

M12 QD type



Cable type

Photoelectric Sensor V series

Thru-beam type

(Sensing range : 40m)

Relay output type • VT-4000 / VT-4000T

(Sensing range : 30m)

Transistor output type • VT-3000N / VT-3000NP

Retro-reflective type

(Sensing range : 10m)

Relay output type • VR-1000 / VR-1000T

(Sensing range : 8m)

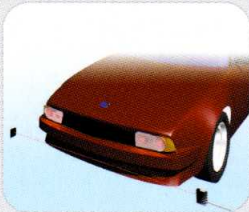
Transistor output type • VR-800N / VR-800NP

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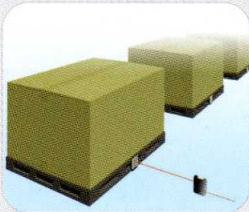
Applications



Rubber / plastic industry



Transportation industry



Material handling

- **Universal voltage photoelectric sensor 12~240 VDC / 24~240 VAC.**
- **M12 QD types are available.**
- **Relay contact (AC/DC models) and Transistor output (DC models).**
- **Rugged duty sensor housing.**
- **BGS-V2000, long sensing distance (2m) with BGS operation.**

Features

High power light source

The strong LED light source assures stable sensing even in misty or dirty conditions.



Long detecting distance (Relay output type)



Timer Function

Adjustable ON delay, OFF delay and ON+OFF delay time by individual delay trimmer. From 0.1 to 10 sec.



Applicable for use world-wide

24 to 240V AC
12 to 240V DC.



Photoelectric Sensor

- C
- E
- J
- J2
- J3
- V
- V2
- V3
- V4
- SRC
- S
- BGS
- Z
- K
- BGS
- FGS
- BGS
- serie

Diffuse reflective type

(Sensing range : 1.3m)
Relay output type • VD-130 / VD-130T
 (Sensing range : 1m)
Transistor output type • VD-100N / VD-100P

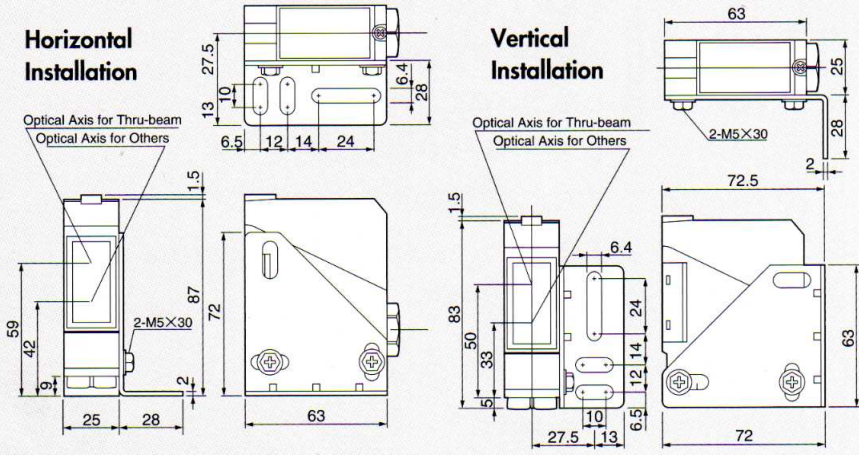
Diffuse reflective type

(Sensing range : 3m)
Relay output type • VD-300 / VD-300T
 (Sensing range : 2.5m)
Transistor output type • VD-250N / VD-250P

BGS type

(Sensing range : 2m)
Relay output type • BGS-V2000 / BGS-V2000T
Transistor output type • BGS-V2000N / P / CN / CP
Contact the factory for specifications.

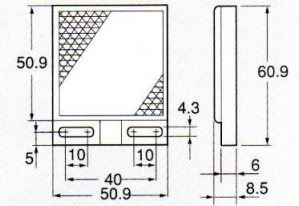
Dimensions



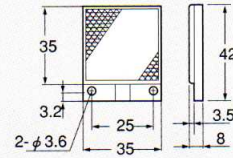
<4 Pin configuration>



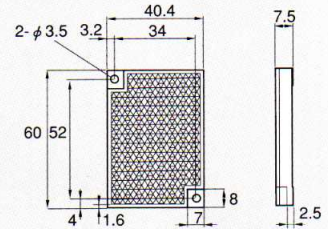
Standard reflector V-61



Small reflector V-42

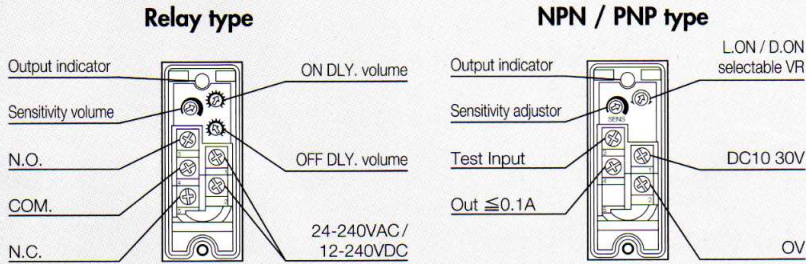


Anti-cloud reflector V-60K



(Unit : mm)

Components



Specifications

Model	Thru-beam		Retro-Reflective		Diffuse		Diffuse-long		
Cable type	NPN	VT-3000N	VT-4000	VR-800N	VR-1000	VD-100N	VD-130	VD-250N	VD-300
	PNP	VT-3000P	(Relay output)	VR-800P	(Relay output)	VD-100P	(Relay output)	VD-250P	(Relay output)
Connector type	NPN	VT-3000CN	—	VR-800CN	—	VD-100CN	—	VD-250CN	—
	PNP	VT-3000CP	—	VR-800CP	—	VD-100CP	—	VD-250CP	—
Timer type	—	—	VT-4000T	—	VR-1000T	—	VD-130T	—	VD-300T
			0.1-10 sec (ON + OFF delay)		0.1-10 sec (ON + OFF delay)		0.1-10 sec (ON + OFF delay)		0.1-10 sec (ON + OFF delay)
Sensing range		30 meter	40 meter	8 meter	10 meter	1 meter	1.3 meter	2.5 meter	3 meter
Supply voltage		DC 10-30V	AC24-240V+/-10% DC12-240V+/-10%	DC 10-30V	AC24-240V+/-10% DC12-240V+/-10%	DC 10-30V	AC24-240V+/-10% DC12-240V+/-10%	DC 10-30V	AC24-240V+/-10% DC12-240V+/-10%
Power consumption		35mA	8.5VA	35mA	5VA	35mA	5VA	5mA	5VA
Min. detectable object		30mm round	—	50mm round	—	20mm round	—	40mm round	—
Response time		1.5ms	20ms	1.5ms	20ms	1.5ms	20ms	5ms	20ms
Hysteresis		—	—	—	—	20%	20%	20%	20%
Light source		Red LED				Infrared			
Test input		yes	No	yes	No	yes	No	yes	No
Operating mode		L/D selectable	Light-on	L/D selectable	Light-on	L/D selectable	Light-on	L/D selectable	Light-on
Connection		Terminal chamber (Diameter of applicable cable: φ 6 to φ 10mm)							
Ambient temperature		-25~+55°C (No freezing)							
Ambient humidity		35~85%/RH							
Environmental illuminance		Sun Light:10,000 lx max. Halogen light:3,000 lx max.							
Isolation resistance		20MΩ min. (DC500V)							
Withstand voltage		2700 VAC 1 minute (AC power type only)							
Vibration resistance		10 to 55Hz amplitude 1.5mm X,Y,Z, each 2 hours							
Shock resistance		50G (500m/s ²) X,Y,Z, each 3 times							
Protection category		IEC 144, IP67							
Material		Case/Cover:ABS (Glassfiber-reinforced) Lens:PMMA							
Weight		Emitter : 70g Receiver : 90g		95g					