BA2M-DDT

Small, diffuse reflective type with long sensing distance

▣Features

- Realization of long sensing distancen(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.**

CE

▣Specifications

Model	BA2M-DDT
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	Adjustable VR
Operation mode	Light ON(Dark ON mode is optional)
Control output	NPN open collector output ☞ Load voltage : Max. 30VDC, Load current : Max. 100mA, Residual voltage : Max. 1V
Protection circuit	Reverse polarity protection, Output short-circuit protection
Receiver	Photo diode(Built-in IC)□
Indicator	2 color LED [Operation : Red, Stable : Yellow(Red+Green)]
Insulation resistance	Min. 20MΩ (at 500VDC)
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/s² (10G) in X, Y, Z directions for 3 times
Ambient illumination	Sunlight : Max. 10,000ℓx, Incandescent lamp : Max. 3,000ℓx(Receiving illumination)
Ambient temperature	-20 ~ +55℃(at non-freezing status), Storage : -25 ~ +70℃
Ambient humidity	35 ~ 85%RH
Protection	IP50(IEC standard)
Material	Case : PBT, Lens : PMMA
Cable	3P, φ3mm, Length : 2m
Accessory	Adjustment driver
Approval	CE
Unit weight	Approx. 50g

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

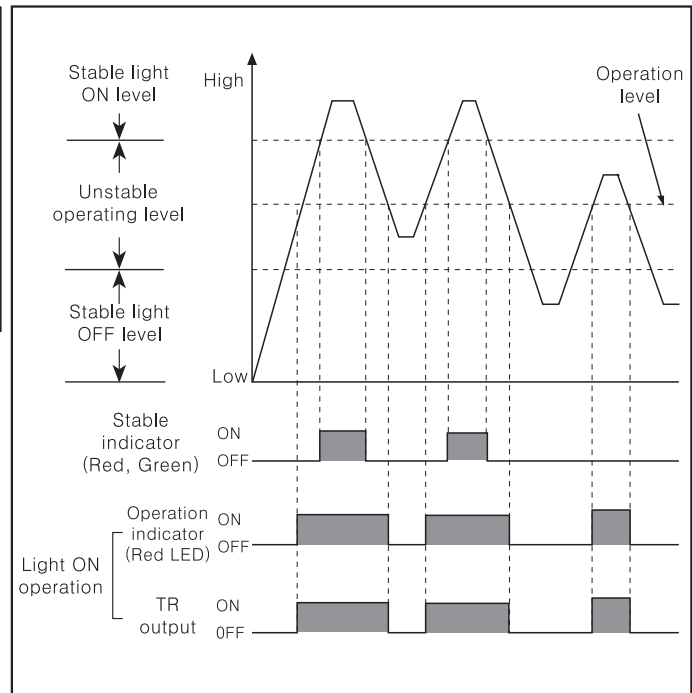Autonics
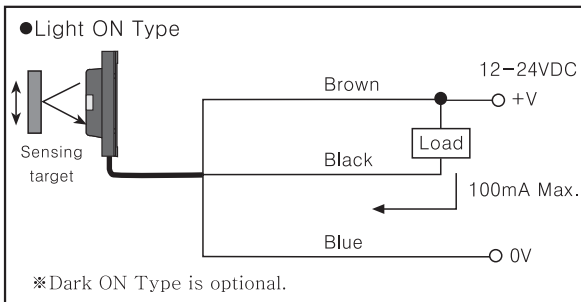
Diffuse Reflective Type with Long Sensing Distance
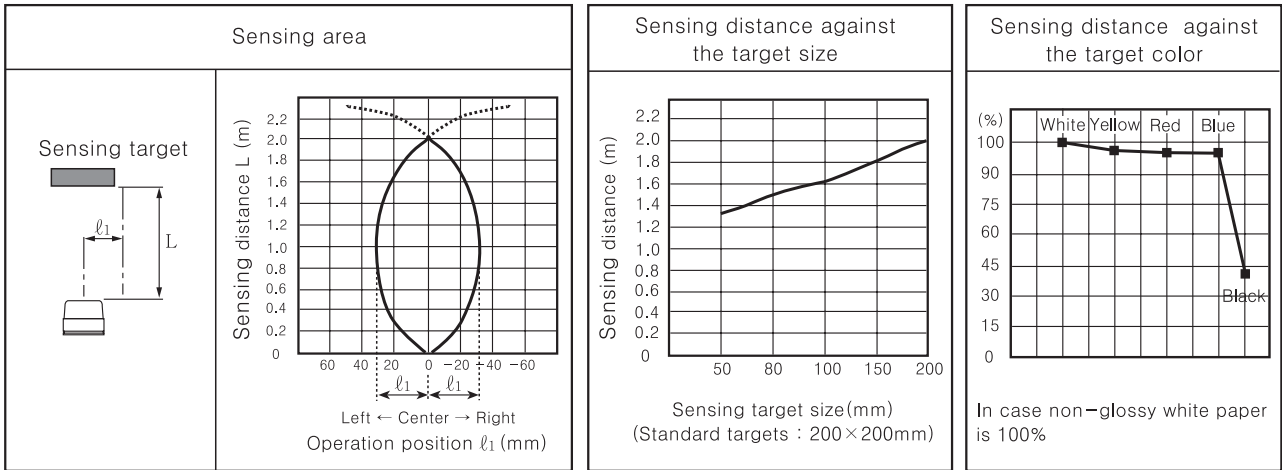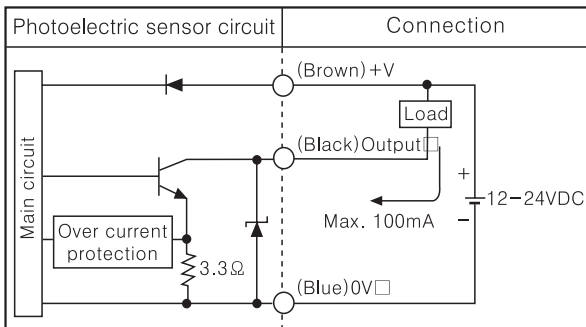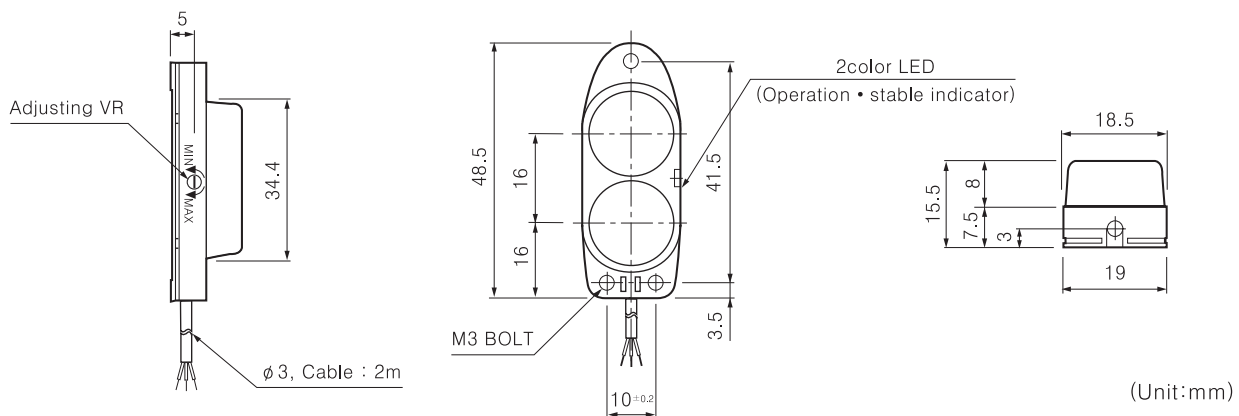
(A) Counter

(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) Production stoppage models & replacement

▣ Feature data

Sensing area	Sensing distance against the target size	Sensing distance against the target color

Sensing target

Sensing distance L (m)

Left ← Center → Right
Operation position ℓ_1 (mm)

Sensing target size (mm)
(Standard targets : 200×200mm)

White Yellow Red Blue

Black

In case non-glossy white paper is 100%

▣ Control output diagram

Photoelectric sensor circuit	Connection

Main circuit

Over current protection

3.3Ω

(Brown) +V

(Black) Output □

Load

+ 12−24VDC −

Max. 100mA

(Blue) 0V □

▣ Connections

● Light ON Type

Sensing target

12−24VDC

Brown — +V

Load

Black

100mA Max.

Blue — 0V

※ Dark ON Type is optional.

▣ Operation mode

Stable light ON level

Unstable operating level

Stable light OFF level

High

Low

Operation level

Stable indicator (Red, Green)   ON / OFF

Operation indicator (Red LED)   ON / OFF

Light ON operation

TR output   ON / OFF

▣ Dimensions

5

Adjusting VR

MIN MAX

34.4

φ 3, Cable : 2m

48.5

16

16

41.5

2color LED (Operation・stable indicator)

M3 BOLT

10 ±0.2

3.5

18.5

15.5

8

7.5

3

19

(Unit:mm)