OPTEX
Sensing Innovation

Reverse detection system

ACCURANCE R1002

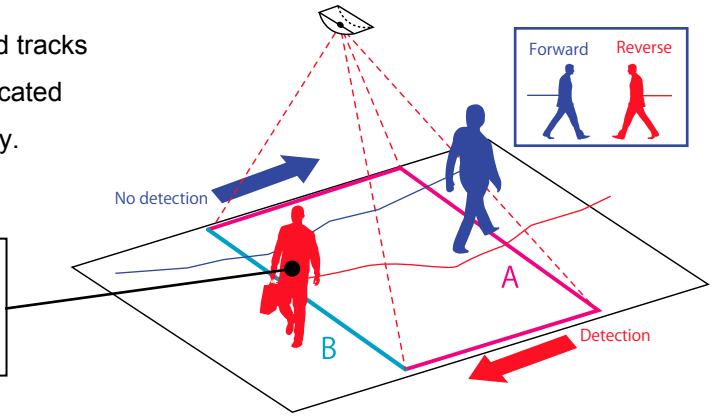
Detection unit : R1002CB(E)
Control box : R1002CB(E)

Reverse Detection System R1002 with an unique detection algorithm [Vector Focal Method] is designed to detect backward movement of human(s) in a specific area.The system are suitable for applications to catch a suspicious individual such as airports for an efficient facility management or security.

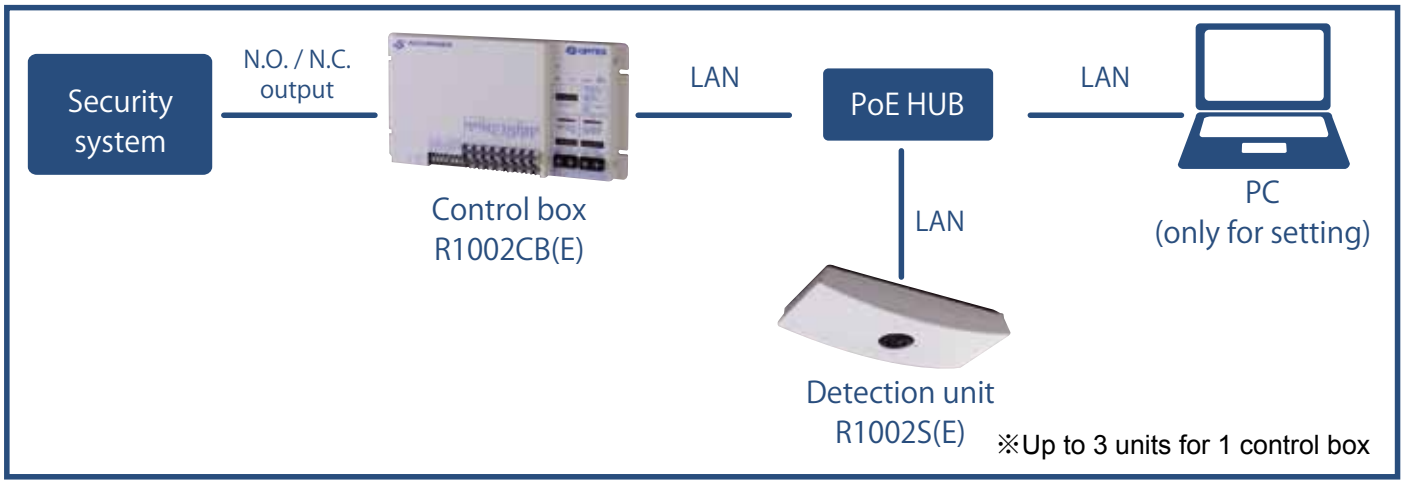
Principle

An unique detection method [Vector Focal Method] grasps and tracks a shape of human sterically.The system can recognize complicated movement and the number of people at high rate and accuracy.

As shown in the figure below, when a passer by crosses two lines of pink (A) and light blue (B) in oppsite directions, a “Reverse” outout will be activated.



System configuration



Features

Accurate detection

An unique detection method [Vector Focal Method] grasps and tracks a shape of human sterically.

Reverse detection

Grasp all human movements and detect only backward movement

System corporation

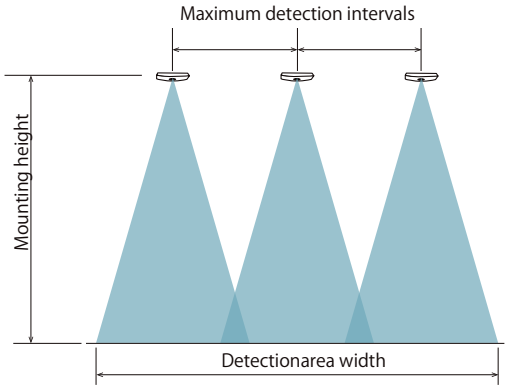
Enable to be connected with an upper layer system by using no-voltage output from the control box.

Specifications

Items	Specifications		Remarks
Detection Method	Vector Focusing Method		
Detection Accuracy	> 95% (by own criteria)		
Supply Voltage	Power over Ethernet IEEE 802.3 af		
Warm-up time	Approx. 45 sec.		
Power Consumption	Control box	10 W max.	
	Detection unit	10 W max.	
Indicator	Control box	Green	Power (lit)
		Red	Reverse detection (lit)
		Green / Red	Warm-up (lit) / Trouble (blinking) Communication trouble (alternative blinking)
	Detection unit	Green	Power (lit)
		Red	Reverse detection (lit)
		Orange	Warm-up (lit) / Trouble (blinking)
		Green / Red	Communication trouble (alternative blinking)
Dimensions	Control box	265 × 135 × 31 mm	(W × H × D)
	Detection unit	193 × 85 × 34 mm	(W × H × D)
Weight	Control box	800 g	
	Detection unit	220 g	
Operating Temperature	0 to 50°C		
Operating Humidity	< 80% RH		only under no condensation
Operating Illuminance	100 to 20,000 lux *1		only the outline of an object is shown
Install location	Control box	Wall / stationary	Interior only
	Detection unit	Ceiling	Interior only
Mounting Height	Detection unit	2.5 to 4.0 m	It may be limited by environmental conditions.
LAN wiring	CAT5e or larger		100 m max. in length
Ethernet	100Base-T(X)		Protocol : TCP/UDP(IPv4), ARP, ICMP or HTTP
Input terminal *2	Disable output	N.O./N.C. no voltage	Disable reverse detection [1] and [2]
	Output reset		Stop the outputs of reverse detection [1] and [2]
Output terminal *2	Reverse detection [1]	MOS FET relay N.O./N.C. no voltage 30 V DC 0.2 A or less (Resistibility load)	Variable timer 0.2 to infinity
	Reverse detection [2]		
	Unit [1] detects		Pulse output for reverse detection by unit [1]
	Unit [2] detects		Pulse output for reverse detection by unit [2]
	Unit [3] detects		Pulse output for reverse detection by unit [3]
	Number of reverse detections		Pulse output for the number of reverse detection
	Error		Output when disable to detect

*1 R1002 always requires 100 lux or more.
*2 Input/output relays can be selected N.O./N.C. by the dipswitch.

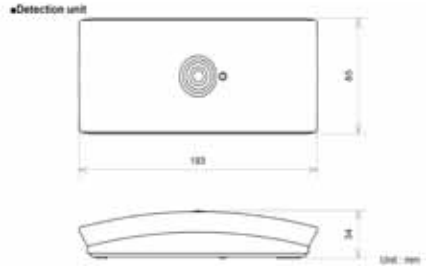
Detection area

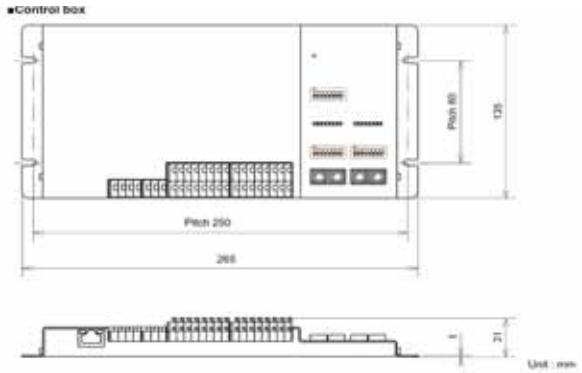


Mounting height	Detection area width			Maximum installation intervals
	One unit	Two units	Three units	
2500	1500	2700	3900	1200
3000	2700	5100	7500	2400
3500	3300	6300	9300	3000
4000	4000	7700	11400	3700

Unit：mm

Dimensions





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