



شركة المصنع السعودي لأجهزة الإطفاء
SAUDI FACTORY FOR FIRE EQUIPMENT Co.

Empowering
a **Safer Future** for
the Kingdom



Fire Detection and
Alarm System

Technical
Data
Sheets

Quality Approvals for Various Products and Services



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Extinguishant Releasing Control Panel

Model: LF1810-12 & LF1810-13

Product of LIFECO



Description

The LIFECO releasing panel offers outstanding value and performance for all small to medium fixed firefighting installations.

With three initiating circuits as standard, release can be configured to activate from any combination of detection zone inputs to allow (among other combinations) any two from three types of activations for detection in ceiling void, room and floor void applications.

The extensive configuration options of the LF-1810 allow the functionality of the system to be extensively modified. The panel contains a large LED display to enable easy configuration and control which also displays the time remaining until release for added user safety.

The countdown time is duplicated on up to seven remote status units to provide local indication of the system status.

With all the electronics mounted on a single, easily removable, steel plate LF-1810 panels are both robust and easy to install.

Features

- ❖ Approvals: UL864 and FM 3010
- ❖ Circuits: Three initiation circuits as standard
- ❖ Zones: Any single zone or any combinations of zones can be configured to release
- ❖ NAC Delay: Configurable first stage NAC delays
- ❖ Detection Delay: Configurable detection delays
- ❖ Manual Release: Zero time delay upon manual release option
- ❖ Indicators: Supports up to seven, four wire status indicators
- ❖ Fan Control: Built in Extract Fan control
- ❖ Compatibility: Compatible with I.S. barriers
- ❖ Zone Input: Non-latching zone input option to receive signals from other systems such as aspirating equipment
- ❖ Release Delay: Configurable releasing delays up to 60 seconds in 5 second steps
- ❖ Duration: Configurable releasing duration up to 5 minutes in 5 second steps
- ❖ Timer: Countdown timer shows time remaining until release

Panels

- ❖ LF-1810-12: Surface mounting panel - Red 115V (Size: 368 x 310 x 90 mm)
- ❖ LF-1810-13: Surface mounting panel - Red 230V (Size: 368 x 310 x 90 mm)

Extinguishant Releasing Control Panel

Model: LF1810-12 & LF1810-13

Product of LIFEKO

Technical Specifications

- ❖ Construction: 1.2mm mild sheet steel
- ❖ IP Rating: IP30
- ❖ Finish: Epoxy powder coated
- ❖ Colour-lid & box: Red RAL 3002 (optional grey BS 00 A 05 semi-matt)
- ❖ Mains Supply: 230V AC or 115V AC
- ❖ Mains Supply Fuse: 1.6Amp (F1.6AL250V)
- ❖ Power Supply Rating: 3 Amps total including battery charge 28V +/- 2V
- ❖ Maximum Ripple Current: 200 millivolts
- ❖ Battery Type (Yuasa NP): Two 12 Volt 7Ah sealed lead acid in series
- ❖ Battery Charge Voltage: 27.6VDC nominal (temperature compensated)
- ❖ Battery Charge Current: 0.7A maximum
- ❖ Battery Fuse: 20mm, 3.15A glass
- ❖ Maximum Current Draw from Batteries: 3 amps
- ❖ Quiescent Current of Panel in Mains Fail: 0.095A
- ❖ ROV Output: Fused at 500mA with electronic fuse
- ❖ Sounder Outputs: 24V Fused at 500mA with electronic fuse
- ❖ Fault Relay Contact Rating: 30VDC 1A Amp maximum
- ❖ Fire Relay Contact Rating: 30VDC 1A Amp maximum
- ❖ Local Fire Relay Contact Rating: 30VDC 1A Amp maximum
- ❖ First Stage Contact Rating: 30VDC 1A Amp maximum
- ❖ Second Stage Contact Rating: 30VDC 1A Amp maximum
- ❖ Extract Contact Rating: 30VDC 1A Amp maximum
- ❖ Zone Quiescent Current: 2mA maximum
- ❖ Terminal Capacity: 12 AWG
- ❖ Number of Detectors Per Zone: Dependent on type (maximum 32)
- ❖ NAC Rating: 0.5A per circuit
- ❖ Detection Circuit End of Line: 6K8 5% 1/2 Watt resistor
- ❖ Monitored Input End of Line: 6K8 5% 1/2 Watt resistor
- ❖ Sounder Circuit End of Line: 10K 5% 1/4 Watt resistor
- ❖ Extinguishant Output EOL: 1N4004 Diode
- ❖ No. of Initiating Circuits: 3
- ❖ No. of NAC Circuits: 2 x 1st stage, 1 x 2nd stage
- ❖ Extinguishant Release Output: Fused at 1 Amp
- ❖ Extinguishant Release Delay: Adjustable 0 to 60 seconds (in 5 second steps)
- ❖ Extinguishant Release Duration: Adjustable 60 to 300 seconds (in 5 second steps)
- ❖ SIL, AL, FLT, RST Inputs: Switched -ve, max resistance 100 ohms
- ❖ Zone Normal Threshold: 8K ohms to 1k ohm
- ❖ Detector Alarm Threshold: 999 ohms to 400 ohms
- ❖ Call Point Alarm Threshold: 399 ohms to 100 ohms
- ❖ Short Circuit Threshold: 99 ohms to 0 ohms
- ❖ Monitored Inputs Normal Threshold: 8K ohms to 1k ohm
- ❖ Monitored Inputs Alarm Threshold: 999 ohms to 100 ohms
- ❖ Monitored Inputs Short Circuit Threshold: 99 ohms to 0 ohms
- ❖ Status Unit/Ancillary Board Connection: Two wire RS485 connection
- ❖ Status Unit Power Output: Fused at 500mA with electronic fuse

Extinguishant Releasing Control Panel

Model: LF1810-12 & LF1810-13

Product of LIFECO

Programmable Functions

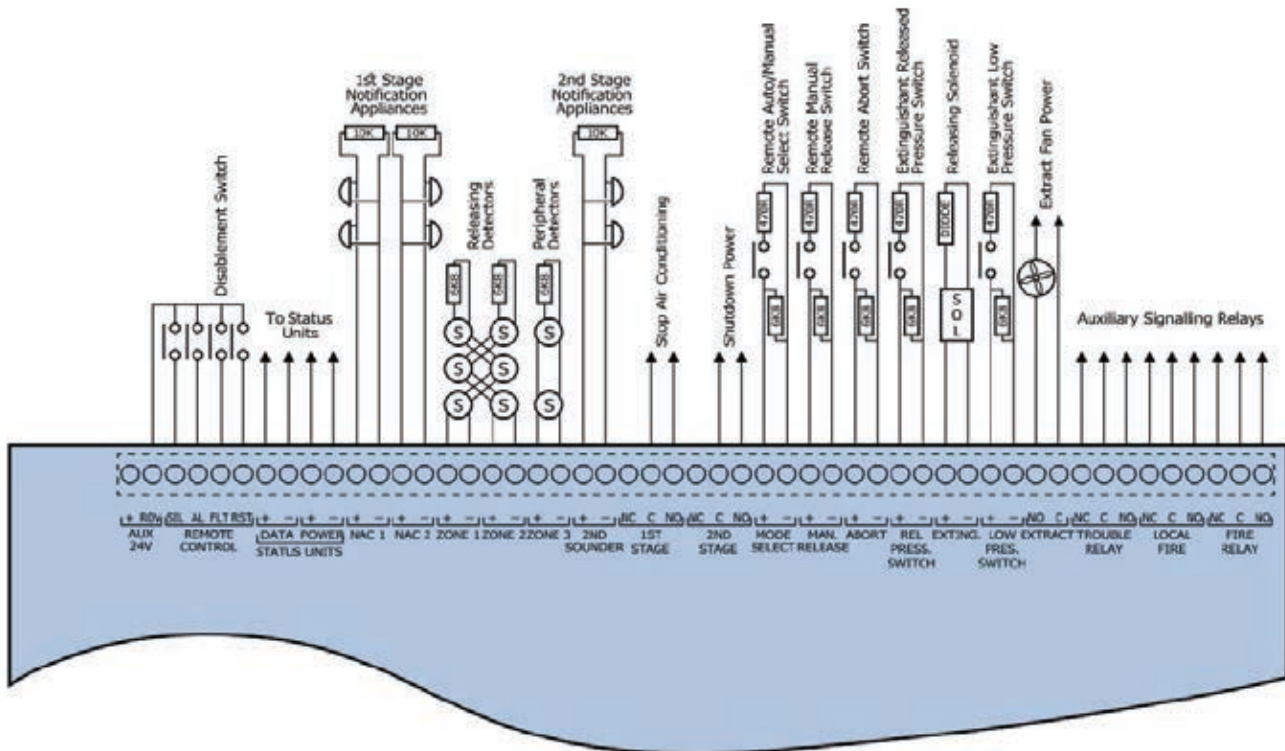
Access Level 2

- Test Zones: Test Zones 1 to 3
- Disable Zones: Disable Zones 1 to 3
- Disable Alarms: Disable 1st stage alarms
- Disable Relay 1: Disable pre-activated 1st stage relay
- Disable Relay 2: Disable pre-activated 2nd stage relay
- Disable Fan: Disable extract fan output
- Disable Input: Disable manual release input
- Disable Release: Disable releasing sub system
- Activate Fan: Activate extract fan output
- Activate Delays: Activate alarm delays

Access Level 3

- Sounder Delay: Sounder delay
- Coincidence: Coincidence detection
- Panel Features: Disable panel features
- Zone Delays (Detectors): Zone alarm delays (detectors)
- Zone Delays (Call Stations): Zone alarm delay (call stations)
- I.S. Barrier: Configure zone for I.S. barrier use
- Zone Short Circuit: Zone short circuit alarm
- Zone Latching: Zone non latching
- Input Delay: Zone inputs delay
- Release Delay: Extinguishant release time delay
- Duration Timer: Extinguishant release duration timer
- Reset Timer: Extinguishant reset delay timer

Connection Diagram



Conventional Optical-Smoke Detector

Model: LF-S50

Product of LIFECO



Overview

The fire detector is designed for early warning of a fire condition responding to fixed threshold smoke concentration detected in the protected premises. The smoke sensitivity is factory preset. The principle of functioning of the detector is based on scattered light reflected from smoke particles entering the optic chamber. The fire detector is microprocessor controlled with implemented algorithm for self-compensation of the chamber contamination. LF-S50 is fitted on 50 series base.

The fire detector consists of a printed circuit board and an optic chamber fixed in a plastic cabinet.

Conventional Optical-Smoke Detector
Model: LF-S50

Both LED indicators allow range of visibility 360° and provide information for the status.

Nominal operating voltage	24V DC
Minimum operating voltage	10V DC
Maximum operating voltage	30V DC
Current consumption in Standby mode	130 μ A/22.5V DC
Current consumption in Alarm mode	8mA/10V DC; 25mA/30V DC
Smoke sensitivity	complies with EN 54-7:2018
Time to enter Standby mode after power supply is on	up to 40s
Reset Time	2s
Time to enter Standby mode after reset	up to 40s
Protected area	circle with diameter 15m (complies with EN 54-14)
Height of mounting	complies with EN54-14
Output in Alarm condition (RI/KL terminal)	for (RI) Remote Indicator
Degree of protection	IP43 (not verified by UL)
Operational temperature range	minus 10°C - plus 50°C
Relative humidity resistance	(93 \pm 3) % at 40°C
Dimensions, base included	\varnothing 100mm, h=52mm
Weight, base LF-DB50 included	0.100kg
Type of the connecting line to the base	2-wire, a single-core or multi-core insulated wire
Cross section of the connecting wire	(0.8-1.5) mm ²

Conventional Fixed Temperature Heat Detector

Model: LF-F50

Product of LIFECO



Overview

The fire detector is designed for early warning of a fire condition when the fixed temperature threshold in the protected premises is reached. The principle of functioning of the fire detector is based on the ohmic resistance alteration in the thermistor as a result of the ambient temperature change.

LF-F50 is fitted on a 50 series base.

The fire detector consists of a printed circuit board and a chamber with thermistor, fixed in a plastic body.

Both LED indicators allow range of visibility 360° and provide information for the status.

Nominal operating voltage	24V DC
Minimum operating voltage	10V DC
Maximum operating voltage	30V DC
Current consumption in Standby mode	80μA/22.5V DC
Current consumption in Alarm mode	8mA/10V DC; 25mA/30V DC
Temperature category	A2S (complies with EN54-5:2017 + A1:2018)
Protected area	circle with diameter 10m (complies with EN54- 4)
Height of mounting	up to 8m (complies with EN54-14)
Output in Alarm condition (RI/KL terminal)	for (RI) Remote Indicator
Degree of protection	IP43 (not verified by UL)
Operational temperature range	minus 10°C - plus 50°C
Relative humidity resistance	(93±3) % at 40°C
Dimensions, base included	Ø100mm, h=47mm
Weight, base LF-DB50 included	0.100kg
Type of the connecting line to the base	2-wire, a single-core or multi-core insulated wire
Cross section of the connecting wire	(0.8-1.5) mm ²

Manual Pull Station

Model No: LE-HPS-DAH

Product of LIFECO



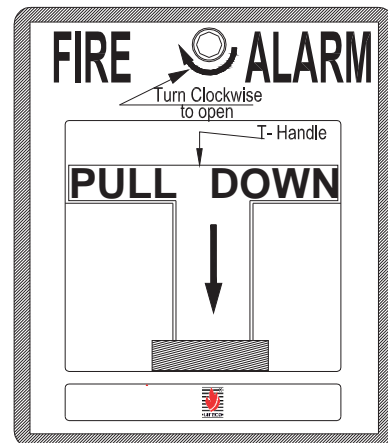
Overview

LIFECO LE-HPS-DAH is constructed of a solid die cast housing and comes in glossy red. The back switch plate is plated steel. The electrical switch is rated for 10 Amps @ 120 VDC normally open contact rating. All models are connected via terminal block connections.

Features

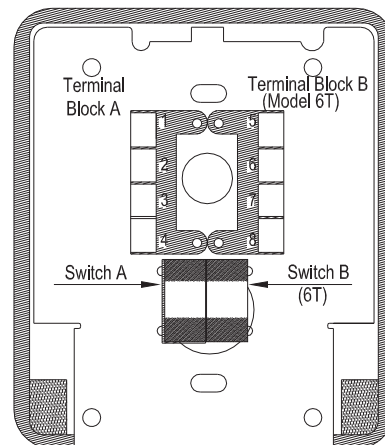
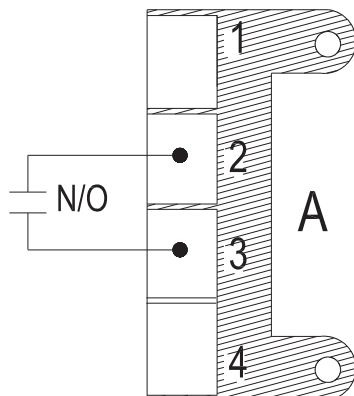
- ❖ Metal Construction
- ❖ Enclosed switch with glass rod (included)
- ❖ 10 Amps @ 120 VAC
- ❖ Dual Action with Hex Lock

Contact	SPST Form "A"
Terminal Block	A
Contact Rating	10A @ 120 VAC
Operating Temperature	-30°F (-35°C) ~ 150°F (66°C)



Front View

Wiring Diagram



Rear View

Abort Switch

Model: LF1823-10

Product of LIFECO



Overview

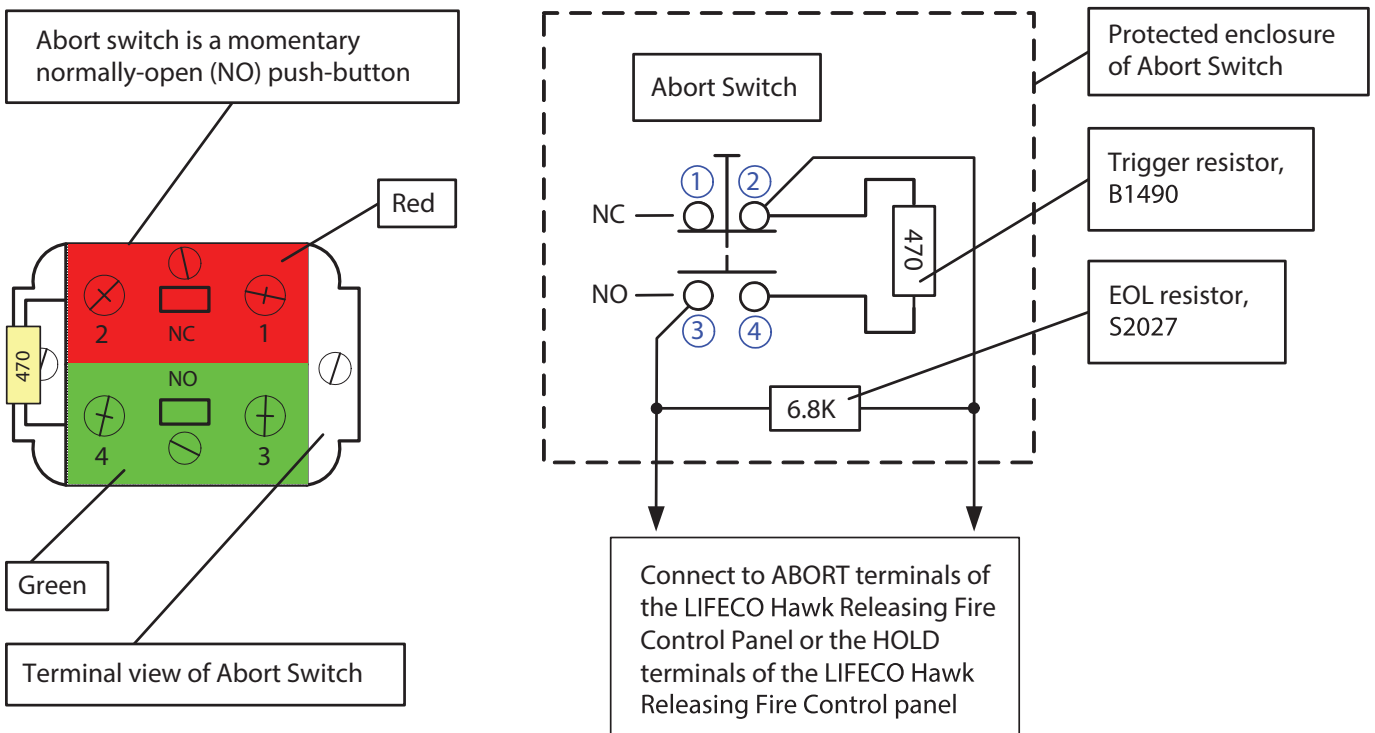
The LIFECO Abort switch connects to the Abort terminals of the LIFECO Hawk releasing panel. Any number of Abort switches may be connected to the circuit. The last switch must have the end of line device from the Abort circuit terminals of the LIFECO Hawk releasing panel fitted across its connections to provide open and short circuit supervision. The unit is supplied mounted to a rugged steel enclosure but may also be flush mounted to a single gang electrical box.

Features

- ❖ Capable of aborting releasing operation
- ❖ Includes a backbox for surface mount

Size	3.81" (W) x 3.81" (H) x 2.32" (D)
Switch rating	1A at 30VDC
Color	Red
Trigger resist	470R1W
End of line resistor	6K81/2 W

Wiring Diagram



Manual Disablement Switch

Model: LF1832-10

Product of LIFECO



Overview

LF1832-10 is a disconnect switch used to disable a releasing circuit for system testing or maintenance.

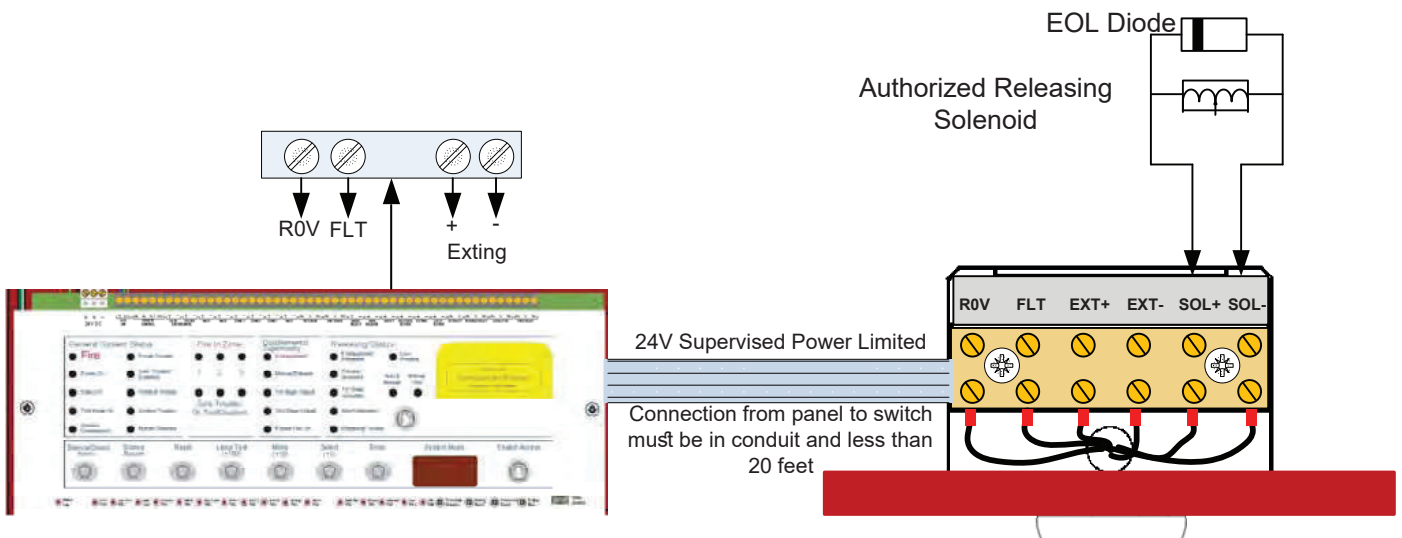
LF1832-10 is compatible with the Hawk releasing control panel.

Features

- ❖ Key removable in either position
- ❖ Both sides of solenoid circuit are mechanically disabled during activation
- ❖ Disablement illuminated at panel when active

Size	3.81" (W) x 3.81" (H) x 2.32" (D)
Colour	Red
Switch Rating	1A@3 OVDC

Wiring Diagram



Sounder with Beacon

Model No: LF-1110XXX

Product of LIFECO



Selectable Output	High: 92-96 dB(A) / Low: 86- 90 dB(A)
Current Consumption	14 mA at 24 V dc
Weight	0.06 kg
Operating Temperature	-5°C to +50°C
Material	Fire rated ABS
Operating Voltage	20 - 28 V dc

Overview

A product designed for conventional fire alarm systems, it is an ideal solution for environments that require a discreet but affective device.

Used as an ancillary visual alarm in fire systems; LIFECO Sounder with Beacon is suitable for conventional and 2-wire fire systems as well for general alarm and signalling systems.

As with the wider LIFECO range, the product is designed to fit any recessed single gang box, giving a flush finish or surface mounted using the default surface box.

Body colours available are Red and White.

Strobe colours available are Red, Clear, Amber, Blue and Green.

Features

- ❖ Aesthetically appealing design
- ❖ Sounder approved by UL to EN 54 Part 3
- ❖ Features 4 x 20 mm knockouts for surface and glanded entry



Flush Mounted

Surface Mounted



Sounder with Beacon

Model No: LF-1110XXX

Product of LIFECO

Flush Mounted

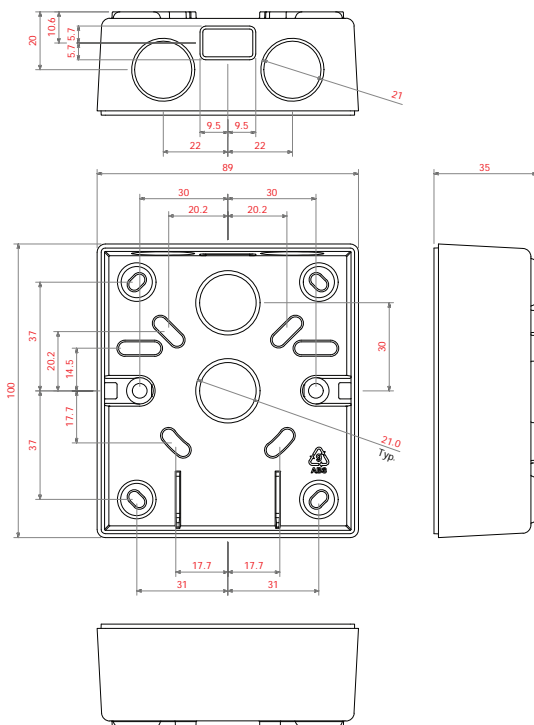
Part Code	Part Name
LF-1110RFA	Flush Mount, Red, Amber
LF-1110RFB	Flush Mount, Red, Blue
LF-1110RFG	Flush Mount, Red, Green
LF-1110RFR	Flush Mount, Red, Red
LF-1110RFW	Flush Mount, Red, White
LF-1110WFA	Flush Mount, White, Amber
LF-1110WFB	Flush Mount, White, Blue
LF-1110WFG	Flush Mount, White, Green
LF-1110WFR	Flush Mount, White, Red
LF-1110FW	Flush Mount, White, White

Surface Mounted

Part Code	Part Name
LF-1110RSA	Surface Mount, Red, Amber
LF-1110RSB	Surface Mount, Red, Blue
LF-1110RSG	Surface Mount, Red, Green
LF-1110RSR	Surface Mount, Red, Red
LF-1110RSW	Surface Mount, Red, White
LF-1110WSA	Surface Mount, White, Amber
LF-1110WSB	Surface Mount, White, Blue
LF-1110WSG	Surface Mount, White, Green
LF-1110WSR	Surface Mount, White, Red
LF-1110WSW	Surface Mount, White, White

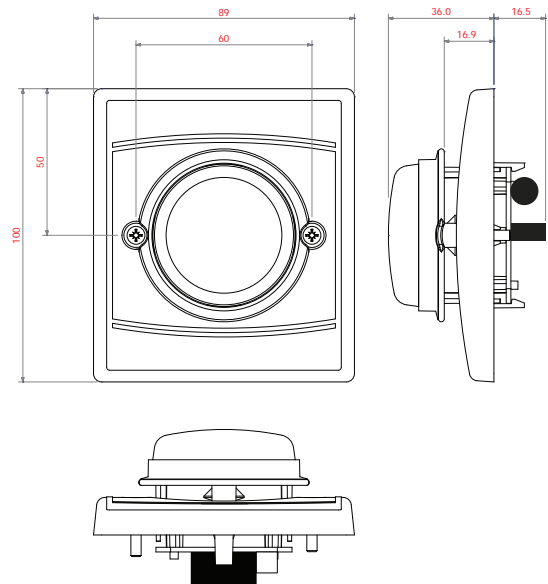
Technical Drawing

Back Box



Sounder Unit

Dimensions: mm



Fire Alarm Bell

Model No: LFB16, LFB18, LFB110

Product of LIFECO



Features

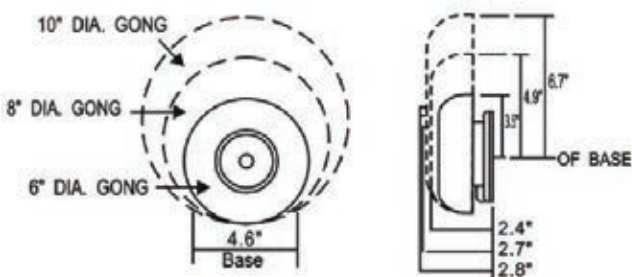
- ❖ Microprocessor based design
- ❖ High dBA Sounds Output
- ❖ Low power consumption
- ❖ Available in 6", 8" 10" Housing
- ❖ Quickly and Easily installed

Installation Instruction

- ❖ Remove bell gong by loosening hex bolt.
- ❖ Wire bell in circuit. (Notice Polarity)
- ❖ Mount bell mechanism on 4" square standard outlet box with the striker facing down.
- ❖ Replace the gong and tighten hex bolt.
- ❖ The bell must be mounted a minimum of 8ft above the floor, or as close to the ceiling as possible.
- ❖ Polarized bell provides Red(-) and Black(-) lead wires. When you install the bell, must observe the polarity.

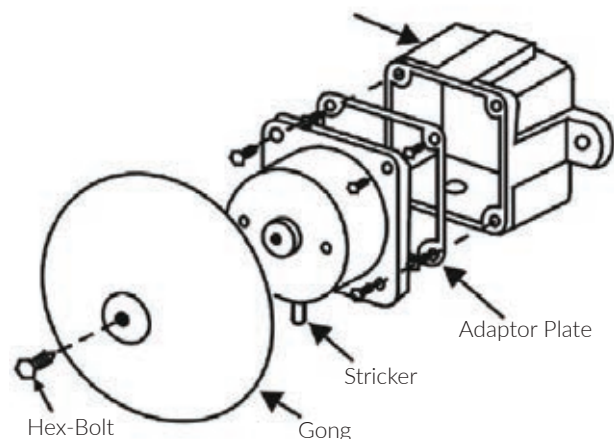
	LFB16	LFB18	LFB110
Gong size	6"	8"	10"
Voltage	24VDC	24VDC	24VDC
Current	20mA	20mA	20mA
Sound level	95dB@10ft	83dB@10ft	85dB@10ft

Dimension Details



Exploded View

Waterproof back box for outdoor use (optional)





Since 1983, SFFECO has been a trusted name in fire protection, known for innovation and quality worldwide.

With state-of-the-art facilities in Riyadh and Dubai, we deliver a complete range of firefighting solutions that meet international standards.

Our innovative approach and comprehensive product portfolio make SFFECO the one-stop destination for reliable fire protection products and services.

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