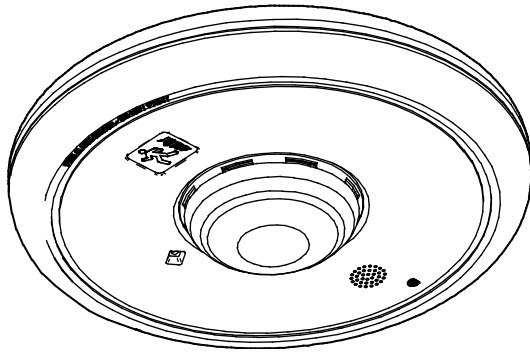




DC-M9416 Series Ceiling Mount Sounder Strobe Installation Sheet



Description

The DC-M9416 Series Ceiling Mount Sounder Strobe is a fire alarm notification appliance that is designed for mounting on indoor ceilings and walls. See Table 1 for a list of model numbers.

Table 1: Models

Description	Model number
Sounder strobe, 15 to 95 multi-cd, white, with FIRE marking	DC-M9416W
Sounder strobe, 15 to 95 multi-cd, red, with FIRE marking	DC-M9416W

Field-configurable jumper options are available for selecting the desired dB output, temporal or steady sound output, and strobe signal output.

The sounder strobe includes a field-configurable switch for selecting the desired candela output. The candela output setting is locked in place and remains visible after final installation.

This strobe features an enhanced synchronization circuit to comply with the latest requirements of UL 1971 *Signaling Devices for the Hearing Impaired*.

Synchronized operation requires that you connect the DC-M9416 Series Ceiling Mount Sounder Strobe to a NAC output set for Synch Mode, or to a separate DC-M9410 Signal Synchronization Module.

Installation

Install and wire this device in accordance with applicable national and local codes, ordinances, and regulations.

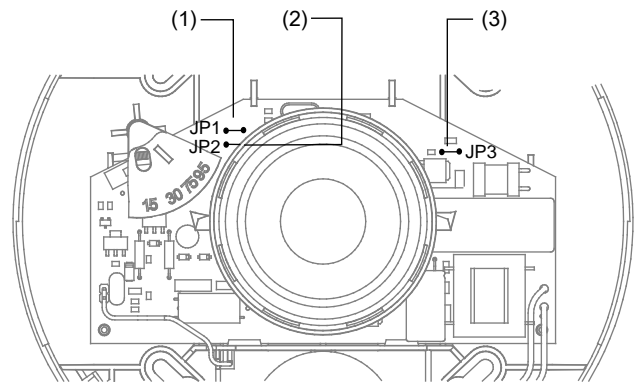
WARNING: Electrocution hazard. To avoid personal injury or death from electrocution, remove all sources of power and allow 10 minutes for stored energy to discharge before installing or removing equipment.

Caution: Electrical supervision requires the wire run to be broken at each terminal. Do not loop the signaling circuit field wires around the terminals.

To install the sounder strobe:

1. Remove the cover by depressing the tab on the side of the unit with a small screwdriver. Turn the cover counterclockwise to release.
2. Set the sounder signal, sound output level, and strobe signal to the desired settings. See Figure 1.
3. Connect the strobe terminals to the signal circuit field wiring. You must observe polarity for the unit to function properly. See Figure 3.
4. Slide the candela switch to the desired candela output (95, 115, 150, or 177 cd) by aligning it with the indicator below the switch. See Figure 2.
5. Mount the unit onto a compatible electrical box. See Figure 4.
6. Replace the cover by positioning the alignment arrows together and rotating the cover clockwise.
7. Test the unit for proper operation.

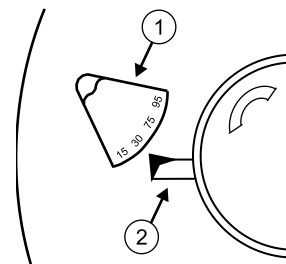
Figure 1: Sounder and strobe settings



- (1) JP1: Sounder signal jumper: Cut to change from temporal to steady
- (2) JP2: Strobe signal output: Cut to change from 1 flash per second (public mode) to temporal (private mode)
- (3) JP3: Sounder sound output: Cut to change from high dB to low dB

Note: If the strobe is set to temporal (private mode), this device is no longer UL 1971 but is still UL 1638 Listed.

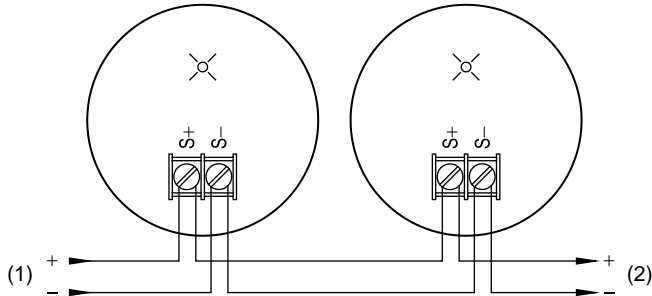
Figure 2: Candela switch



- (1) Candela switch
- (2) Indicator

Wiring

Figure 3: Wiring Diagram



- (1) From NAC output
 (2) To next appliance, EOLR, or return to source

Note: Signal polarity is shown in the alarm condition.

Figure 4: Mounting diagram

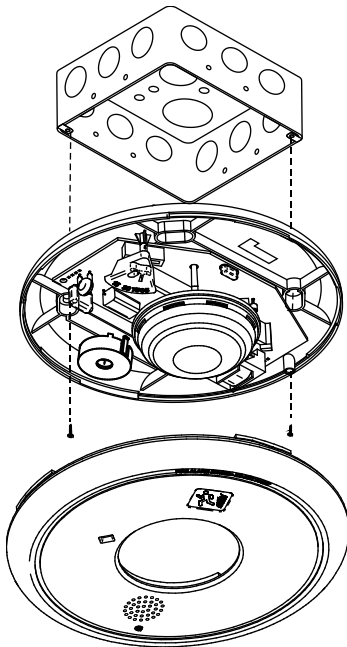
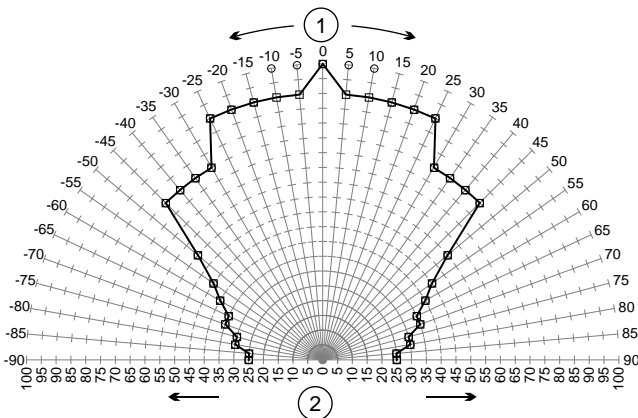


Figure 5: UL 1971 minimum light output (% of rating vs. angle)



- (1) Angle
 (2) Percentage of rated output

Note: Horizontal and vertical outputs have the same pattern

Table 2: Strobe operating current in RMS (A)

	15 cd	30 cd	75 cd	95 cd
VDC	0.147	0.190	0.316	0.372
VFWR	0.189	0.253	0.417	0.451

VDC = Volts direct current, regulated and filtered
 VFWR = Volts full wave rectified

Note: Operating currents shown above were measured by UL at 16 VDC and 16 VFWR.

Table 3: Sound level output (dBA)

Signal	VDC	High db	Low db
Temporal	16	79.8	75.0
	24	83.3	78.0
	33	85.0	80.9
Steady	16	83.2	79.3
	24	85.4	83.0
	33	87.8	85.9

UL464: Sound level output at 10 ft. (3.05 m) measured in a reverberant room

Table 4: Audible directional characteristics (horizontal pattern)

Angle (°) [1]	Sound output (dBA) [2]
90 (Ref)	0 (Ref)
75 and 115	-3
70 and 120	-6

[1] Angles are measured from a perpendicular axis; positive angles to the right.

[2] Peak output at regulated 24 VDC, set for temporal tone.

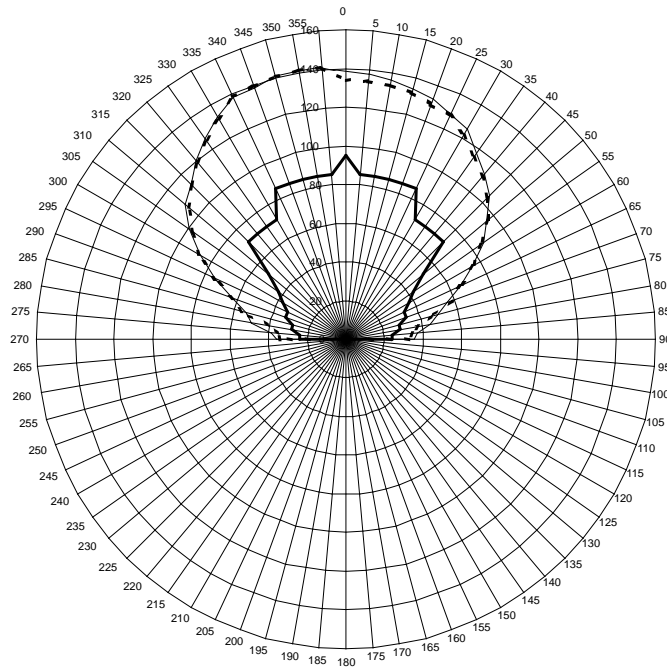
Table 5: Audible directional characteristics (vertical pattern)

Angle (°) [1]	Sound output (dBA) [2]
90 (Ref)	0 (Ref)
65 and 135	-3
55 and 140	-6

[1] Angles are measured from a perpendicular axis; positive angles are up.

[2] Peak output at regulated 24 VDC, set for temporal tone.

Figure 6: Light output profile



----- Horizontal plane
 _____ Vertical plane

Maintenance

Caution: To maintain the required agency listings, do not change factory applied finishes.

This unit is not serviceable or repairable. Should the unit fail to operate, contact the supplier for replacement.

Perform a visual inspection and an operational test twice a year or as directed by the local authority having jurisdiction.

Specifications

Voltage	Regulated 24 VDC, 24 VFWR						
Strobe operating current	See Table 2						
Light output	Selectable at 15, 30, 75, and 95 cd						
Synchronization	Meets UL 1971 requirements. Maximum allowed resistance between any two devices is 20 Ω . Refer to specifications for the synchronization control module, this strobe, and the control panel to determine allowed wire resistance.						
Sound level output	See Table 3						
Default settings	<table border="0"> <tr> <td>Signal</td> <td>Temporal</td> </tr> <tr> <td>Sound level output</td> <td>High dB</td> </tr> <tr> <td>Strobe signal rate</td> <td>1 flash per second (fps)</td> </tr> </table>	Signal	Temporal	Sound level output	High dB	Strobe signal rate	1 flash per second (fps)
Signal	Temporal						
Sound level output	High dB						
Strobe signal rate	1 flash per second (fps)						
Wire size	12 to 18 AWG (0.75 TO 2.50 mm ²)						
Compatible electrical boxes	4 in. square electrical box, 2-1/8 in. deep (no extension ring)						
Operating environment	<table border="0"> <tr> <td>Temperature</td> <td>32 to 120°F (0 to 49°C)</td> </tr> <tr> <td>Relative humidity</td> <td>0 to 93% noncondensing</td> </tr> </table>	Temperature	32 to 120°F (0 to 49°C)	Relative humidity	0 to 93% noncondensing		
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Relative humidity	0 to 93% noncondensing						

Regulatory information

UL rating	Regulated 24 DC and 24 FWR [1]
Environmental class	UL: Indoor, Dry
North American standards	UL 464, UL 1638, and UL 1971

[1] This device was tested to the regulated 24 DC/FWR operating voltage limits of 16 V and 33 V. Do not apply 80% and 110% of these values for system operation.

Contact information

For information or questions, please contact:

Gulf Security Technology Co., Ltd.
 No. 80, Changjiang East Road,
 QETDZ, Qinhuangdao, Hebei, P. R. China 066004

Tel +86 (0) 335 8502434
 Fax +86 (0) 335 8502532
service.gst@fs.utc.com
www.gst.com.cn