 20% at rated setting distance	
Response time	Approx. 1ms	
Power supply	12-24VDC ±10% (Ripple P-P : Max. 10%)	
Current consumption	Max. 15mA (Max. 30mA when the output is ON)	
Light source	Infrared LED (850nm modulated)	
Sensitivity adjustment	VR	
Operation mode	Light ON (Dark ON mode is optional)	
Control output	NPN or PNP open collector output Load voltage : Max. 26.4VDC, Load current : Max. 100mA, Residual voltage: NPN : Max. 1V, PNP : (Min. Power supply - 2.5V)	
Protection circuit	Reverse power polarity, Output short-circuit (Overcurrent) protection circuit	
Receiver	Photo diode (Built-in IC)	
Indicator	2 color LED [Operation : Red, Stable : Yellow (Red+Green)]	
Insulation resistance	Min. 20MΩ (at 500VDC mega)	
Noise strength	±240V the square wave noise (pulse width: 1μs) by the noise simulator	
Dielectric strength	1000VAC 50/60Hz for 1minute	
Vibration	1.5mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 2 hours	
Shock	100m/s <sup>2</sup> (10G) in X, Y, Z directions for 3 times	
Ambient illumination	Sunlight : Max. 11,000lx, Incandescent lamp : Max. 3,000lx (Receiving illumination)	
Ambient temperature	-20 ~ +55°C (at non-freezing status), Storage : -25 ~ +70°C	
Ambient humidity	35 ~ 85%RH	
Protection	IP50 (IEC standard)	
Material	Case : PBT, Display : PC, Lens : PMMA	
Cable	3P, φ 3mm, Length : 2m	
Accessory	Adjustment driver	
Approval		
Unit weight	Approx. 50g	

※ (★) It is for Non-glossy white paper (200×200mm).

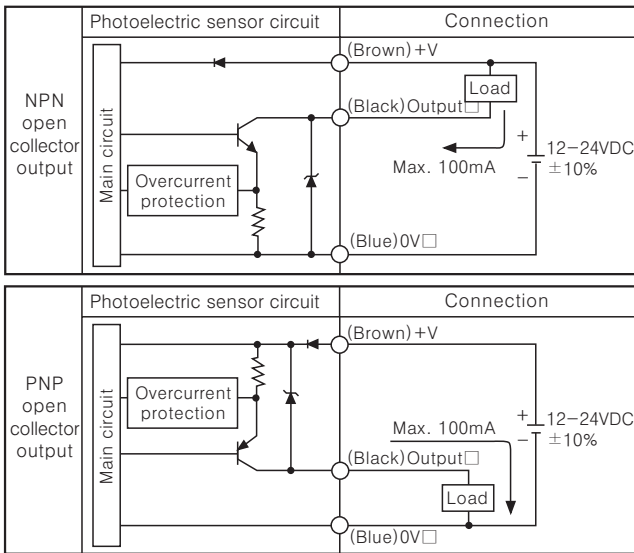
- (A) Counter
- (B) Timer
- (C) Temp. controller
- (D) Power controller
- (E) Panel meter
- (F) Tacho/Speed/Pulse meter
- (G) Display unit
- (H) Sensor controller
- (I) Switching power supply
- (J) Proximity sensor
- (K) Photo electric sensor
- (L) Pressure sensor
- (M) Rotary encoder
- (N) Stepping motor & Driver & Controller
- (O) Graphic panel
- (P) Field network device
- (Q) Production stoppage models & replacement

# BA2M-DDT

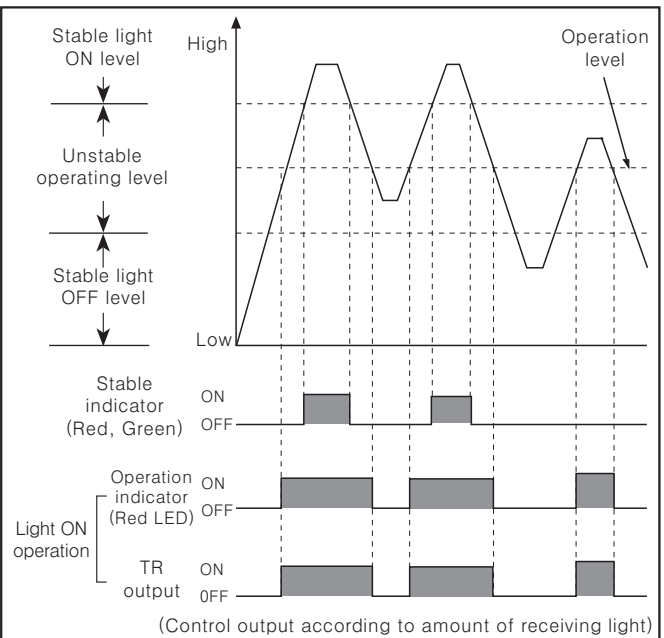
## Feature data



## Control output diagram

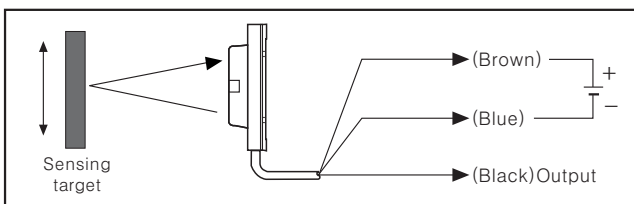


## Operation mode



1. Waveform of operation indicator and output TR is for the Light ON mode. When it is Dark ON mode, the operation will be apposite. (Dark ON mode : Option)
2. If the control output terminal is short-circuit or over current than the rated current flows the unit, the sensor does not operate normally by protection circuit.

## Connections



## Dimensions

