



- Slim slide-on style sensor
- Basic function model for applications ranging from flush-mounting to small conveyor lines
- In-line sensitivity adjustment

<Sample application> detection of translucent objects

Sensitivity adjustment allows detection of objects even if they do not completely block light.

<Sample application> detection of small objects

Small object that blocks light axis but cannot be detected due to light going around it may be detected by adjusting sensitivity.

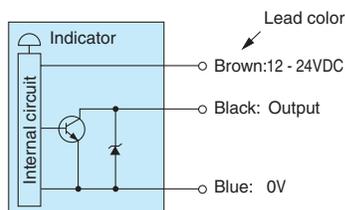
(Note) Be sure to test the operation before use.

Type

Detection method	Detecting distance	Model	In-line sensitivity adjustment volume	Operation mode	Output mode
 Through-beam type	500mm	UM-T50DNS	—	Dark-ON	NPN Open collector
		UM-T50DNSV	Provided		
		UM-T50NS	—	Light-ON	
		UM-T50NSV	Provided		

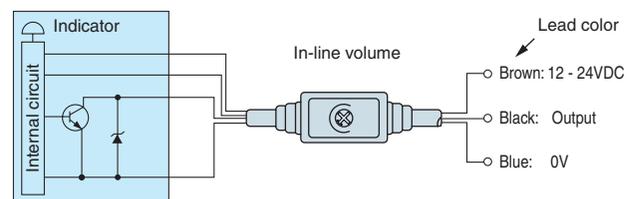
Input/Output Circuit and Connection

Model: UM-TR50DNS
UM-TR50NS



Model: UM-TR50DNSV
UM-TR50NSV

With in-line sensitivity adjustment volume



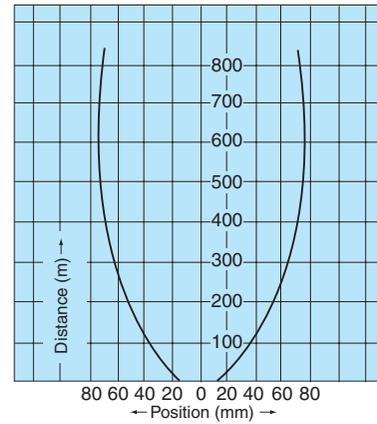
The transmitter of the through-beam type is provided with power supply lines (brown: 12~24 VDC; blue: 0 V) only.

Rating/Performance/Specification

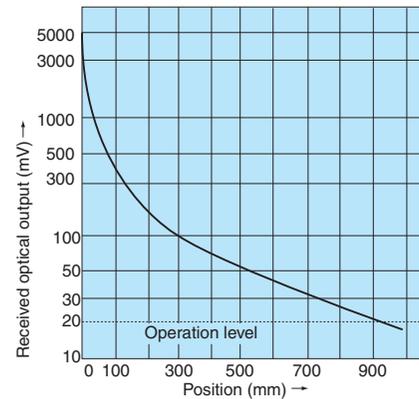
Type		UM-T50DNS	UM-T50DNSV	UM-T50NS	UM-T50NSV
Detection method		Through-beam type			
Detecting distance		500mm			
Detection object		φ 3mm (Min.) Opaque			
Power supply		12 - 24V DC ± 10% / Ripple 10% max.			
Current consumption	Transmitter	14mA max.			
	Receiver	14mA max.	22mA max.	14mA max.	22mA max.
Output mode		NPN open collector Rating: sink current 100 mA (30 VDC) max.			
Operation mode		Dark-ON		Light-ON	
Response time		0.5ms max.			
Operating angle		13°			
Hysteresis		—			
Light source (light wavelength)		Red LED (660nm)			
Indicator		Operation indicator (red LED)		Stability indicator (green LED)	
Volume		—	In-line sensitivity adjustment *	—	In-line sensitivity adjustment *
Material	Case	Polybutylene terephthalate			
	Lens	Polyarylate			
Connection		Permanently attached cord (outer dimension: dia. 2.8) Transmitter 0.15 sq. 2 core 2 m length (gray) Receiver 0.15 sq. 3 core 2 m length (black)			
Mass	Transmitter	Approx. 30g			
	Receiver	Approx. 35g	Approx. 40g	Approx. 35g	Approx. 40g
Notes		* Length of cord between sensor and in-line sensitivity adjustment: 300 mm (fixed)			
Ambient light		3,000 lx max.			
Ambient temperature		-25 - +55 -C (non-freezing)			
Ambient humidity		35 - 85%RH (non-condensing)			
Protective structure		IP64			
Vibration		10 - 55 Hz / 1.5 mm amplitude / 2 hours each in 3 direction			

Characteristics (Typical Example)

Directional characteristics



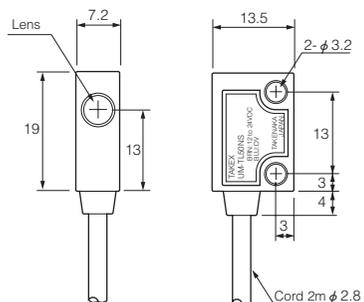
Distance-area characteristics



Dimensions (in mm)

Transmitter

CAD

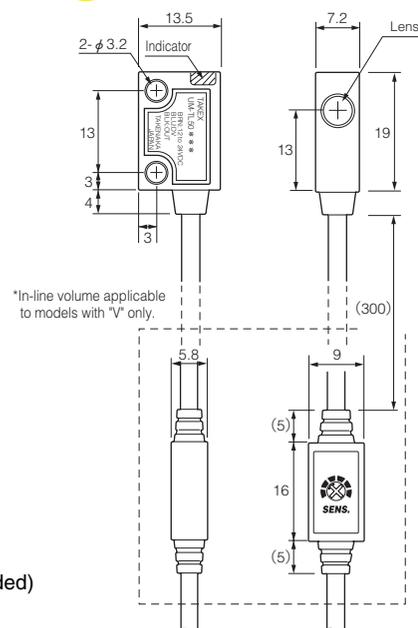


- No mounting bracket is provided.
- For mounting, use the screws provided.
The tightening torque not exceed 0.3 N·m.

(M3 x 15 mm screws, nuts, two 3-piece sems screws provided)

Receiver

CAD



*In-line volume applicable to models with "V" only.