

Laser Scan Detector

RLS-3060L



## FEATURES

- \* Detection range is 30m (Approx. 100ft.) radius, max. 190 degree
- \* Selectable horizontal or vertical detection area
- \* Recognition of the intrusion location which can activate 4 independent outputs for PTZ control
- \* Flexible and easy setup of the required detection area
- \* Analog (dry-contact) output and IP connection

REDFSCAN is an area sensor that configures a fan-like detection area of 30 m (Approx.100 ft.) radius over 190 degrees arc. using laser beams.

REDFSCAN detects target objects by emitting laser beams at the target and measuring the time required for the emitted beams to be reflected and returned to the detector.

There are 2 modes for detecting an intruder. Horizontal Detection Area2 and Vertical Detection Area. Each one is configured with an independent detection algorithm.

## CONTENTS

1	INTRODUCTION	
1-1	BEFORE OPERATION.....	1
1-2	PRECAUTIONS.....	2
1-3	PARTS IDENTIFICATION.....	2
1-4	INSTALLATION WORK FLOWCHART.....	2
2	TYPES OF INSTALLATION METHOD AND DETECTION AREAS	
2-1	TYPES OF INSTALLATION METHOD.....	3
2-2	TYPES OF DETECTION METHOD.....	3
2-3	AREA SETTING PROCEDURE.....	4
3	INSTALLATION AND ANGLE ADJUSTMENT	
3-1	INSTALLING TO WALL OR CEILING PLANE.....	4
3-2	INSTALLING TO POLE.....	5
3-3	INSTALLING AT AN ANGLE TO WALL, CEILING PLANE OR POLE.....	5
3-4	CONFIRMATION OF LOCATION OF THE LASER PLANE.....	6
4	PARTS LAYOUT INSIDE THE COVER AND THEIR FUNCTIONS	
4-1	WIRING.....	6
4-2	SIGNAL OUTPUT.....	6
4-3	POWERING ON.....	6
4-4	LED FUNCTIONS.....	7
4-5	INITIALIZATION TO FACTORY DEFAULT.....	7
5	SETTING HORIZONTAL DETECTION AREAS 2	
5-1	SELECTOR SWITCH OPERATION.....	7
5-2	ADJUSTMENT OF HORIZONTAL DETECTION AREA.....	7
5-3	AUTO SETTING OF HORIZONTAL DETECTION AREA.....	8
6	SETTING VERTICAL DETECTION AREA	
6-1	SELECTOR SWITCH OPERATION.....	8
6-2	ADJUSTMENT OF VERTICAL DETECTION AREA.....	9
6-3	AUTO SETTING OF VERTICAL DETECTION AREA.....	9
7	AREA CHECKUPS	
7-1	WALK TEST.....	10
7-2	SYSTEM FUNCTION AFTER POWER FAILURE.....	10
8	IP CONNECTION WITH REDSCAN	
8-1	DEFAULT SETTINGS.....	10
8-2	REDFSCAN MANAGER.....	10
8-3	REDWALL EVENT CODE.....	10
9	SPECIFICATIONS	
9-1	SPECIFICATIONS OF THE MAIN UNIT.....	11
9-2	DIMENSIONAL DRAWING.....	11
9-3	OPTIONS.....	11

# 1 INTRODUCTION

## 1-1 BEFORE OPERATION

- Read this instruction manual carefully prior to installation.
- This manual uses the following warning indications to provide information regarding correct usage of the product to prevent you and other people from being harmed and your assets from being damaged. These warning indications are described below.  
Ensure you understand these precautions before reading the rest of this manual.

### Warning

Failure to follow the instructions provided by this warning and improper handling may cause death or serious injury.

### Caution

Failure to follow the instructions provided by this caution and improper handling may cause injury and/or property damage.

This symbol indicates prohibition.  
The specific prohibited action is provided in and/or around the figure.

This symbol requires an action or gives an instruction.

### Warning

**Do not use the product for purposes other than the detection of moving objects such as people and vehicles.**

**Do not use the product to activate a shutter, etc., which may cause an accident.**

**Do not touch the unit base or power terminals of the product with a wet hand (do not touch when the product is wet with rain, etc.). It may cause electric shock.**

**Never attempt to disassemble or repair the product. It may cause fire or damage to the devices.**

**Do not exceed the voltage or current rating specified for any of the terminals, doing so may cause fire or damage to the devices.**

**Ensure the power is turned off before connecting wiring.**

**Confirm the signal name of every terminal to ensure wiring is carried out correctly.**

**Whenever a commercial switching regulator is used, be sure to connect PE (Protective Earth Terminal).**

**Hold the main unit securely when you install or service it. Exercise care not to bump the product against nearby objects or drop it inadvertently.**

**This product is not capable of detecting objects in the dead zone of the laser scan.**

**Do not use this product for an application where it is not capable of covering the detection area required by the task.**

**Please note that the product can malfunction, including producing an irregular output and committing a detection error, if it is exposed to unfavorable environmental conditions such as strong ambient light, electronic noises or mechanical vibrations.**

### Caution

**Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.**

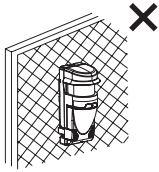
**Clean and check the product periodically for safe use. If any problem is found, do not attempt to use the product as it is.**

**When disposing of this product, be sure to follow the waste-disposal regulations of the country or region where it is used.**

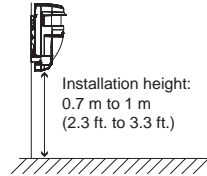
**This product is intended to detect an intruder(s) and is not designed to prevent theft, disasters or accidents. The manufacturer shall not be held liable for any damage to user's property resulting from theft, disasters or accidents.**

## 1-2 PRECAUTIONS

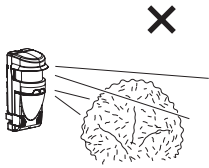
Install the product only on a solid surface.



In the Horizontal Detection Area, this product must normally be used within the recommended installation height in order to detect an intruder.



Install the product so that the detection area is not influenced by interference from tall grass or tree branches waving in the wind.



Do not install or leave the product in a location exposed to heat, vibrations or impacts.

Do not use the product in an environment where solvent fumes or corrosive gases are present.

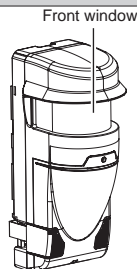
Do not use this product in environments where there may be oil mist particles which may contaminate the window of the detector; thus causing detection errors and possible corrosion which may lead to product failure.

The symbol "X" indicates prohibited actions.

### Cleaning the Product

Clean the front window on a regular basis using a wet cloth.

A smeared front window can limit the detection area due to the reduced laser sensitivity. In addition, heavy soiling of the window can induce detection errors.



### On Safety of Laser

This product is categorized as a Class 1 product in terms of the Safety Standard.

Average Power : Max. 0.015 mW (AEL)  
 Wavelength : 905 nm  
 Pulse Width : 4 ns  
 Emission period : 36 μs  
 Standard : IEC60825-1

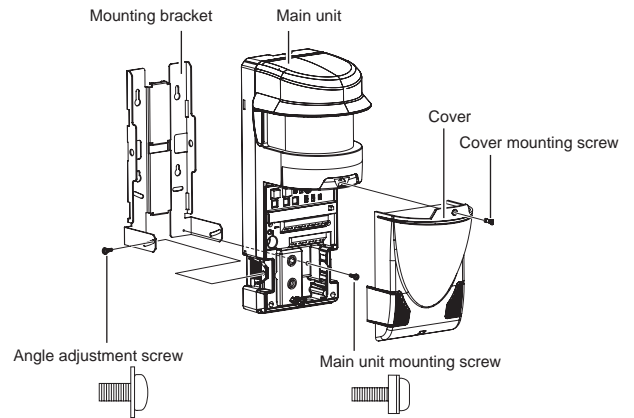
Class 1 of the Laser Safety Standard means that the safety of laser products belonging to this class is warranted under normal operating conditions (reasonably predictable operating conditions). The product is marked to indicate that it is laser equipment. No additional safety measures are necessary.

Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No.50, dated June 24, 2007.

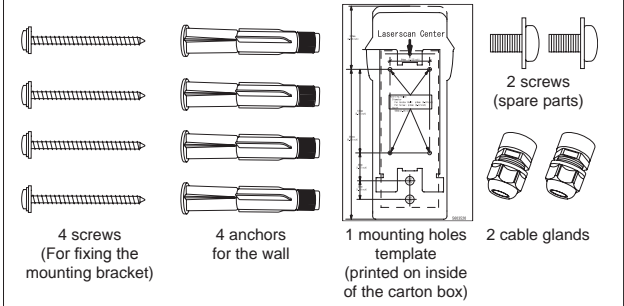
Class 1 laser product

Do not expose your eyes directly to the laser beam.

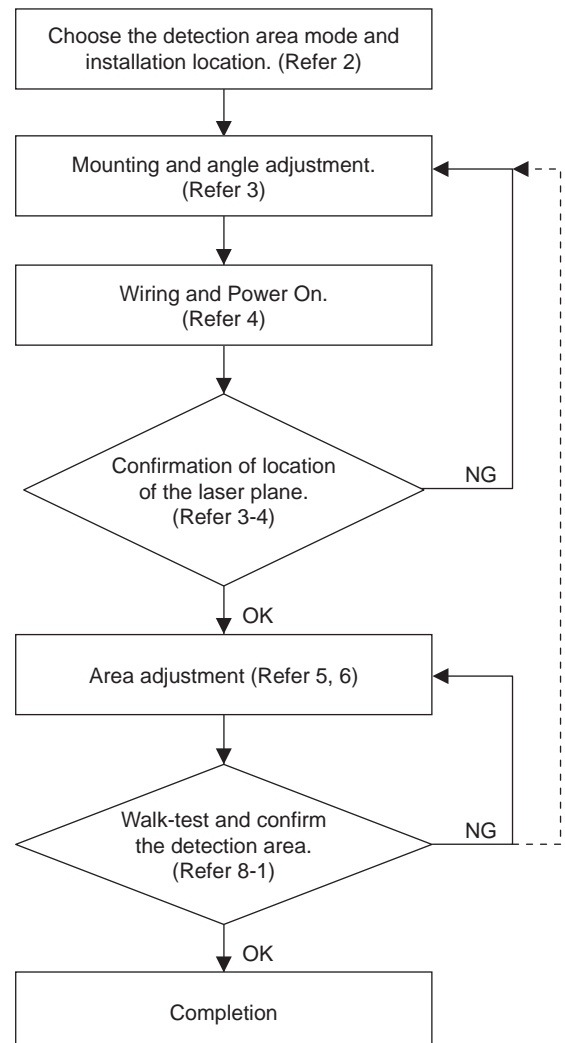
## 1-3 PARTS IDENTIFICATION



### Accessories >>

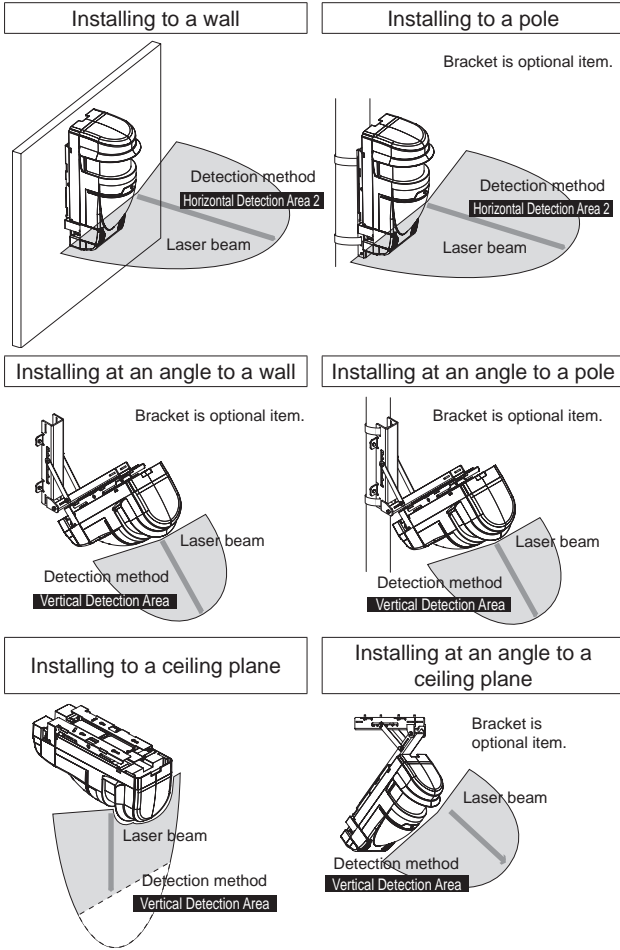


## 1-4 INSTALLATION WORK FLOWCHART



## 2 TYPES OF INSTALLATION METHOD AND DETECTION AREAS

### 2-1 TYPES OF INSTALLATION METHOD



### 2-2 TYPES OF DETECTION METHOD

The detection method comprises the two modes of operation, Horizontal Detection Area 2 and Vertical Detection Area.

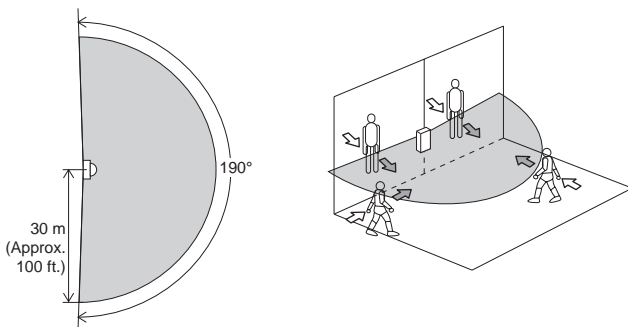
#### -Horizontal Detection Area 2

H2 V

This mode allows setting of a fan-like detection area in the horizontal direction with a maximum radius of 30 m (Approx. 100 ft.), a spread angle of 190 degrees.

This mode detects intrusion into the detection area from any direction.

The Redscan will generate the alarm output for 1 minutes after the initial detection, so long as the detected object stays in the detection area.



#### -Vertical Detection Area

H2 V

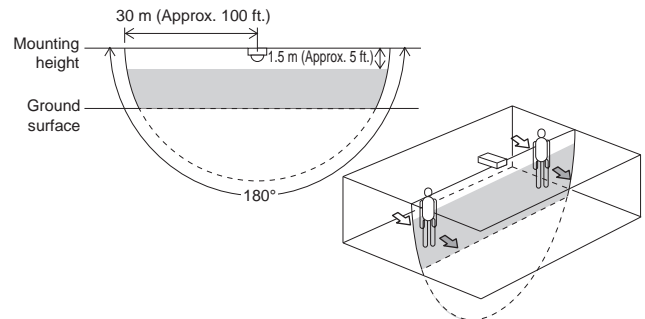
This mode allows setting of a fan-like detection area in the vertical direction with a maximum radius of 30 m (Approx. 100 ft.), a spread angle of 180 degrees.

This mode creates a non detection area, 1.5 m (Approx. 5 ft.) (\*1) immediately in front of the unit, in order to avoid possible false alarms caused by birds or obstructions close to the unit.

Recommended installation height is from 4 m (Approx. 13 ft.) to 15 m (Approx. 50 ft.).

This mode will detect an object that traverses the detection area.

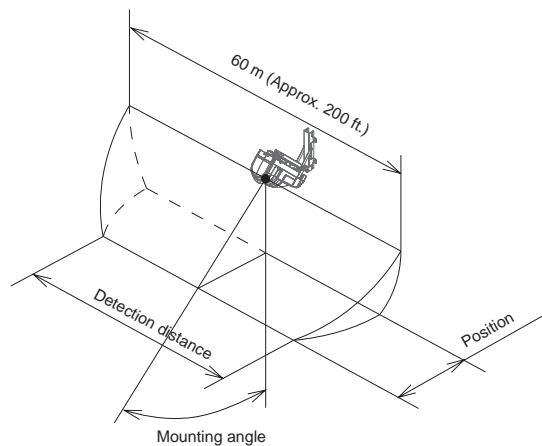
\*1: The Redscan Manager software can change this value or cancel the "non detection area" for specific applications.



#### -Vertical Detection Area when the product is installed at an angle

H2 V

When you have installed this product at an angle with the optional adjustable angle mounting bracket, the detection area varies as shown below depending on the installation height and angle.



Relationship between "detection distance" and mounting height and mounting angle. See diagram above.

		Mounting angle				
		0°	30°	45°		
Installation height	4 m (13 ft.)	Position	0 (0)	2.3 (7.6)	4.0 (13.1)	
		Detection Distance	Walking	59 (195)	59 (195)	59 (193)
	Crawling		57 (187)	55 (180)	53 (174)	
	8 m (26 ft.)	Position	0 (0)	4.6 (15.2)	8.0 (26.2)	
		Detection Distance	Walking	58 (190)	57 (187)	56 (182)
			Crawling	53 (174)	51 (167)	48 (157)
12m (39 ft.)		Position	0 (0)	6.9 (22.7)	12.0 (39.4)	
	Detection Distance	Walking	55 (180)	53 (175)	49 (162)	
		Crawling	50 (164)	48 (157)	46 (151)	

Unit: m (ft.)

#### Note >>

A running person may not be detected if the mounting angle is 0 degree.

## 2-3 AREA SETTING PROCEDURE

The setting procedure comprises two options; P1 and P2. The setting procedure in each mode varies depending on which detection method of either Horizontal Detection Area 2 or Vertical Detection Area is selected.

### -Horizontal Detection Area 2

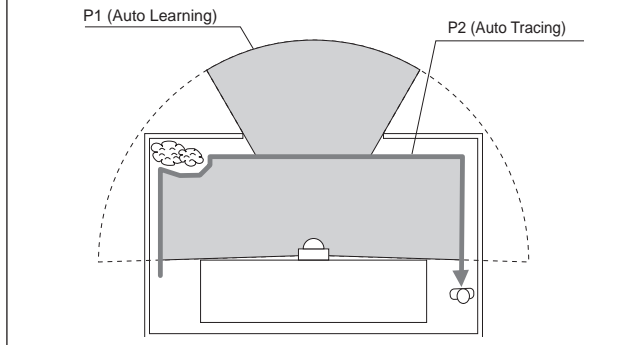
#### Auto

##### P1 Auto Learning

The area automatically learnt by the sensor within the boundary defined by "Detection distance adjustment".

##### P2 Auto Tracing

The area automatically learnt by tracing a person walking a boundary within the area set by "Detection distance adjustment".



### -Vertical Detection Area

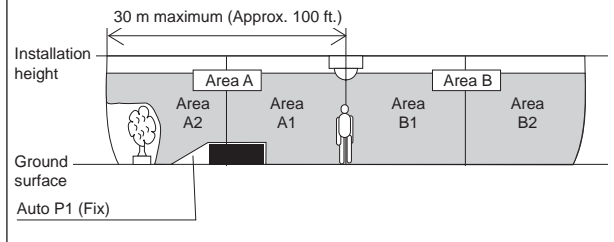
#### Auto

##### P1 Fixed detection area

The detection area is fixed by the "Area Set" and by the settings of the Size and Offset parameters. The Redscan will ignore "noise" at ground level caused by grass or small changes of the ground shape.

##### P2 Adaptive detection area

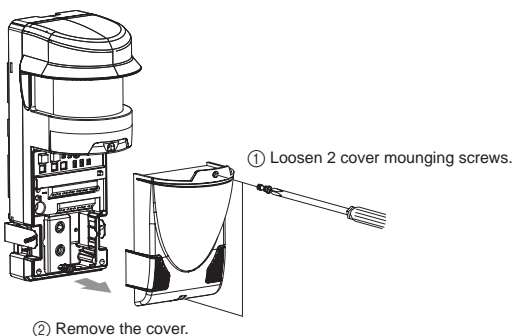
When an object, such as a stack of snow, is in the detection area, the Redscan will recreate the detection area around the object. Similarly, if a hole is created in the snow the Redscan will recreate the detection area to include the hole. This automatic adaptive area has a default value of +/- 1m.



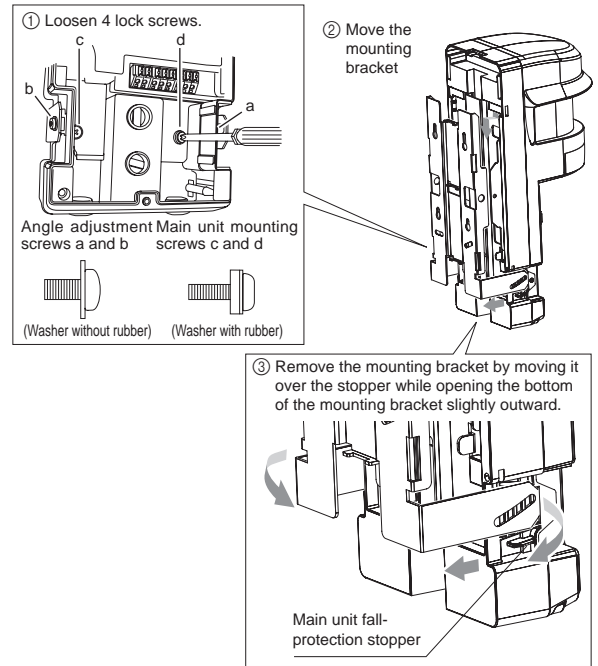
## 3 INSTALLATION AND ANGLE ADJUSTMENT

### 3-1 INSTALLING TO WALL OR CEILING PLANE

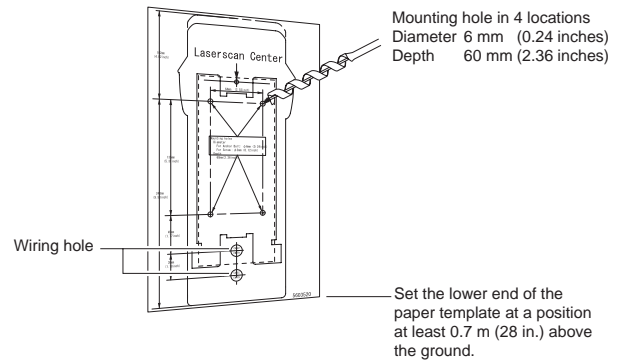
#### 1 Remove the cover from the main unit.



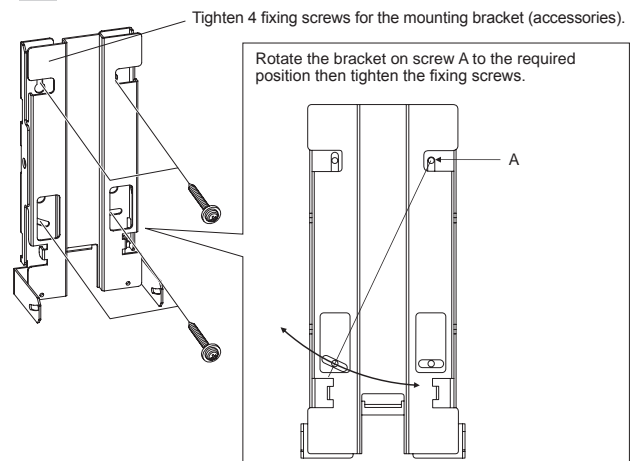
#### 2 Remove the mounting bracket from the main unit.



#### 3 Attach the mounting holes template (an accessory) onto the wall or the ceiling plane, and drill 4 mounting holes in it. Drill 2 wiring holes as required. Insert the anchor bolt (an accessory) into the mounting holes.



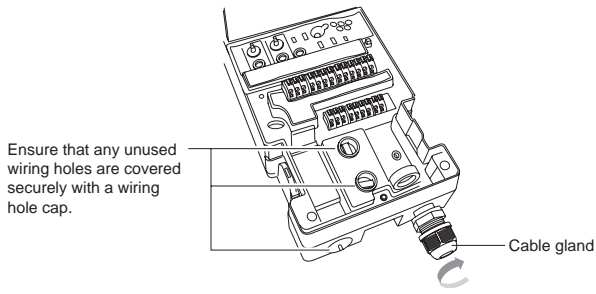
#### 4 Fix the mounting bracket on the wall or the ceiling plane.



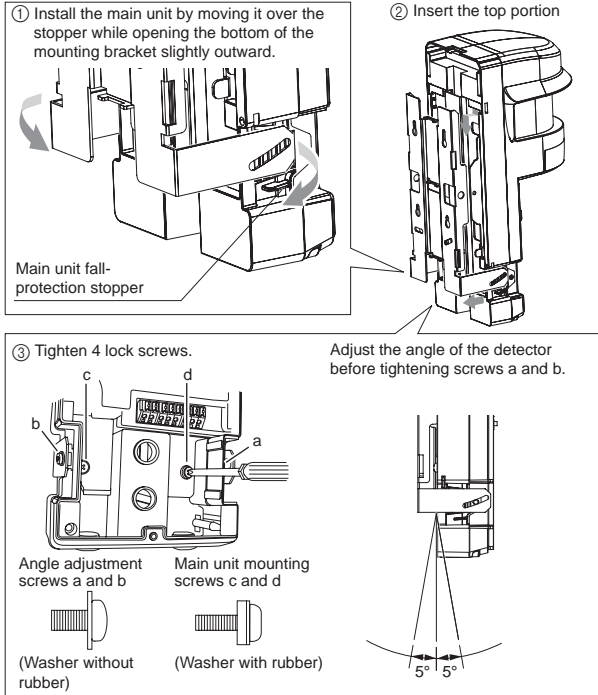
#### Cautions>>

When installing the product to the wall, fix the mounting bracket parallel to the ground. If the mounting bracket is set at an angle, the laser beam will not be emitted parallel to the ground, which may result in the non-detection of an intruder. An inclination of 1 degree varies the shape of the detection area of 30 m (Approx. 100 ft.) ahead by approximately 0.5 m (1.6 ft.).

**5** Install the cable gland.



**6** Install the main unit and fix it to the mounting bracket.

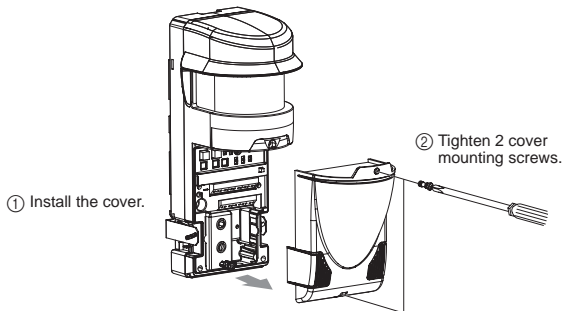


**7** See section "4-1" and connect the wires to the terminal block.

**8** It is recommended that the optional Laser Area Checker (LAC-1) is used to adjust the mounting angle to achieve the required detection area. (Refer 3-4)

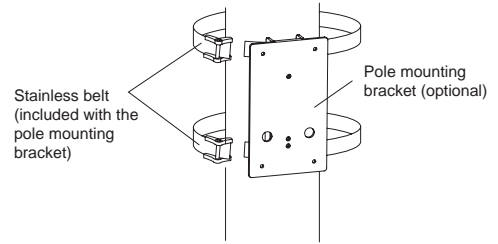
**9** See Chapters 5, 6 and 7, make various settings and confirm that the equipment operates correctly.

**10** The installation work is complete when the various settings and operational check are finished. Mount the cover.



**3-2 INSTALLING TO POLE**

When installing the product to a pole, use the optional pole mounting bracket (RLS-PB).



**Note >>**

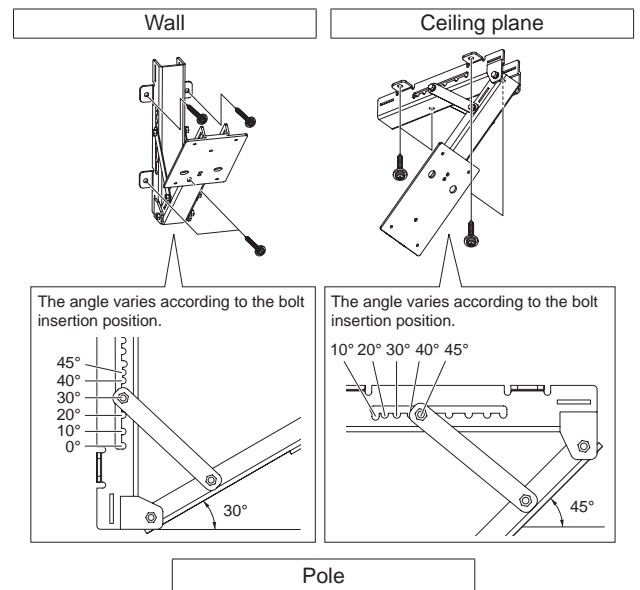
For detailed handling procedures, see the manual attached to the pole mounting bracket.

**3-3 INSTALLING AT AN ANGLE TO WALL, CEILING PLANE OR POLE**

When installing the product at an angle to a wall, ceiling plane or pole, use the optional adjustable angle mounting bracket (RLS-SB).

**Points >>**

The mounting holes for the adjustable angle mounting bracket align with similar holes in the main unit mounting holes indicated on the mounting holes template.



**Note >>**

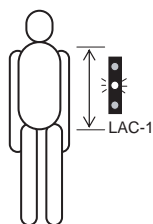
For detailed handling procedures, see the manual attached to the adjustable angle mounting bracket.

### 3-4 CONFIRMATION OF LOCATION OF THE LASER PLANE

It is recommended that the optional Laser Area Checker (LAC-1) is used to confirm the location of the laser plane.

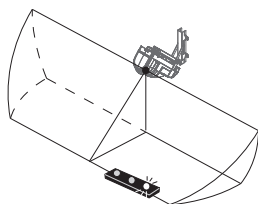
#### -Horizontal Detection Area

Ensure that the laser beam is hitting the human target between the shoulder and hip line in all of the detection area taking into consideration the possibility that the ground level may not be flat.



#### -Vertical Detection Area

Adjust the mounting angle so that the laser beam is hitting the ground at the required location.

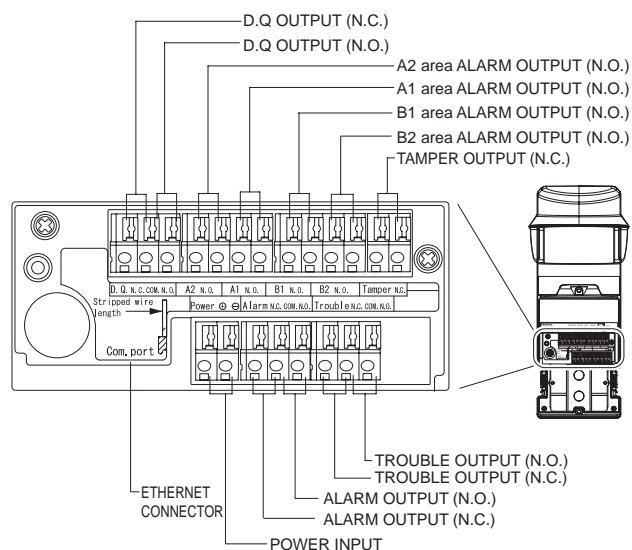


**Note >>**

For detailed instructions see the LAC-1 Instruction manual.

## 4 PARTS LAYOUT INSIDE THE COVER AND THEIR FUNCTIONS

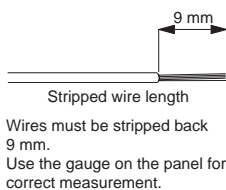
### 4-1 WIRING



\*1: TAMPERS terminals to be connected to a 24 hour supervisory loop.

Power wires should not exceed the following lengths.

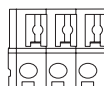
WIRE SIZE	Sensor	
	24V DC	24V AC
AWG20 (0.52 mm <sup>2</sup> )	120 (394)	60 (197)
AWG18 (0.83 mm <sup>2</sup> )	200 (656)	100 (328)



m (ft.)

## 4-2 SIGNAL OUTPUT

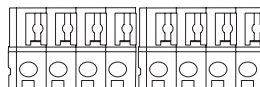
### -D.Q. output



D.Q. N.C. COM. N.O.

The algorithm specific to REDSCAN allows for detection during foggy conditions. However, during severe conditions such as heavy rain, dense fog or snow storms the Environmental DisQualification (EDQ) output is activated. Refer to the end of this manual for the connection example.

### -Alarm output



A2 N.O. A1 N.O. B1 N.O. B2 N.O.

Upon detecting an intruder, this product outputs the alarm specific to the general area (Area A1, Area A2, Area B1 or Area B2) where the intrusion happened.

When combined with a CCTV camera monitoring system employing PTZ, this product works efficiently to provide early detection of intruders.

### -Tamper output

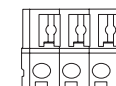


Tamper N.C.

This output is enabled when the terminal cover is removed.

### -Trouble output

Trouble N.C. COM. N.O.

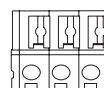


It is generated when an error has occurred on the sensor.

Name	Function
Anti-masking	It is activated when an obstacle has been placed in front of the sensor in order to block the detection area. It is reset after such obstacles are removed.
Anti-rotation	It is activated when the area being scanned changes by a significant amount as a result of the unit being rotated from its original settings.
Soiling of the window	It is activated when the front window is heavily soiled which may induce detection errors. Clean the front window using a wet cloth.
Sensor error	It is activated when the sensor has detected an internal self check error.

### -Alarm output

Alarm N.C. COM. N.O.



The alarm output is generated if an intruder is detected in one or more of the divided areas (Area A1, Area A2, Area B1 and Area B2).

## 4-3 POWERING ON

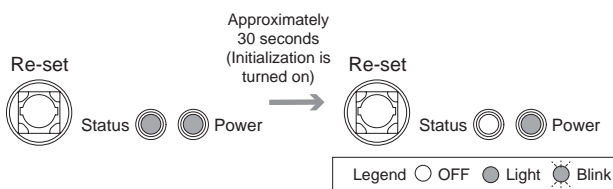
Power



Connect 24 VAC/DC to the power input terminal to turn power on.

As power is turned on, the indicators (Status and Power) light for about 30 seconds and then go out.

During this period, REDSCAN initializes itself. Indicator Power remains lit as long as power is turned on.



## 4-4 LED FUNCTIONS

Re-set



### -In the normal operation

Symbol	Colour	DETECTOR STATUS
Status	Yellow	Lit during auto setup of the unit. (Turned off during normal operation.)
Power	Green	Lit when power is turned on

## 4-5 INITIALIZATION TO FACTORY DEFAULT

Re-set



You can restore the sensor to the factory default settings (IP ADDR 192.168.0.126) using the following procedure.

- Turn power on and push and hold down the “Re-set” button within 20 seconds.
- Keep holding the button down until the green power indicator is extinguished.
- Only the “Status” indicator is lit during the initialization.
- When ALL indicators are extinguished, power cycle (off/on) the Redscan.

## 5 SETTING HORIZONTAL DETECTION AREAS 2

### Note >>

The following switch settings of the RLS-3060L can only be changed using the Redscan manager software. Refer to [8] for IP connection and the Help menu of the Redscan Manager software for more details.

## 5-1 SELECTOR SWITCH OPERATION

### -Detection method selection

H2 V

Select H2 mode using the Redscan manager.

SELECTOR POSITION	FUNCTION
H1	Not Applicable by this model.
H2	It selects Horizontal Detection Area 2. (Factory default)
V	—

### -Selecting the Auto mode

H2 V

SELECTOR POSITION	FUNCTION
P1	Turns on the Auto Learning. (Factory default)
P2	Turns on the Auto Tracing.

### -Selecting the detection sensitivity

H2 V

Set the detection sensitivity using the SIZE and SENS buttons as per the following chart.

SELECTOR POSITION	FUNCTION
S	Approx. 150 mm (0.5 ft.) or above
M	Approx. 300 mm (1 ft.) or above (Factory default)
L	Approx. 1000 mm (3.3 ft.) or above
H	Approx. 500 mm (1.6 ft.) or above
M	Approx. 1000 mm (3.3 ft.) or above (Factory default)
L	Approx. 2000 mm (6.6 ft.) or above

This switch specifies the width of the target object to be detected.

This switch specifies the distance that the object has to move before it is considered to be an intruder.

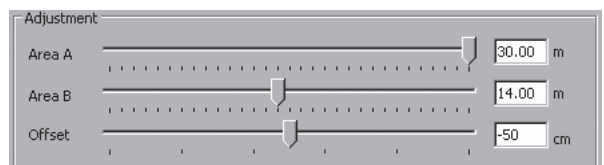
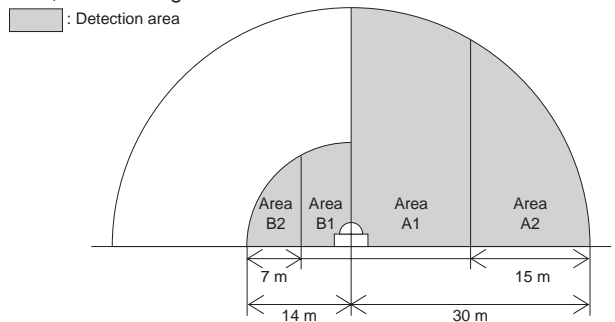
## 5-2 ADJUSTMENT OF HORIZONTAL DETECTION AREA

H2 V

### -Detection distance adjustment

You can specify the radius in the range of 0 to 30 m. Setting detection distance to 0 m deletes the detection area.

Example: if you specify “Detection distance in Area A: 30 m” and “Detection distance in Area B: 14 m” in a location where the radius is 30 m or more without obstacles within the detection area, the following detection areas will result.



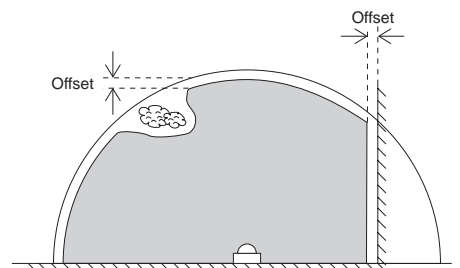
Factory default : 30m (Approx. 100 ft.)

### -Offset adjustment

You can reduce the boundary of the detection area using the offset parameter. Use this adjustment if blowing grass or tree bushes might cause a false detection at the edge of the detection area.

You can reduce the boundary of the detection area (toward the sensor) by up to 1 m.

Recommended setting is 10 cm minimum.



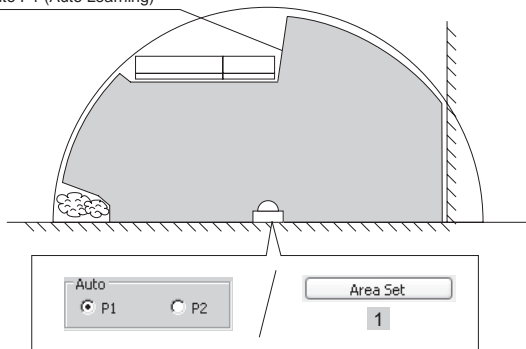
## 5-3 AUTO SETTING OF HORIZONTAL DETECTION AREA

### -Function of the detection area setting button

**Area Set** This button starts the auto function of either P1 or P2 whichever has been selected. H2 V

### -Setting P1 (Auto Learning)

Auto P1 (Auto Learning)



Sequence of operation	Status indicator	Time	Action of REDSCAN
1 Click "Area Set" button via Redscan Manager software.	Flashing starts	For 1 second	—
—	Fast flashing	For 10 seconds	Scan of the detection area is executed
—	ON	For 15 seconds	Scan of the detection area is completed and the data are saved
—	Flashing	For 3 seconds	—
—	OFF	—	Security protection of the detection area is started

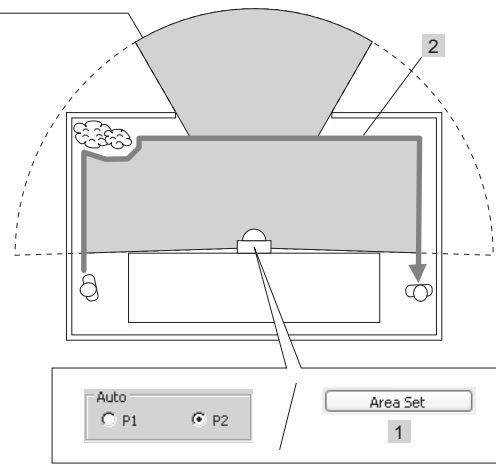
#### Cautions >>

Do not enter the area while the area scan is being carried out. An unwanted object in the area interferes with the correct scanning of the target area.

### -Setting P2 (Auto Tracing)

H2 V

Auto P1 (Auto Learning)



Sequence of operation	Status indicator	Time	Action of REDSCAN
1 Click "Area Set" button via Redscan Manager software.	Flashing starts	For 1 second	—
—	Fast flashing (*2)	For 10 seconds	Scan of the detection area is executed
2 Walking along the boundary of the area (*1)	Flash (*3)	For 5 minutes (Last 30 seconds)	Tracing started
—	ON	For 15 seconds	Tracing is completed and the data are saved
—	Flashing	For 3 seconds	—
—	OFF	—	Security protection of the detection area is started

\*1: The tracing is automatically ended after 5 minutes. When movement of the target object along the area boundary has finished before this time, you can terminate the tracing without waiting for 5 minutes by clicking "terminate" button on Redscan Manager software.

\*2: Flashes twice a second

\*3: A flashing sequence of flashing twice a second and not flashing for a second is repeated

#### Cautions >>

Do not enter the area while the area scan is being carried out. An unwanted object in the area interferes with the correct scanning of the target area.

#### Note >>

Any area left untraced will revert to the Auto learning area settings.

## 6 SETTING VERTICAL DETECTION AREA

#### Note >>

The following switch settings of the RLS-3060L can only be changed using the Redscan manager software. Refer to [8] for IP connection and the Help menu of the Redscan Manager software for more details.

### 6-1 SELECTOR SWITCH OPERATION

#### -Detection method selection

H2 V

Select V mode using the Redscan manager.



SELECTOR POSITION	FUNCTION
H1	—
H2	—
V	Selects the vertical detection area.



## -Selecting the Auto mode

H2 V

SELECTOR POSITION	FUNCTION
P1	Fixed detection area. (Factory default)
P2	Adaptive detection area.

## -Setting the detection sensitivity

H2 V

Set the detection sensitivity using the SIZE and SENS buttons as per the following chart.

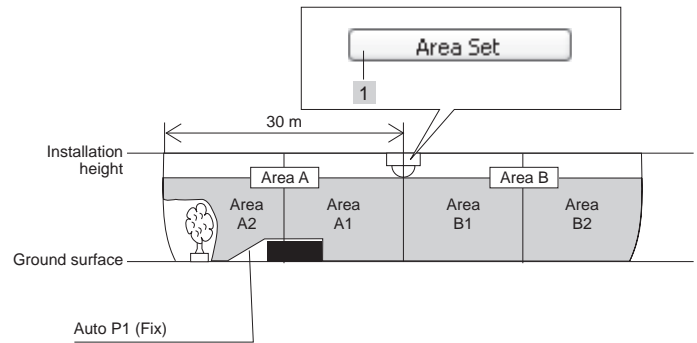
SELECTOR POSITION	FUNCTION
S	Approx. 250 mm (0.8 ft.) or above
M	Approx. 350 mm (1.2 ft.) or above (Factory default)
L	Approx. 500 mm (1.6 ft.) or above
H	100 ms or longer. This setting is recommended when the target object can run through the detection area.
M	150 ms or longer (Factory default)
L	200 ms or longer.

This switch specifies the height from offset position of the target object to be detected.

This switch specifies the duration during which the target object stays in the detection area.

## 6-3 AUTO SETTING OF VERTICAL DETECTION AREA

H2 V



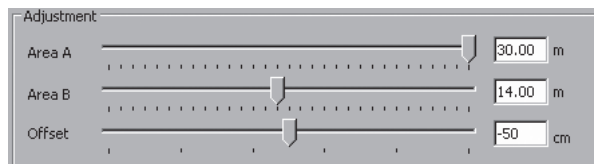
Sequence of operation	Status indicator	Time	Action of REDSCAN
1 Click "Area Set" button via Redscan Manager software.	Flashing starts	For 1 second	—
—	Fast flashing	For 10 seconds	Scan of the detection area is executed
—	ON	For 15 seconds	Scan of the detection area is completed and the data are saved
—	Flashing	For 3 seconds	—
—	OFF	—	Security protection of the detection area is started

## 6-2 ADJUSTMENT OF VERTICAL DETECTION AREA

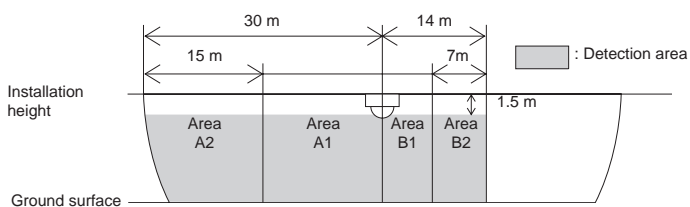
H2 V

### -Detection distance adjustment

It can specify the radius in the range of 0 to 30 m. Setting detection distance to 0 m deletes the area.



Factory default: 30 m (Approx. 100 ft.)

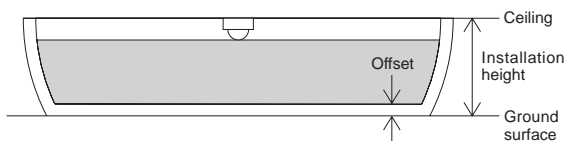


### -Offset adjustment

You can reduce the boundary of the detection area using the offset parameter. Use this adjustment if blowing grass or tree bushes might cause a false detection at the edge of the detection area.

You can reduce the boundary of the detection area (towards the detector) by up to 1 m.

Recommended setting is 10 cm minimum.



### Cautions >>

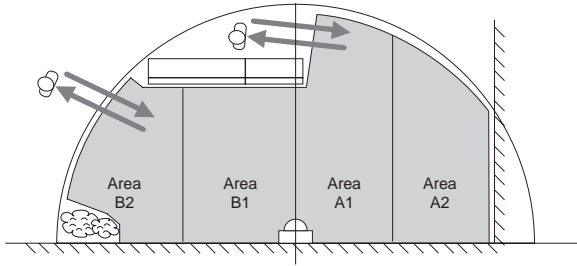
Do not enter the area while the area scan is being carried out. An unwanted object in the area interferes with the correct scanning of the target area.

## 7 AREA CHECKUPS

### 7-1 WALK TEST

H2 | V

Ensure that the detection area has been correctly set by observing the indicators or detection circle on the Redscan Manager software.



#### -When a detection area has not been correctly set

- 1 Before pressing the detection area setting button, ensure that the detection method switch and the detection mode switch are set to the correct position, respectively.
- 2 Set the detection again with reference to "5-3" for the horizontal detection area and "6-3" for the vertical detection area.

Summary of detection area switch settings

Function	P1	P2
H2	Automatically learns the detection area within the area set by "Detection distance adjustment"	Automatically learns the detection area by tracing a person walking a boundary within the area set by "Detection distance adjustment"
V	Automatically learns the detection area within the area set by "Detection distance adjustment"	Automatically adapts to the changing shape of the ground area below the REDSCAN

### 7-2 SYSTEM FUNCTION AFTER POWER FAILURE

H2 | V

The REDSCAN setup is not lost after a power interruption.

## 8 IP CONNECTION WITH REDSCAN

### 8-1 DEFAULT SETTINGS

- IP address : 192.168.0.126 (Can be changed)
- Subnet mask : 255.255.255.0 (Can be changed)

### 8-2 REDSCAN MANAGER

(Optional Setup Software, attached to RLS-AT)

REDCAN Manager is a software program that allows you to configure various settings easily via a local network when installing the REDSCAN unit or performing maintenance work. REDSCAN Manager can register and manage the REDSCAN unit located within the local network and display the area information and the switch setting information obtained from the REDSCAN unit. Also, it enables you to change the obtained detection area and switch settings and set them back into the REDSCAN unit.

REDCAN Manager also provides the following useful functions.

Selectable application template

\*Outdoor (Default)

\*Indoor

Activate / Inactivate functions

\*Environmental resistance function

Customize parameters

\*Non detection area adjustment in V mode

Redwall Event Code setup

\*Protocol

\*Destination IP address

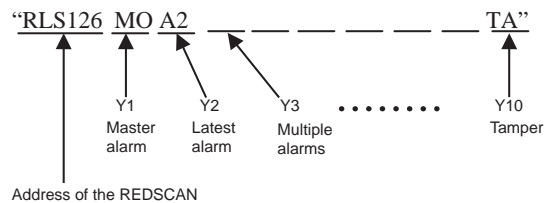
#### Note >>

For detailed features and operations, see the help attached to the REDSCAN Manager.

### 8-3 REDWALL EVENT CODE

REDCAN generates event codes which can be used by a NVR or VMS software to control PTZ cameras and other devices. Redwall event code can be sent to the assigned port using UDP or TCP protocol. The default port number is "1234".

Code format



	Status Code	Status
Y1	MO	Master alarm
Y2	A1-B2	Latest alarm
Y3	AA-AB	Multiple alarms
Y4	CC	Multiple alarms
Y5	DQ	Environmental disqualification
Y6	AR	Anti-rotation
Y7	AM	Anti-masking
Y8	TR	Trouble
Y9	SO	Soiling of the window
Y10	TA	Tamper

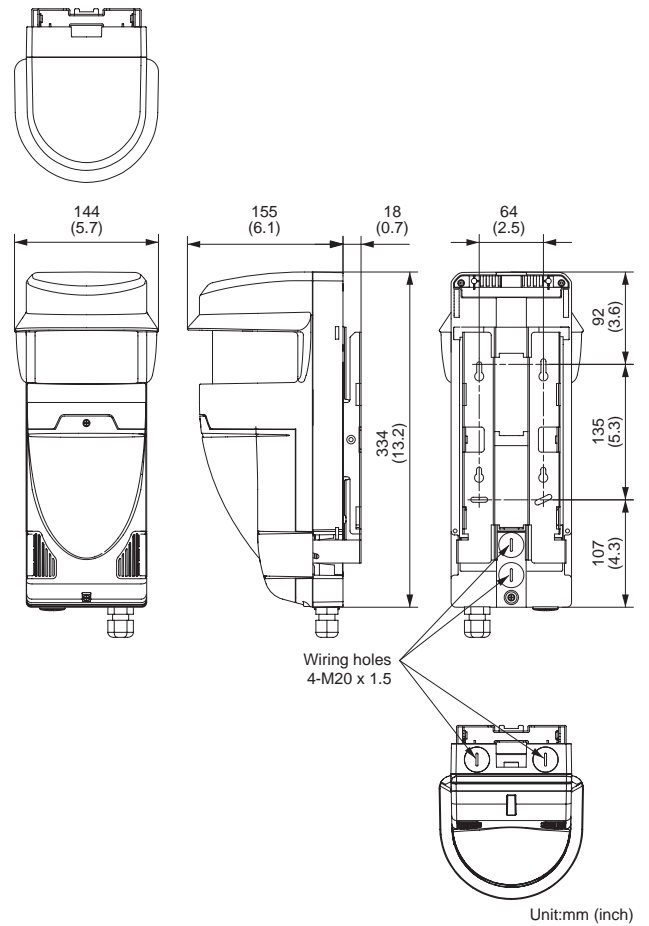
# 9 SPECIFICATIONS

## 9-1 SPECIFICATIONS OF THE MAIN UNIT

Model	RLS-3060L
Detection method	Infrared Laser Scan
Laser protection class	Class 1 IEC / EN60825-1 Second edition 2007 Class I FDA 21CFR 1040.10,1040.11 (Laser Notice No.50)
Wavelength of laser emission	905 nm (infrared laser)
Coverage for vertical mounting	Radius: 30 m (Approx. 100 ft.), Arc: 180°
Coverage for horizontal mounting	MAX. 60 m (Approx. 200 ft.)
Detection resolution	0.25°
Power input	24V AC/DC ±10%
Current draw	400 mA (24VDC) 600 mA (24VAC)
Vertical mounting height	From 4 m (Approx. 13 ft.) to 15 m (Approx. 50 ft.) (recommended)
Horizontal mounting height	0.7 m (28 in.) (recommended)
Communication port	Ethernet, RJ-45, 10BASE-T/100BASE-TX
Protocol	UDP, TCP/IP *Redwall event code
Area alarm output	N.O. 28V DC, 0.2A × 4 outputs
Master alarm output	Form C, 28V DC, 0.2A max.
Trouble output	Form C, 28V DC, 0.2A max.
Tamper output	N.C. 28V DC, 0.1A max.
Environmental disqualification circuit	Form C, 28V DC, 0.2A max.
Alarm period	Approx. 2 sec. Off delay timer
Warm-up period	Approx. 30 sec.
Operating temperature	-20 – +60 °C (-4 – +140 °F)
IP rating	IP66
Dimensions (H × W × D)	334 × 144 × 155 mm (13.2 × 5.7 × 6.1 in.)
Weight	2.4 kg (85 oz.)
Accessories	Mounting screw, anchor fixing for wall, mounting holes template, and cable gland.

\* Specifications and design are subject to change without prior notice.

## 9-2 DIMENSIONAL DRAWING



## 9-3 OPTIONS

- RLS-PB : Pole mount bracket
- RLS-SB : Adjustable angle mounting bracket
- LAC-1 : Laser area checker
- RLS-AT : Redscan Adjusting Tools  
(Laser area checker and Redscan Manager software)

Conversion Table (meter to feet)

m	0	1	2	4	6	8	10	12	14
ft.	0.0	3.3	6.6	13.1	19.7	26.2	32.8	39.4	45.9

m	16	18	20	22	24	26	28	30
ft.	52.5	59.1	65.6	72.2	78.7	85.3	91.9	98.4



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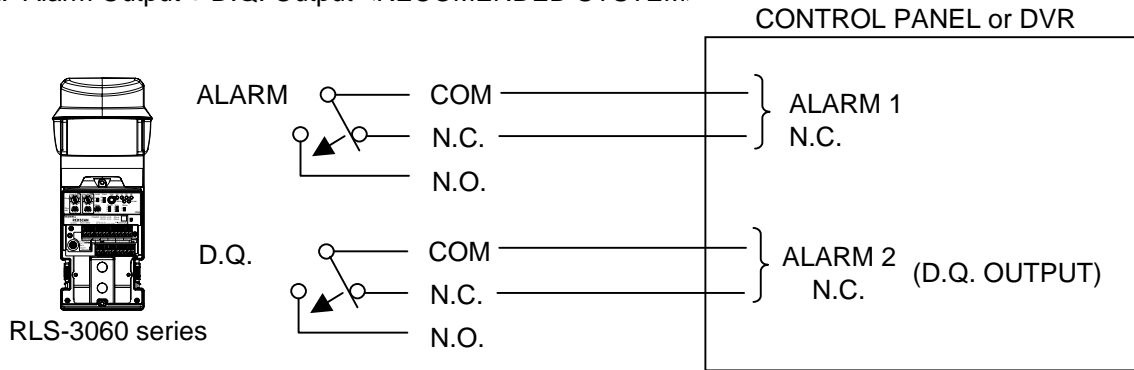
TEL:+86-21-34600673/34606166

URL:<http://www.optexchina.com/>

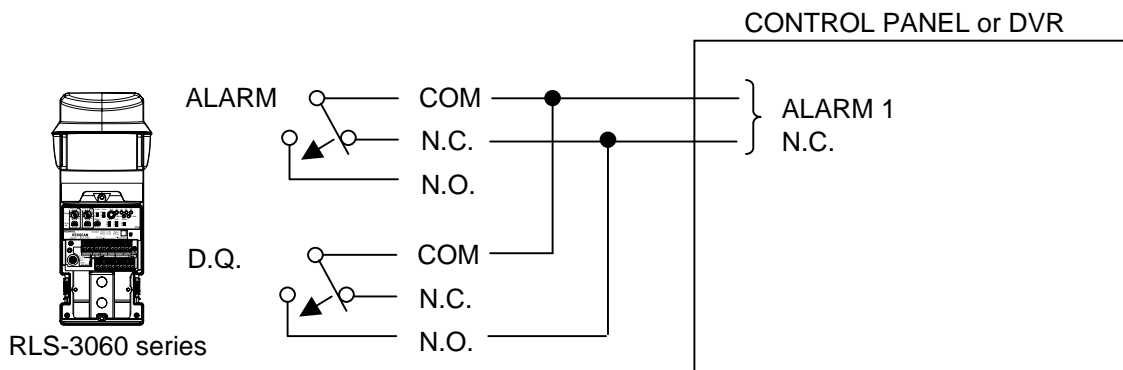
## D.Q. OUTPUT (ENVIRONMENTAL DISQUALIFICATION)

The algorithm specific to REDSCAN allows detection of an intruder during fog. However, during severe conditions such as heavy rain, dense fog or snow storms the Redscan detection capability may be reduced. During such conditions, the Environmental DisQualification (D.Q.) output will be activated. When this output is activated, other solutions are required to secure the area.

### A. Alarm Output + D.Q. Output <RECOMENDED SYSTEM>

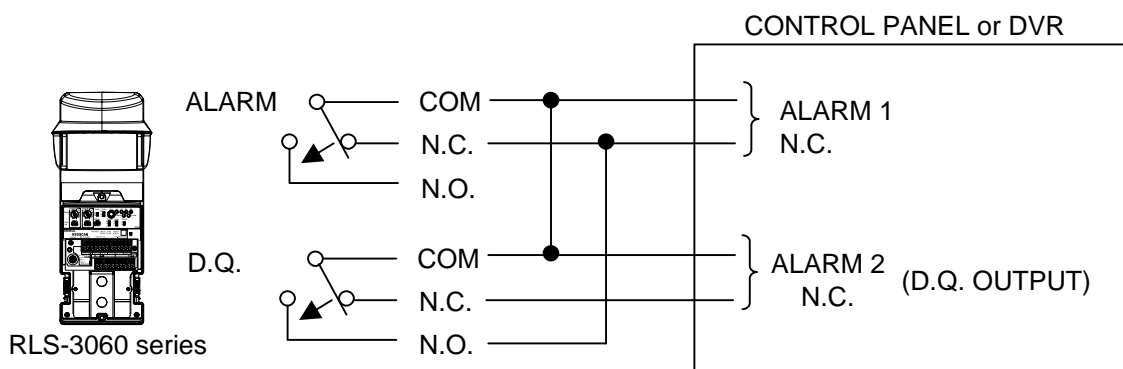


### B. Bypass Alarm when DQ is activated



Note: With this connection, when the D.Q. output is activated, the alarm circuit is held closed.

### C. Bypass Alarm when DQ is activated + D.Q. Output



Note: With this connection, when the D.Q. output is activated, the alarm circuit is held closed. If the control panel's or DVR's input terminal have the same common, the alarm out, and D.Q. output can be triggered simultaneously.

NOTES : Options B and C above, should only be used in cases where high numbers of false alarms are being encountered during adverse weather conditions.