

SPECIFICATIONS

Model	RLS-3060SH	RLS-3060L
Detection method	Infrared Laser Scan	
Laser protection class	Class 1	
Coverage	Vertical area	Max. 60 m (Approx. 200 ft.) at 10% reflectivity
	Horizontal area	Radius:30 m (Approx. 100 ft.), Arc:190° at 10% reflectivity
Detection resolution	0.25"	
Communication port	Ethernet ,RJ-45 ,10BASE-T/100BASE-TX	
Protocol	UDP, TCP/IP *Redwall Event Code	
Power input	24 VDC , 24 VAC	
Current draw	400 mA max. (24 VDC) 600 mA max. (24 VAC)	
Heater power input	24 VDC, 24 VAC	
Heater current draw	400 mA max. (24 V DC/AC)	
Mounting height	Vertical area	From 4 m (13 ft.) to 15 m (50 ft.) (recommendation)
	Horizontal area	0.7 m (28 in.) (recommendation)
Target object selector	S / M / L	
Sensitivity selector	H / M / L	
Camera control output	N.O. 28 VDC, 0.2 A x 4 outputs	
Master alarm output	Form C, 28 VDC, 0.2 A max.	
Trouble output	Form C, 28 VDC, 0.2 A max.	
Tamper output	N.C. 28 VDC, 0.1 A max.	
Environmental disqualification circuit	Form C, 28 VDC, 0.2 A max.	
Alarm period	Approx. 2 sec., Off delay timer	
Operating temperature	-20 to 60 °C (-4 to 140° F)	
Operating temperature with heater	-40 to 60 °C (-40 to 140° F)	-
IP rating	IP66	
Dimensions (H x W x D)	334 x 144 x 155 mm (13.2 x 5.7 x 6.1 in.)	
Weight	2.5 kg (88 oz)	2.4 kg (85 oz)

Model	SIP-3020	SIP-4010	SIP-404	SIP-3020/5	SIP-4010/5	SIP-404/5	SIP-5030	SIP-100
Detection method	Passive infrared							
Coverage (main area)	30 x 20 m (100 x 65 ft.)	40 x 10 m (130 x 33 ft.)	40 x 4 m (130 x 13 ft.)	30 x 20 m (100 x 65 ft.)	40 x 10 m (130 x 33 ft.)	40 x 4 m (130 x 13 ft.)	50 x 30 m (165 x 100 ft.)	100 x 3 m (330 x 10 ft.)
Coverage (creep zone)	-	-	-	3 x 5 m (10 x 16 ft.) installed at 2.3 m (7.6 ft.) height, 6 x 9 m(20 x 30 ft.) installed at 4 m (13 ft.) height, Detection angle adjustable horizontally				
Power input	11 to 16 VDC 22 to 26 VAC with optional heating unit							
Current draw	40 mA max. (12 VDC) 75 mA max. (24 VAC), 415 mA max. (24 VAC) with optional heating unit			45 mA max. (12 VDC) 85 mA max. (24 VAC), 425 mA max. (24 VAC) with optional heating unit			45 mA max. (12 VDC) 85 mA max. (24 VAC), 425 mA max. (24 VAC) with optional heating unit	50 mA max. (12 VDC) 90 mA max. (24 VAC), 430 mA max. (24 VAC) with optional heating unit
Mounting height	2.3 to 4 m (7.6 to 13 ft.)							
Sensitivity selector	Far: SH/H/M/L Near: SH/H/M/L			Far: SH/H/M/L Near: SH/H/M/L Creep zone: SH/H/M/L				
Range selector	Far: On / Off						-	-
Detection logic selector	AND / OR							
Alarm output (main area)	N.O., N.C. 28 VDC 0.2A max.						Far area: N.O., N.C. 28 VDC 0.2 A max.	
							Near area: N.O., N.C. 28 VDC 0.2 A max.	
Alarm output (creep zone)	-	-	-	N.O., N.C. 28 VDC 0.2 A max.				
Alarm interval period	Off / 15, 30, 60 sec.							
Trouble output	N.C., 28 VDC 0.2 A max.							
Tamper output	N.C., 28 VDC 0.1 A max.							
Alarm period	Approx. 2 sec.							
Warm-up period	Approx. 60 sec.							
Operating temperature	-25 to +60°C, -40 to +60°C with optional heating unit (-13 to +140 °F, -40 to +140° F with optional heating unit)							
IP rating	Main unit : IP65							
	Chassis : IP55							
Dimensions (H x W x D)	227 x 102 x 266 mm (9.0 x 4.0 x 10.5 in.)			248 x 102 x 266 mm (9.8 x 4.0 x 10.5 in.)			271 x 102 x 290 mm (10.7 x 4.0 x 11.4 in.)	
Weight	1.2 kg (42 oz)			1.4 kg (48 oz)			1.6 kg (56 oz)	

Model	SIP-3020WF	SIP-4010WF	SIP-404WF
Detection method	Passive Infrared		
Coverage	30 x 20 m (100 x65 ft.)	40 x 10 m (130 x33 ft.)	40 x 4 m (130 x 13 ft.)
Power input	3 to 9 VDC Alkaline or lithium battery		
Operating voltage	2.5 to 10 VDC		
Current draw	40 µA(Standby) 5 mA max. (Operating LED ON)		
Mounting height	2.3 to 4 m (7.6 to 13 ft.)		
Sensitivity selector	Far: SH/H/M/L Near: SH/H/M/L		
Range selector	Far: On / Off		
Detection logic selector	AND / OR		
Alarm output	N.C. 10 VDC, 0.01 A max. N.O. 10 VDC, 0.01 A max.		
Alarm interval period	Off / 5, 60, 150 sec.		
Trouble output	N.C., 10 VDC 0.01 A max.		
Tamper output	N.C., 10 VDC 0.01 A max.		
Alarm period	Approx. 2 sec.		
Warm-up period	Approx. 120 sec.		
Operating temperature	-25 to +60°C (-13 to +140°F)		
IP rating	Main unit : IP65		
	Chassis : IP55		
Dimensions (H x W x D)	227 x 102 x 266 mm (9.0 x 4.0 x 10.5 in.)		
Weight	1.2 kg (42 oz)		

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

Model	RLS-2020I	RLS-2020S
Installation location	Indoor	Indoor/Outdoor
Detection metod	Infrared Laser Scan	
Laser protection class	Class 1	
Power input	10.5 to 30 VDC, PoE (IEEE802.3af/at compliant)	
Current draw	500mA max. (12 VDC), 250mA max. (24 VDC), 6W max. (PoE)	
Mounting method	Ceiling mount, Wall mount, Tripod mount, Pole mount (option), Recess mount (option)	
Detection area	20 x 20 m, (approx. 65 x 65 ft.), 95 degrees	
Detection range	Radius 1 to 21m (approx. 3.0 to 68 ft.) at 10% reflectivity	
Detection resolution/ Response time	0.25 degrees / within 75 ms to 1 minute	0.25 degree / within 75msec to 1 minutes (for indoor mode and outdoor mode)
		0.25 degree / within 25msec (for indoor throw-in mode),
		0.125 degree / within 100msec to 1 minutes (for Indoor high resolution mode)
Mounting height (Vertical mode)	2 m (6.7 ft.) or higher	Indoor: 2 m (6.7 ft.) or higher Outdoor: 4 m (13 ft.) or higher (Recommended)
Communication port	Ethernet RJ-45 10BASE-T/100BASE-TX (Auto negotiation)	
Protocol	UDP, TCP/IP (Redwall Event Code), Http (Web setting), SNMP	
Output	3 outputs, 28 VDC 0.2A max. N.O./N.C. Selectable (3 from Master alarm, Zone outputs, Trouble, Tamper)	3 outputs, 28 VDC 0.2A max. N.O./N.C. Selectable (3 from Master alarm, Zone outputs, Trouble, Tamper, D.Q.)
Input	-	1 Non-voltage contact input
Alarm period	Approx. 2 sec delay timer	
Operating temperature	-40 to 50 C degrees (-40 to 122 F degrees)	-40 to 60 C degrees (-40 to 140 F degrees)
IP rating	IP66	
Dimensions (HxWxD)	146 x 160 x 160 mm (5.8 x 6.3 x 6.3 inch)	
Weight	1.0 kg (2.2 lb)	

OPTIONS



AWT-3
Area walk tester
for SIP series



AVF-1
Area view finder
for SIP series



SIP-HU
Heating unit
for SIP series



SIP-AT
SIP adjustment tools
(AWT-3 + AVF-1) for SIP series



SIP-MINIHOOD
Sun/Snow shield
for SIP-3020/4010/404



SIP-MIDIHOOD
Sun/Snow shield
for SIP-5030/100



RLS-PB
Pole mount bracket



RLS-SB
Adjustable angle mounting
bracket for RLS-3060 series



LAC-1
Laser Area Checker



RLS-RB
Recess mount bracket



OPTEX CO.,LTD. (JAPAN)

URL: <http://www.optex.net/>

OPTEX INC. / AMERICAS HQ (U.S.)

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

OPTEX (EUROPE) LTD. / EMEA HQ (U.K.)

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REDSAN / REDWALL

PRODUCT DIGEST

For efficient Video surveillance

Protection of outdoor assets and preventions of unauthorized entries are serious challenges for large properties, such as office buildings, logistics centers, power plants, and industrial facilities. Effective security system must deter intrusion to the properties.

There are two practical methods. One method is setting up a **local video response (LVR)** system. The system employs security guards and uses video surveillance system linked to external detectors, When an external detector detects an intrusion, a camera captures an image and sends the image to a guard room. Then, security guards are dispatched to the point of detection to rectify the event. In this way, LVR changes a traditional usage of guards and night watches into efficient way of deterring intrusions.

Another method is called a **remote video response (RVR)** system. RVR systems use external detectors, network connected cameras and speakers for remote audio announcement. hen an external detector detects an intrusion, an operator in a distant RVR center verifies an image and remotely makes a voice warning through the speakers. The operator at the RVR center can also reports the event to a designated key-holder/local guards or makes a call out to police to set an ordinance.

REDSAN and **REDWALL** are the most suitable indoor/outdoor detectors for these LVR and RVR security systems. Due to their reliable detections, LVR guard rooms and RVR centers can obtain critical images of intrusions that may lead to crime, acts of vandalism, terrorism or any threats to important properties.

Operation flow chart for LVR and RVR

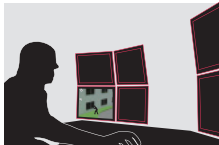
LOCAL VIDEO RESPONSE

Event



An intruder is detected and camera operates

Verify



A Report is sent to operators in the control room

Response



A guard is dispatched.

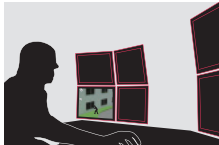
REMOTE VIDEO RESPONSE

Event



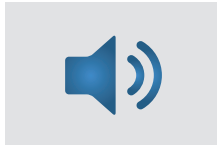
An intruder is detected and camera operates

Verify



Video is transmitted to the remote video response enter.

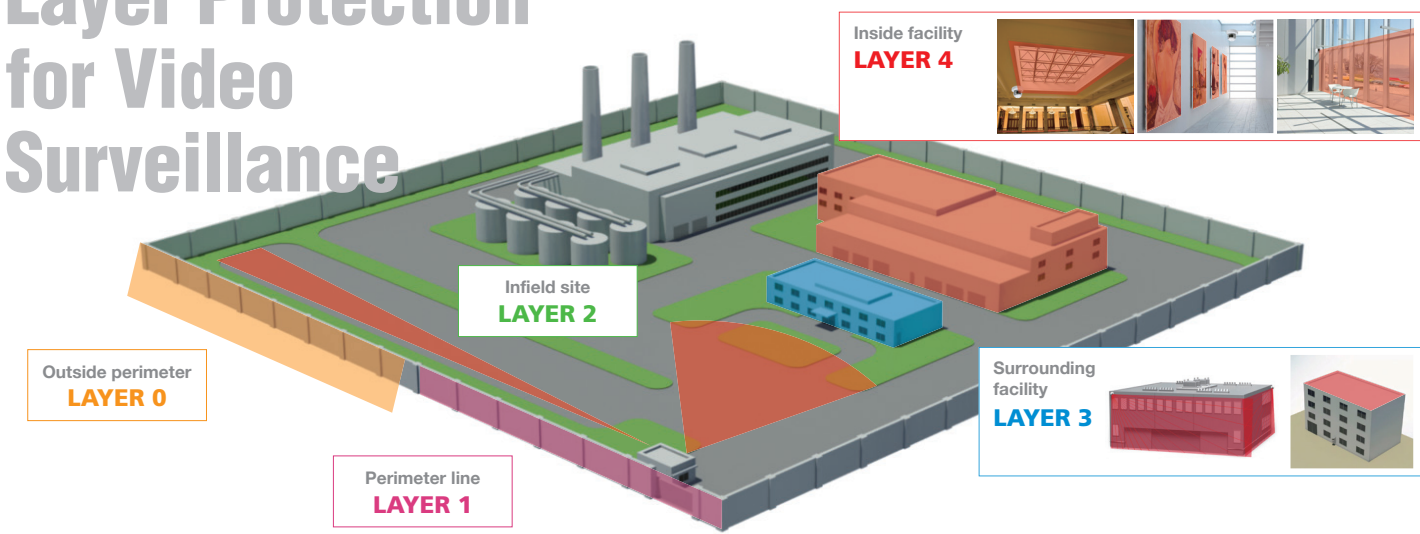
Response



A guard is dispatched.



Layer Protection for Video Surveillance



Laser Scan Detector **RLS-3060 series**



The RLS-3060 series is an innovative laser scan detector that identifies a moving object's size, speed and distance from the detector. It processes that information with a unique algorithm, resulting in a highly reliable detection system with minimal false alarms.

FEATURES

- 30m radius for 190 degrees range
- Vertical and horizontal mounting
- Unique detection algorithm
- Automatic area setting function
- 4 independently adjustable detection areas and 4 linked outputs for PTZ camera control (on Analog connection and IP connection)
- Fog cancellation algorithm (Patent listed)

RLS-3060L

LAYER 0 **LAYER 1** **LAYER 3** **LAYER 4**

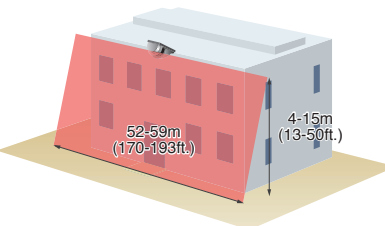
•Scene selection (Indoor / outdoor)

RLS-3060SH

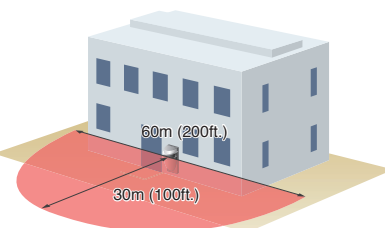
LAYER 0 **LAYER 1** **LAYER 3** **LAYER 4**

Scene selection(outdoor, indoor, indoor ceiling/Wall protection and vehicle)
•8 independently adjustable detection area and Redwall event codes for network recorder and video management software (on analog connection and on IP connection)
•Built-in heater

VERTICAL DETECTION ZONE



HORIZONTAL DETECTION ZONE



Laser Scan Detector **RLS-2020 series**



The RLS-2020 series is a compact and highly customizable Laser Scan detector that helps protect in an unobstructed way, houses, buildings, flat roofs, controlled areas and assets by creating an invisible laser wall or plane and detecting any intrusion breaching it.

FEATURES

- 20m x 20m (65ft. x 65ft.), 95 degree detection area
- Vertical and Horizontal detection modes
- Multi-angle Adjustment Shell Structure (M.A.S.S.)
- Unique detection algorithm
- Automatic area setting function
- Advanced area setting
- 4 adjustable detection areas on IP connection
- Total 3 outputs can be assigned for analog connection

RLS-2020I

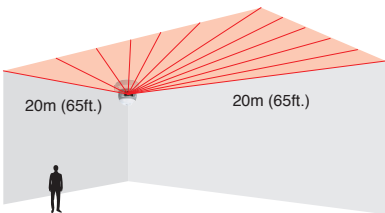
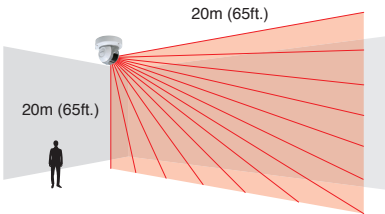
LAYER 4

•Indoor use model

RLS-2020S

LAYER 0 **LAYER 2** **LAYER 3** **LAYER 4**

- Indoor / outdoor mode
- Indoor high resolution mode
- Indoor throw-in mode



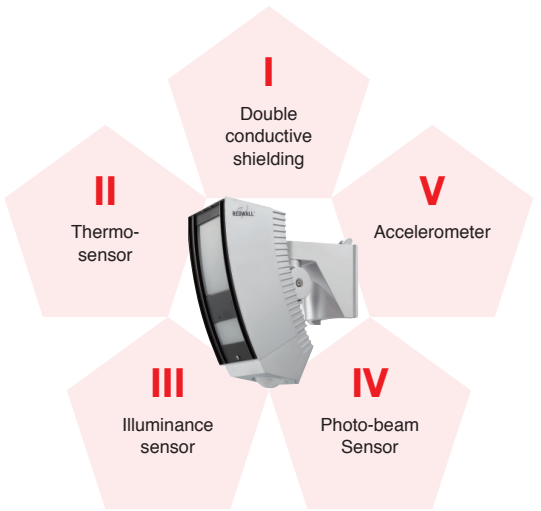
REDWALL-V employs five innovative sensing technologies

- Technology I** PIR sensor with double conductive shielding for visible light and RFI protection.
- Technology II** *Thermo-sensor for automatic sensitivity adjustment
- Technology III** *Illuminance sensor for automatic sensitivity adjustment
- Technology IV** Photo-beam sensor for anti-masking
- Technology V** Accelerometer for anti-rotation

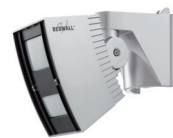
By using these five technologies, The REDWALL-V series provides the following three benefits:

1. Reduction of false alarms
2. Quick and reliable installation
3. Protection from vandalism

*REDWALL-V uses surrounding temperature and luminance information to optimize its sensitivity to reduce false alarms.



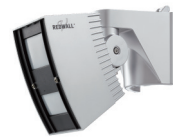
Synthesized Intelligent PIR **REDWALL-V series**



SIP-3020 SIP-4010 SIP-404

LAYER 2 **LAYER 3**

- Standard short range type



SIP-3020WF SIP-4010WF SIP-404WF

LAYER 2 **LAYER 3**

- Battery operated
- Short range type
- Compatible with
- Wireless transmitter

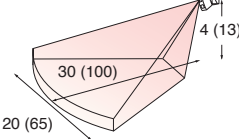


SIP-3020/5 SIP-4010/5 SIP-404/5

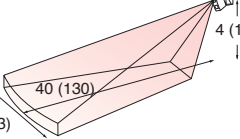
LAYER 2 **LAYER 3**

- Short range type
- With creep zone

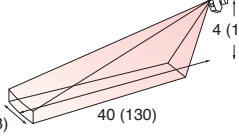
SIP-3020/WF



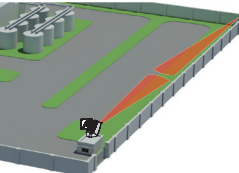
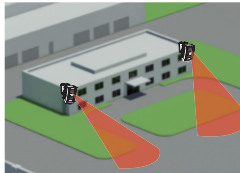
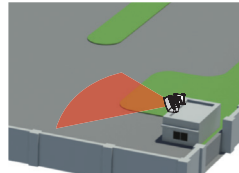
SIP-4010/WF



SIP-404/WF



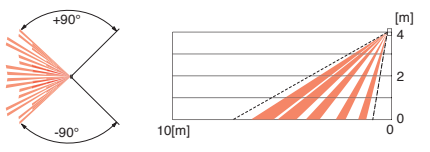
Unit: m (ft.)



Unit: m (ft.)

Creep zone

The built-in creep zone detector provides a 3m x 5m (10' x 16') at 2.7m (7.6') height detection area directly below the detector, which eliminates the normal "dead space" that an intruder could enter a protected area. The creep zone detection area can be adjusted between -90 to +90 degree horizontally and -3 to +3 degree vertically.

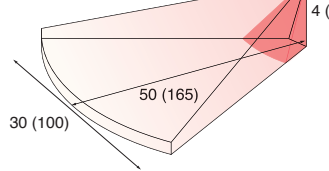


SIP-5030 SIP-100

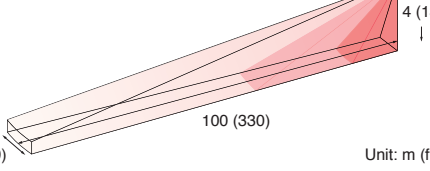
LAYER 0 **LAYER 1**
LAYER 2 **LAYER 3**

- Long range type
- With creep zone

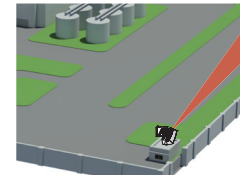
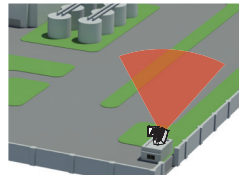
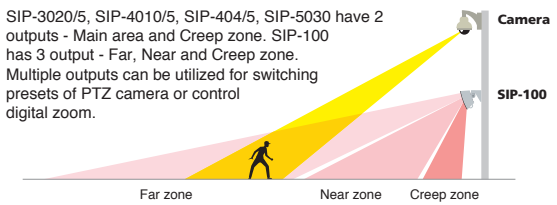
SIP-5030



SIP-100



Unit: m (ft.)



SIP-XXXX-IP model is available. The package includes SIP detector and PIE-1 (PoE IP encoder unit).