ECO.NO	ZONE	DETAILS	DESIGN	DATE
00116				2009-8-31
S19004		删除“Printed in China”		2019-4-19

Notes:

1. Material: 80g printing paper, white.size 290*210MM.
2. Printing: Black
3. Pack and tie a label with part number 0-ML00-0024-01-1.

DIMENSION TOLERANCES UNLESS OTHERWISE SPECIFIED

>0.0AND≤5	+/-0.055mm
>5AND≤10	+/-0.060mm
>10AND≤25	+/-0.075mm
>25AND≤50	+/-0.100mm
>50AND≤100	+/-0.150mm
>100AND≤150	+/-0.200mm
>150	+/-0.250mm
Angular	+/-0.25°

青嵘科技有限公司
A&R Technologies Ltd.

CLIENT			PART NAME		英文版说明书		
MOULD NO	CX-806		PART NO		0-ML00-0024-01-1		
MATERIAL		REV	2	DESIGN	范绮玲	DATE	2019-5-6
SIZE	/	SCALE	/	CHECK		DATE	
SHEET		UNIT	mm	APPROVAL		DATE	

CX-806 X-TEC™ Motion Sensor

Operation and Specifications

SUREN

The CX-806 is a professional state-of-the-art motion sensor engineered with the world's best components and materials. Every aspect of this sensor provides the most reliable motion sensing with freedom from false alarms. The CX-806 includes two motion sensing systems: microwave Doppler motion sensing and PIR motion sensing. Together, the two systems' signals are evaluated by SUREN-proprietary signal processing algorithms, which reject false alarm conditions while detecting intruders.

The CX-806 microwave system includes a modern, compact, DRO-based micro-strip Doppler transceiver, with PCB "patch" antennas. The Doppler signal is digitally processed to detect intruders and reject distractions. Constant-motion signals (such as fans) are de-emphasized, and fluorescent light frequencies are digitally removed. On the PIR side, patented PYROFLEX™ IR detection provides much stronger intrusion signals than conventional detectors, thus providing an information-rich signal to the microcontroller. Inside the microcontroller, SureSpot™ digital processing finds intruder signals among the complex curves and dips of real-world signal waveforms.

SENSOR INITIALIZATION

Following power-on, a CX-806 sensor is fully operational after a two-minute warm-up. During warm-up, its red alarm LED is ON.

WALK TEST:(RED LED)

Note: The CX-806 should be tested once per year.

In Normal Operating Mode: Enable the LEDs (JP1 ON). If the LEDs are not enabled, then, without removing power, set JP1 to ON. Walk across the monitored area (within the sensor's optical fields-of-view). With sensitivity set at STANDARD, the red alarm LED should turn ON (for Alarm) after about two to four normal steps. With the sensitivity set at HIGH, the LED should turn ON (for Alarm) after about one to three normal steps. Often, before the red LED turns ON, one of the single-system LEDs will turn ON. Each time the red LED turns ON, wait for it to turn OFF. Then, wait 12 seconds before continuing the walk-test. When there is no motion in the monitored area, the LED should remain OFF.

In Special Modes: Cycle power-off/power-on, then Walk-test immediately after warm-up with one of the 10-minute walk-test modes.

REMOTE LED ENABLE

The Remote LED Enable terminal functions exactly in parallel with JP1, in a logical OR arrangement. Thus, if either JP1 is ON or if the Remote LED Enable terminal is fed its LOW (active) voltage, then the LEDs are enabled. The LOW (LEDs enabled) voltage range is 0-1.5 Vdc. The HIGH (LEDs disabled) voltage range is 3.5-18 Vdc.

SINGLE-SYSTEM TEST: 10-minute Walk-test Modes PIR (Green LED), MICROWAVE (Yellow LED)

When JP1 is OFF, the function of each motion sensing system can be monitored separately during the first 10 minutes after power-on. To test the PIR system, set JP2 OFF, then walk across the monitored area (within the sensor's optical fields-of-view). Each time a field-of-view is entered, the green LED should flash. To test the microwave system, set JP2 ON, then move within the monitored area. During movement, the yellow LED should flash. Adjust RV1 to change microwave detection range as required. 10 minutes after power-on, all LEDs will be disabled.

ALARM PROCESSING

A PIR motion sensor works by counting signal events, often called "pulses". The CX-806's PIR system includes SureSpot™ to provide expert qualification of true intruder-caused pulses. However, the CX-806 dual-technology processing system does not simply count pulses. Instead, SUREN-proprietary processing includes expert algorithms for real-time analysis of the combined PIR and microwave signals. This provides the best intruder detection while rejecting false alarms.

SUPERVISION

CX-806 supervision functions include these tests:

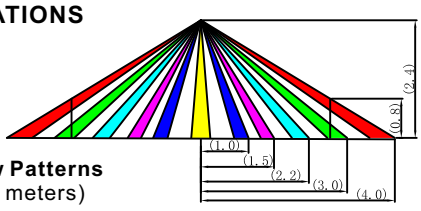
- Ambient temperature in-range;
- Detector electronics okay;
- Supply voltage between 8-16Vdc;
- PIR self test okay.

When a failure is detected, then:

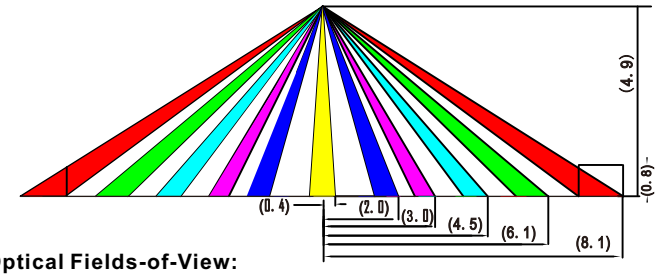
1) The red alarm LED blinks ON/OFF every second;
2) Alarm relay does not re-close after an alarm signal event.
3) Trouble output opens.

NOTE: The sensor will NOT initiate an alarm upon failure.

SPECIFICATIONS



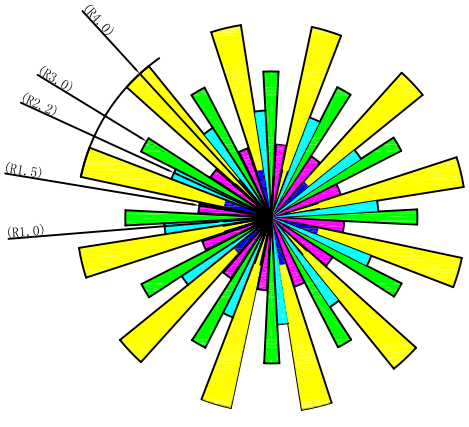
Optical View Patterns
(side view, in meters)



Optical Fields-of-View:

Long-range	Mid-range	Short-range	Look-down
48	48	16	10

(top view, in meters, 2.4m mounting height)



IR Sensor:
PYROFLEX™, Dual elements

Power Supply:
8-16 Vdc; 15 mA at 12 Vdc

Alarm Relay:
Solid state, 60V, 50 mA,
1500 V_{rms} isolation

Tamper Switch:
Form A (NC). 50 mA at 30 Vdc

Trouble:
Normally closed to (-), NPN open collector, 30 Vdc, 100mA

Housing Material:
High-impact ABS

Dimensions:
Φ128 x 40 mm (Dia. x D)

Lighting Rejection:
Selectable: 50 or 60 Hz

Approvals/qualification:
CCC (Pending)
CE (Pending)

Microwave Operating Freq:
Around 10 GHz. See unit label

Events Detection:
SureSpot™ processing engine

RF Immunity:
20 V/m, 10-1000 MHz;
10 V/m, 1-2 GHz

White Light Immunity:
6500 lux

Sensitivity: PIR
Selectable: 2-event or 3-event

Range: Microwave
20%-100% adjustable

Operating Temperature Range:
-10°C to +55° C (+14°F to +131°F)

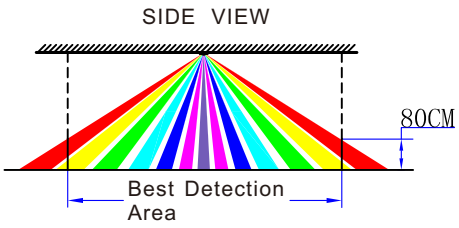
Storage:
-40°C to +60° C (-40°F to +140°F)

Note: Specifications are subject to change without notice.

SUREN Part no.: 0-ML00-024-01-1 Rev. 2

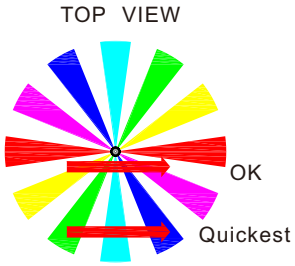
1: Detection Area

The sensor's outer limit of detection is where its outer field-of-view descends below about 80 cm from the floor. This depends on mounting height. Locate the sensor so that a person entering the area will pass through an outer field of view to 80 cm or higher from the floor.



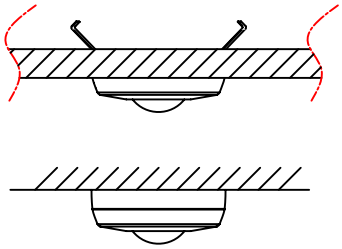
2: Mounting Location

For quickest light activation, locate the sensor so that a person entering the area will not be following a straight line leading directly under the sensor. This way, the person entering will be crossing the (radial) fields of view the best way to be “seen” by the sensor.



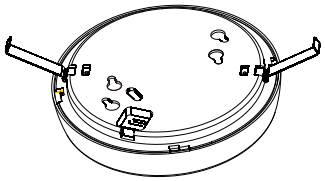
3: Sensor Mounting Choices

The sensor may be mounted either in a drop-ceiling panel, or on a solid ceiling. In a drop-ceiling panel, two metal springs serve to retain the sensor in the panel. On a solid ceiling, the sensor is mounted by means of two screws, and a trim ring added around the sensor base.



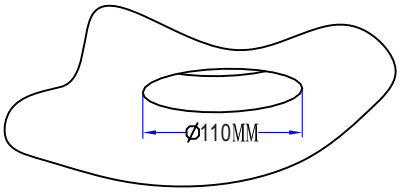
4: Drop-ceiling Mounting: Base Preparation

Do not remove any of the “knock-out” hole-fillers in the base. These are for use in solid-ceiling mounting. Install the two retaining springs as shown.



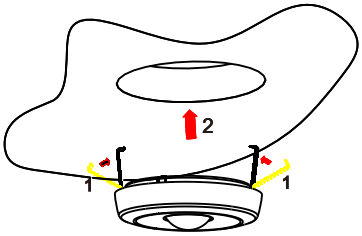
5: Drop-ceiling Mounting: Panel Preparation

Use a hole saw to cut a 110 mm circular hole in the drop-ceiling panel at the desired location.



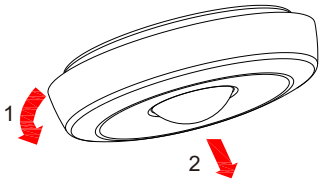
6: Drop-ceiling Mounting: Sensor Installation

Press the retaining springs together, then push the springs and the sensor base through the ceiling panel hole until the sensor rim is seated against the panel. Remove the sensor optics/cover as shown in picture 7, then go to picture 10 for wiring (no need to remove circuit board).



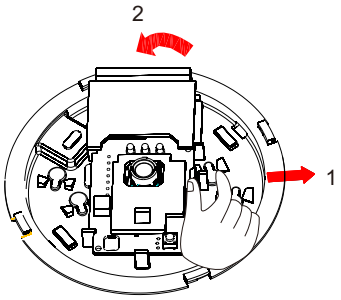
7: Solid-ceiling Mounting: Sensor Opening

Remove the sensor's optics/cover by rotating it counter-clockwise as shown, until it disengages from the sensor base.



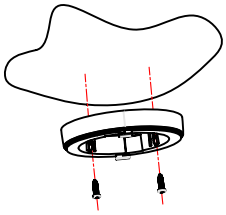
8: Solid-ceiling Mounting: Circuit Board Removal

1. Use a thumb to pull gently on the retaining latch as shown. 2. Lift the circuit board outward by first tilting one side.



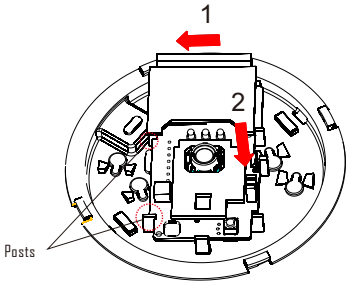
9: Solid-ceiling Mounting

Using the narrow part of the base holes as a guide, drill two small holes in the ceiling. Set the base aside, enlarge the two ceiling holes, and install screw anchors. Install two screws with their heads located about 4 mm from the ceiling. Install the trim ring on the base. Install the base over the screws by passing the heads through the large part of the mounting holes. Rotate the base so that the screw heads are over the narrow part of the mounting holes; then tighten the screws against the base.



10: Circuit Board Installation and Wiring

Place one edge of the circuit board into the slots on two retaining posts. Bring the other edge to the latches. Press gently on the circuit board to snap it under the latch.



11: Operation Programming Jumpers

If there is a way for intruders to pass only a very short distance in the sensor's view, or if aggressive detection is required, then use high sensitivity (JP2=OFF). Otherwise, standard sensitivity (JP2=ON) is fine for ordinary applications. Set microwave light-immunity jumper JP3 to local power frequency. Factory-set jumper positions are shown below in gray.

CX-806			
FUNCTION	JP	ON	OFF
Light Imm.	3	60Hz	50Hz
Sensitivity	2	STANDARD	HIGH
Red LED	1	ENABLE	DISABLE

12: Red Alarm LED Indicator Operation

The chart below shows possible LED indications.

LED	CX-806	
	Sensor State	LED Display
Red	Warm-up	ON
	Alarm	ON 5 Seconds (IF LED ENABLED)
	Failure	Flashing
	Normal	OFF
Yellow	MW Event (IN 10-M TEST MODE)	ON
	NO Event	OFF
Green	PIR Event (IN 10-M TEST MODE)	ON
	NO Event	OFF