



ECO.NO	ZONE	DETAILS	DESIGN	DATE
		二次发行, 更换产品效果图		2019-12-16

Notes:

1. Material: 80g printing paper, white.size 290\*210MM.
2. Printing: Black
3. Pack and tie a label with part number 0-ML00-3119-01-1.

	 <b>青矽科技有限公司</b> <b>A&amp;R Technologies Ltd.</b>							
	DIMENSION TOLERANCES UNLESS OTHERWISE SPECIFIED		CLIENT	PART NAME		英文版说明书		
	>0.0AND≤5	+/-0.055mm	MOULD NO	MCDP-08	PART NO		0-ML00-3119-01-1	
	>5AND≤10	+/-0.060mm	MATERIAL		REV	2	DESIGN	范绮玲
	>10AND≤25	+/-0.075mm	SIZE	/	SCALE	/	CHECK	
	>25AND≤50	+/-0.100mm	SHEET		UNIT	mm	APPROVAL	
>50AND≤100	+/-0.150mm					DATE	2019-12-16	
>100AND≤150	+/-0.200mm					DATE		
>150	+/-0.250mm					DATE		
Angular	+/-0.25°					DATE		

# MCDP-08

## Operation and Specification

# SUREN

### M-TEC™ Presence Sensor Patented HDIR™ + Ultrasonic

MCDP-08 is designed specifically for museum or jewelry shop to protect artifacts/jewelry inside display cabinet, it triggers alarm when the cabinet door is opened or hand movement is detected.

MCDP-08 embodies the technology of SUREN's proprietary 8-element pyros and ultrasonic motion detection into one easy-to-install presence sensor. Mounted at a height of 2.4m, this sensor provides full circular 8m diameter detection for minor motion, e.g. hand movement of people in that area.

MCDP-08 can be surface mounted or flush mounted for an attractive, unobstructive appearance.

#### Operation

##### Initialization:

The sensor becomes operational 30 seconds after power is supplied, The red LED will turn on.

##### Function Description:

M-TEC™ Mode 1 Switch A1(off),A2(off);Ex-factory default setting. this mode is selected in harsh environment. Both HDIR™ and Ultrasonic must detect movement to activate output.

M-TEC™ Mode 2 Switch A1(off),A2(on);Either HDIR™ or Ultrasonic detects movement to activate output. This mode is selected when higher sensitivity is desired.

HDIR™ Mode Switch A1(on),A2(off); Ultrasonic is disabled. This mode is selected where Ultrasonic is prompt to environmental interferences.

Ultrasonic Mode Switch A1(on),A2(on); HDIR™ is disabled. This mode is selected where HDIR is prompt to environmental interferences.

#### Accessories:

- ① Brackets, screws and wall plugs for surface mount
- ② Spring clips for flush mount in drop ceiling
- ③ Infra red zone mask

#### Location:

- ① Determine the number of sensors required to cover the floor area
- ② Install the sensor near work area where walk-path cuts across radial lines, not towards the sensor
- ③ Do not install the sensor near ventilation outlet
- ④ Avoid facing the ultrasonic transceivers to each other to minimize interference

#### Setup Procedure:

- ① See illustration in the next page
- ② Connect the sensor as shown in the wiring diagram. Make sure power supply is turned off
- ③ Turn on the power supply after completed installation
- ④ See Settings section for various sensor setting
- ⑤ Initiate test mode, replace the cover and conduct walk-test

#### LED Indicator:

- ① LED indicator can be enabled or disabled by dip switch B2
- ② Red LED indicates motion detected by infra red sensor
- ③ Green LED indicates motion detected by ultrasonic sensor

#### Specification

**Power Supply:**  
10-16 V DC

**Power Consumption:**  
0.86 W

**Control Signal Output:**  
12 V DC, 15 mA

**PIR Sensor:**  
Pyroelectric, 8-element

**Ultrasonic Frequency:**  
40 KHz

**Housing Material:**  
High-impact ABS

**Dimension:**  
110mm Diameter x 56 mm Height

**Operating Temperature Range:**  
-10° to 50° C

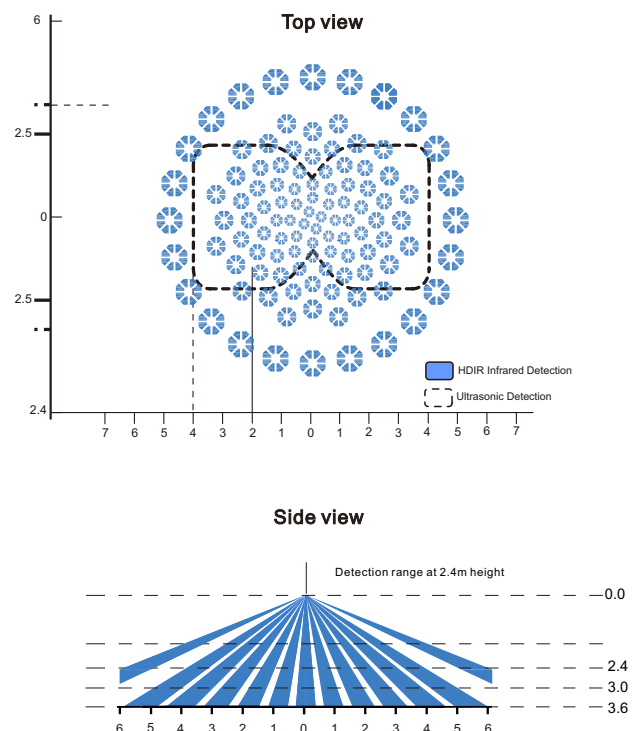
**RF Immunity:**  
20 V/m 10-1000 Mhz; 10 V/m 1-2 GHz

**Approvals:**  
CE 

#### Product Installation Drawing:

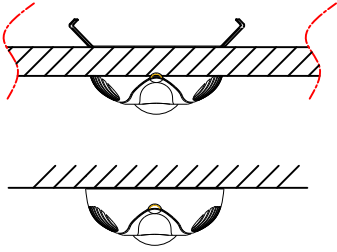


#### Detection Area:



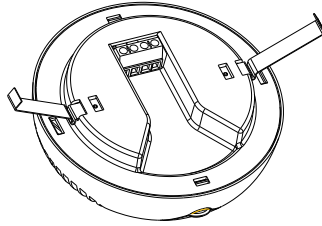
**Sensor Mounting Choices**

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 on a base ring (supplied with the sensor). The base ring is fastened to the ceiling by means of three screws.



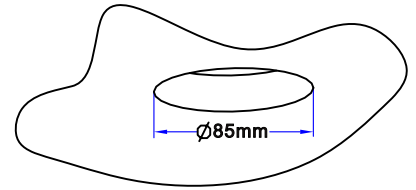
**Drop-Ceiling Mounting: Base Preparation**

Install the two retaining springs as shown.



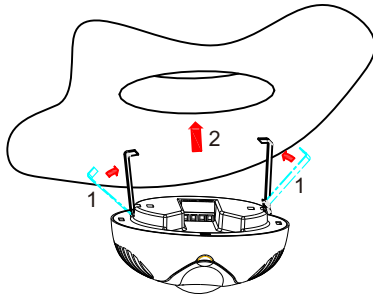
**Drop-Ceiling Mounting: Panel Preparation**

Use a hole saw to cut a 85 mm circular hole in the drop-ceiling panel at the desired location.



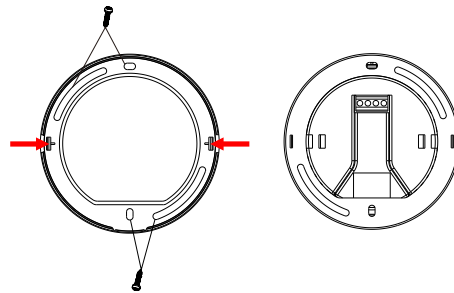
**Drop-Ceiling Mounting: Sensor Installation**

Press the retaining springs together, then push the springs and the sensor base through the hole until the sensor rim is seated against the panel.



**Solid-Ceiling Mounting**

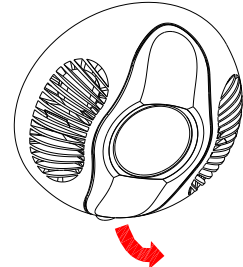
Use the three screws (supplied with the sensor) to fasten the base ring to the ceiling. Align the sensor's two eyelets with the base ring's two hooks. Press the sensor onto the base ring.



Note: The mounting clips indicated by the arrows represent the direction of the longer ultrasonic range shown in the Detection Area diagram.

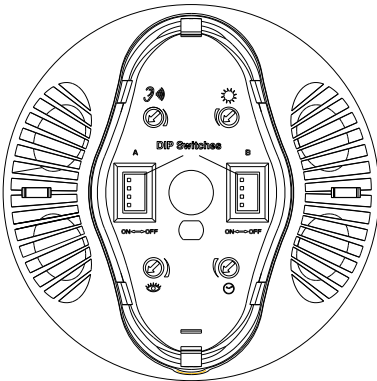
**Sensor Opening**

Slide a fingertip under the tab at one end of the cover. Pull gently to remove the cover.



**Operation Control Console**

All aspects of sensor operation can be adjusted here.



**Ultrasonic Adjustment**

For maximum range and sensitivity, set fully clockwise (CW). If reduced range and sensitivity are required, then turn counter-clockwise (CCW) and test.

**Sets the ultrasonic range**

Range setting  
Full CCW = min.  
Full CW = max.

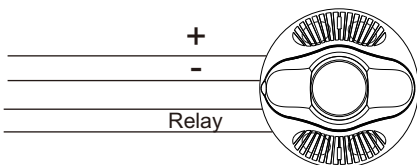
**Infrared Adjustment**

For maximum range and sensitivity, set fully clockwise (CW). If reduced range and sensitivity are required, then turn counter-clockwise (CCW) and test.

**Sets the infrared range**

Range setting  
Full CCW = min.  
Full CW = max.

**Wiring Diagram**



**Dip Switch Settings**

Dip Switch	Function	Settings	
		Off	On
Bank A			
A1	Multi/Single Technology	Multi Mode 1	Multi Mode 2
A2	Technology Activated	HPIR	Ultrasonic
A3	Not Used		
A4	Ultrasonic Frequency	A Channel	B Channel
Bank B			
B1			
B2	LED Indicator	Enabled	Disabled
B3			
B4	Not Used		

Off	Off	PIR technology and Ultrasonic technology all detected movement is enable.
Off	On	Either HDIR or Ultrasonic technology detects movement to activate output.
On	Off	Only PIR technology is active.
On	On	Only Ultrasonic technology is active.