Cautions

ELECTRICAL HAZARD: Disconnect power from equipment prior to making any internal adjustments. Service should only be performed by qualified personnel.

FRAGILE: Inspect the equipment prior to installation. Do not install the equipment if damage is apparent. Do not attempt to disassemble this equipment. If damaged, return to the supplier.

ELECTROSTATIC HAZARD: This is sensitive electronic equipment. Apply safe ant-static practices when handling this equipment.

CIRCUIT LIMITATIONS: The maximum number of detectors connected to a single detection zone is limited by the control and indicating equipment, and may be limited by local regulations.

General Description

The Multi-Candela notification appliances are strobe and sound alarm products which are non-addressable and powered by 2-wired DC24V and wall or ceiling mounted indoor use only notification appliances. That could provide 15cd, 30cd, 75cd, 110cd level strobe and multi-tone sound alarm. The appliances could been activated by SFM (synchronize functional module) or control panel of a UL/ULC Listed.

When multiple products are connected to control panel or SFM, the sound and light between products in the same circuit area can be synchronized.

The product can be separated from the control panel or SFM to work independently,(see Note)

When an alarm signal is emitted, it means there may be an emergency, and should be pay attention immediately.

Note: *In self-run mode, the flash and sound maybe out of sync, so this mode does not suit for special place, i.e., irregular flashes or sounds may cause seizures in patients with epilepsy*
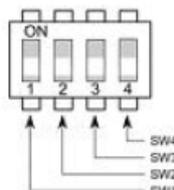
Product Specifications

Nominal Voltage	Regulated 24 VDC
Operating Voltage Range	Regulated 16 VDC to 33 VDC
Strobe Flash Rate	1 flash per second
Operating Temperature	32° to 120° F (0° to 49°C)
Humidity Range	10% to 93%, non-condensing at 100° F (38°C)
Dimensions	130.5mm×130.5mm×89mm
Connections	Terminal for 18 AWG to 12 AWG (0.82 mm2 to 3.31 mm2)
Mounting Box	4 × 4 inch Double Gang Box
Model: VL-W-MS-W	White / Wall Mounting
Model: VL-C-MS-W	White / Ceiling Mounting
Model: VL-W-MS-R	Red / Wall Mounting
Model: VL-C-MS-R	Red / Ceiling Mounting

Sound Level and Electrical Characters

Candela Rating	Input Voltage Regulated DC	Maximum Operating Current RMS*
15	16 VDC	167 mA
30	16 VDC	235 mA
75	16 VDC	350 mA
110	16 VDC	441 mA

* A/V Strobe current is measured with horn circuit steady ON.

Switch: S1   Figure 1.

S1 Settings				Horn Mode	Sound Pressure Level Measurement (dBA)
SW 4	SW 1	SW 2	SW 3	Tone	Reverberant Room at 10 Feet Per UL464
SW1:1 High Output	1	1	1	Broadband Horns	80.5
	1	1	0	Horn	80.9
	1	0	1	Bell	76.7
	1	0	0	Siren	75.8
	0	1	0	Slow Whoop	77.9
	0	0	1	500 Hz Horn	83.1
	0	0	0	Hi/Lo	82.5
	0	1	1	Reserved	Horn off
SW1:0 Standard Output	1	1	1	Broadband Horns	74.6
	1	1	0	Horn	75.8
	1	0	1	Bell	70.2
	1	0	0	Siren	68.6
	0	1	0	Slow Whoop	66.5
	0	0	1	500 Hz Horn	73.9
	0	0	0	Hi/Lo	72.7

The Minimum sound pressure is measured in UL reverberant test chamber.

Adjust the Dip-switch in the back of the product to change the alarm horn mode. See Figure 1.

Strobe Light Output

There are four grades in the S/V appliance strobe strength: 15cd (factory preset), 30cd, 75cd, 110cd, adjust the slide switch to the required brightness which is placed in the back of the product, the reflector has a small window to observe the strength grade (See Figure 7). The strobe dispersion ratings of the product follows the standard UL 1971, the relationship between the angle and the strength is as following tables:

Wall Mount Strobe Vertical and Horizontal Light Dispersion Ratings (Room Temperature)

Vertical Dispersion(wall to floor)			Horizontal Dispersion		
X-Plane Degrees*	Percent of rating	Typical Output	Y-Plane Degrees*	Percent of rating	Typical Output
0	100		0	100	
5 - 30	90		±5 - 25	90	
35	65		±30 - 45	75	
40	46		±50	55	
45	34		±55	45	
50	27		±60	40	
55	22		±65 - 70	35	
60	18		±75 - 80	30	
65	16		±85 - 90	25	
70	15		Compound ±45 right	24	
75	13		Compound ±45 left	24	
80 – 90	12				

*Tolerance of ±1 degree is permitted.

Ceiling Mount Strobe Vertical and Horizontal Light Dispersion Ratings (Room Temperature)

Vertical Dispersion			Horizontal Dispersion		
X-Plane Degrees*	Percent of rating	Typical Output	Y-Plane Degrees*	Percent of rating	Typical Output
0	100		0	100	
±5 - 25	90		±5 - 25	90	
±30-45	75		±30 - 45	75	
±50	55		±50	55	
±55	45		±55	45	
±60	40		±60	40	
±65-70	35		±65 - 70	35	
±75-80	30		±75 - 80	30	
±85-90	25		±85 - 90	25	
Compound ±45 right	24		Compound ±45 left	24	

*Tolerance of ±1 degree is permitted.

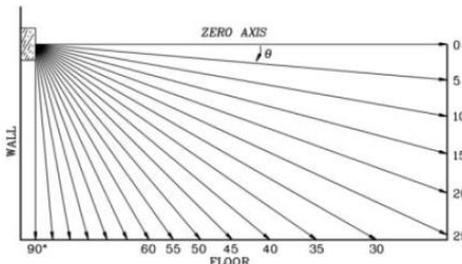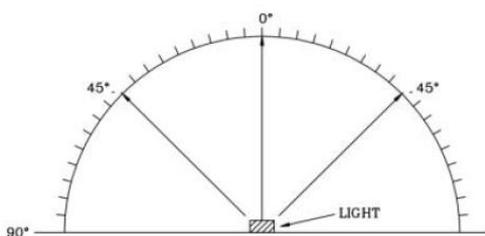Figure 2.

Figure 3.

Wiring

In order to ensure that the total current consumption of the circuit does not exceed the maximum load current of the FACP or SFM module, the device quantity must be considered in the design of the loop system.
Number of circuit is connected with the maximum number of notification products must calculate the loop line loss of voltage to ensure loop notification products work in rated voltage range, please refer to the corresponding FACP or NAC SFM and other equipment installation instructions.

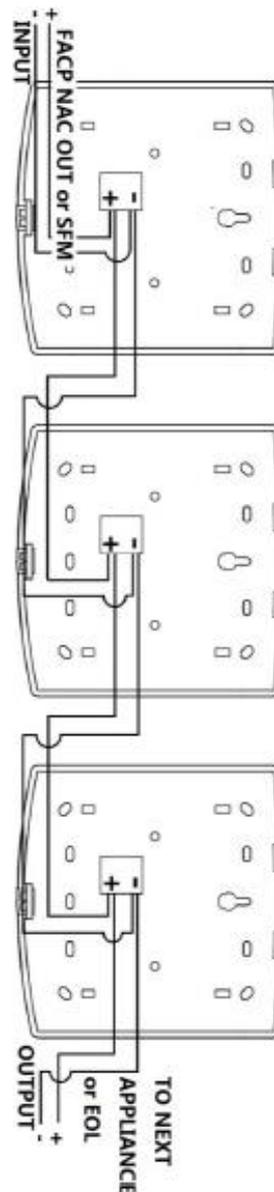The wiring circuit is shown in Figure 5
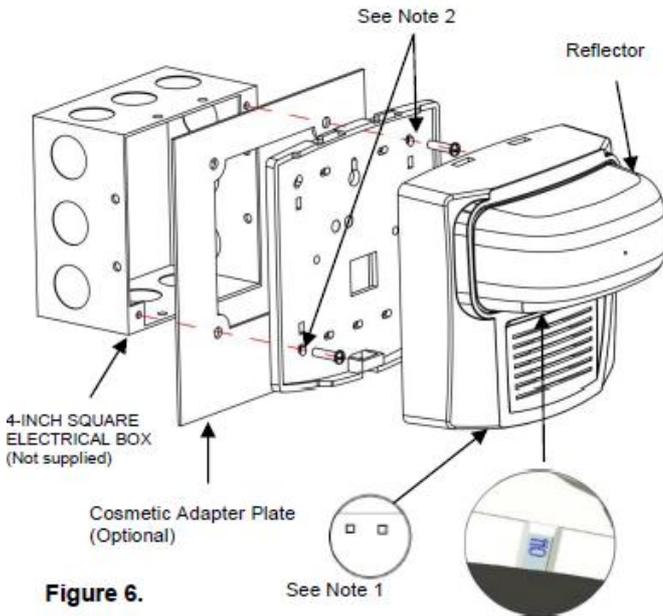

Figure 5

Mounting Appliance Device

Figure 6.

See Note 1

Figure 7.

Products could be installed in standard square 4-inch double gang box.
Before installing and wiring, the power of the loop circuit must be power off,
After the completion of the terminal to ensure that the terminal lock,

It is recommended to install a Cosmetic Adapter Plate before install the Notification devices products.
Please check the cosmetic adapter plate installation instructions for details.

Product installation diagram shown in Figure 6

Note:
Note 1: To remove the cover, Depress the snap at the bottom of the product with a key(or flat tip screwdriver) while pulling the cover up with the other hand.

Note 2: The product attaches directly to a standard 4-inch square electrical box(not supplied) flush mounted or surface mounted. Attach the product to the back cover using two screws (supplied) mounted.

Limited Warranty

Velocity Detection over Time Zeta Alarms Ltd declares that this product is free from defects in material and workmanship and it will repair or replace any product or part thereof which proves to be defective in workmanship or material for a period of twelve (12) months from the date of purchase but not to exceed eighteen (18) months from the date of manufacture. Please contact Velocity Detection over Time Zeta Alarms Ltd directly for a return merchandise authorization (RMA) number before returning goods under warranty. Shipment must be prepaid and Velocity Detection over Time Zeta Alarms Ltd will repair or replace the product if the failure was caused by a manufacturing defect.