



LF-6100 1/2

Fire Alarm Control Panel



Features:

- Microprocessor Based System
- Intelligent Distributed System Structure
- Quick Response Time – Fire Alarm in less than 1 Second
- Capacity of 200/500 Addressable Devices
- 1 - 2 Intelligent Detection Circuits
- Up to 250 Devices per Loop
- Dynamic Supervision
- Fully Field Programmable
- 5" LCD Display – 320x240DPI Resolution
- 21 Key User Friendly Control Switches
- 15 LED Status Indicators
- Menu Driven Functions
- Up to 5 Secure and Independent Module Control Function
- 40 Column Event Logging Printer
- RS485 Communication for Fire Repeater Display Panel and CRT System.
- Laptop Programming
- 3 Level System Password Protection
- Logic Controlled Output Functions
- Circular History Event Flash Memory Storage
- Graphic Workstation Interface
- Up to 8 Network Nodes on a Single Graphic Workstation
- Data Transfer Speed and Reliability
- High Performance at Low Cost
- Wall Mount Enclosures





Description:

The LF-6100 1/2 distributed intelligent fire alarm control panel is a microprocessor based advanced detection and protection system. With its flexibility, unique design and ability to utilize both intelligent and conventional devices, makes it a very reliable system for life safety use. It adopts the use of a multi-line LCD screen for ease of viewing of events and controls, RTOS (Real Time Operating System), for real time monitoring and display of events, and a graphical display for user-friendly menu and control operation as well as ease of identifying information being sent by field devices to the Fire Alarm Controller.

The LF-6000's design widely applies to all kinds of industrial and commercial constructions with its high resistance to humidity, wide operating temperature range, high reliability and ease of installation and configuration.

With its user-friendly interface, the controller also adopts easy to identify function switches and status LED's that even untrained operators can understand and properly respond to the event that occurred (switches and LED's explained further on the succeeding page).

History recording is also an integral part of the system. All data is stored inside the system's flash memory and can be viewed or printed at any time using the event browser. A stored history event adopts the circular type storage wherein the oldest data gets deleted in replacement of new incoming data when memory buffer is full. Maximum capacity of history memory is approximated at 999 events.

The controller can accommodate up to 2 loops - 500 addressable points at the most which is adequate enough for small to medium sized life safety applications. Each device has a code that is to be set using the LF-DP-6190 Device Programmer.

An Auto-Learn feature for devices is also present in the system. The controller analyzes the environment on which the detection devices are installed and adjust the detector's actuation level accordingly.

It also utilizes a specialized loop circuit design, in which the device's transmitted data is sorted out based on its priority. The information with the highest priority would transfer first. Other information from the field devices up to the controller shall be processed accordingly which ensures a rapid and efficient response of the system. Fire Alarm from a field device is transmitted in less than 1 second.

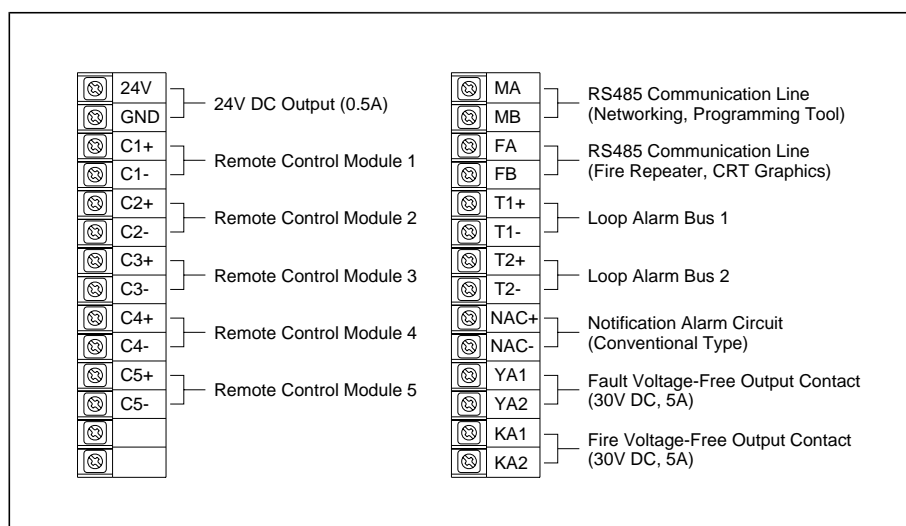
A secure direct link control panel can also be installed for up to 5 critical facilities which are mainly used to start or stop an exterior device independently even upon failure of the main fire alarm controller. It is used for critical elements such as fire pumps, smoke control fans or other facilities which requires direct control even upon failure of the system's processor. It is totally independent from the main controller but has the same functionality for monitoring alarm and line faults. The direct link control panel is secured with a lock and key for access restriction.



Wiring:

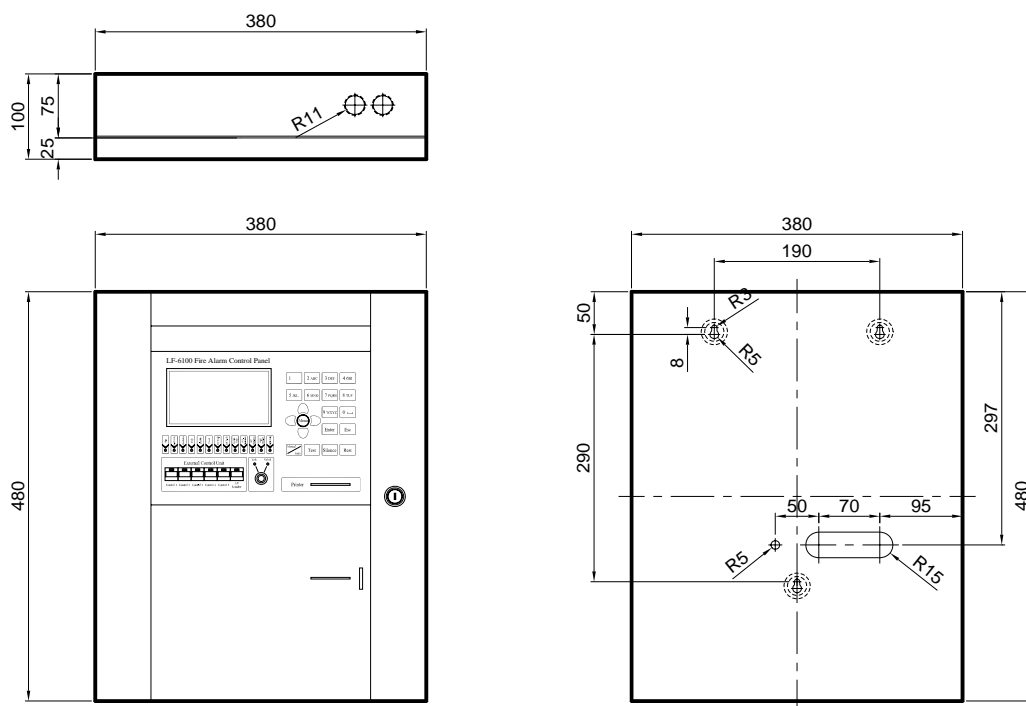
Minimum Wiring Requirements:

- Detection Loop and Module Control Bus – 1 x 1.5mm² color coded twisted pair cable
- 24V DC Power – 2 x 2.5 wire



External Wiring Terminals

Dimensional Details:



Note: All dimensions are in millimeters



TECHNICAL SPECIFICATION

Detector Loops	1 - 2 Loops
Loop Capacity	250 address points for each bus
Max Capacity	500 addresses points
Main Power Supply	AC 220V (+10%~-15%), 50Hz
Back-up Power Supply	DC 24V, 4AH (built-in)
Power Consumption	Supervising status: $\leq 3W$; alarm status: $\leq 10W$ (all 25 units fire detectors are in fire alarm status)
External Control Unit	5
External Control Unit Contact Capacity	DC 30V, 1A
Polling Cycle	≤ 10 seconds (single point continues searching in abnormal situation)
Signal Transmission Distance	$\leq 1000m$ (RVS-2x1x1.0mm ²); $\leq 1500m$ (RVS-2x1x1.5mm ²)
Alarm Line Wiring Method	2 wire bus
Voltage in Alarm Bus	24V (18V~26V)
Operating Temperature	0°C ~ 55°C
Relative Humidity	$\leq 95\%$
Event Storage Capacity	Up to 999 events
Associated Operation Programmable Number	100 including OR1, OR2 & AND logic.
Fire Alarm Output Relay	1 set (KA1, KA2) voltage free contact, normally open
Fault Output Relay	1 set (YA1, YA2) voltage free contact, normally open
Network Interface	RS485
Dimensions	480 x 380 x 100mm

ORDERING INFORMATION

Model Number	Description
LF-6100 / 1	1 Loop - 250 Devices Fire Alarm Control Panel
LF-6100 / 2	2 Loops - 500 Devices Fire Alarm Control Panel



LF-6100 3/4

Fire Alarm Control Panel



Features:

- Microprocessor Based System
- Intelligent Distributed System Structure
- Quick Response Time – Fire Alarm in less than 1 Second
- Capacity of 1000 Addressable Devices
- 3 - 4 Intelligent Detection Circuits
- Up to 250 Devices per Loop
- Dynamic Supervision
- Fully Field Programmable
- 5" LCD Display – 320x240DPI Resolution
- 21 Key User Friendly Control Switches
- 15 LED Status Indicators
- Menu Driven Functions
- Up to 16 Secure and Independent Module Control Function
- 40 Column Event Logging Printer
- RS485 Communication for Fire Repeater Display Panel and CRT System.
- Laptop Programming
- 3 Level System Password Protection
- Logic Controlled Output Functions
- Circular History Event Flash Memory Storage
- Graphic Workstation Interface
- Up to 8 Network Nodes on a Single Graphic Workstation
- Up to 29 LF-6100 ½ for each LF-6100 3/4
- Data Transfer Speed and Reliability
- High Performance at Low Cost
- Wall Mount Enclosures



Description:

The LF-6100 3/4 distributed intelligent fire alarm control panel is a microprocessor based advanced detection and protection system. With its flexibility, unique design and ability to utilize both intelligent and conventional devices, makes it a very reliable system for life safety use. It adopts the use of a multi-line LCD screen for ease of viewing of events and controls, RTOS (Real Time Operating System), for real time monitoring and display of events, and a graphical display for user-friendly menu and control operation as well as ease of identifying information being sent by field devices to the Fire Alarm Controller.

The LF-6000's design widely applies to all kinds of industrial and commercial constructions with its high resistance to humidity, wide operating temperature range, high reliability and ease of installation and configuration.

With its user-friendly interface, the controller also adopts easy to identify function switches and status LED's that even untrained operators can understand and properly respond to the event that occurred (switches and LED's explained further on the succeeding page).

History recording is also an integral part of the system. All data is stored inside the system's flash memory and can be viewed or printed at any time using the event browser. A stored history event adopts the circular type storage wherein the oldest data gets deleted in replacement of new incoming data when memory buffer is full. Maximum capacity of history memory is approximated at 999 events.

The controller can accommodate up to 4 loops - 1000 addressable points at the most which is adequate enough for small to medium sized life safety applications. Each device has a code that is to be set using the LF-DP-6190 Device Programmer.

An Auto-Learn feature for devices is also present in the system. The controller analyzes the environment on which the detection devices are installed and adjust the detector's actuation level accordingly.

It also utilizes a specialized loop circuit design, in which the device's transmitted data is sorted out based on its priority. The information with the highest priority would transfer first. Other information from the field devices up to the controller shall be processed accordingly which ensures a rapid and efficient response of the system. Fire Alarm from a field device is transmitted in less than 1 second.

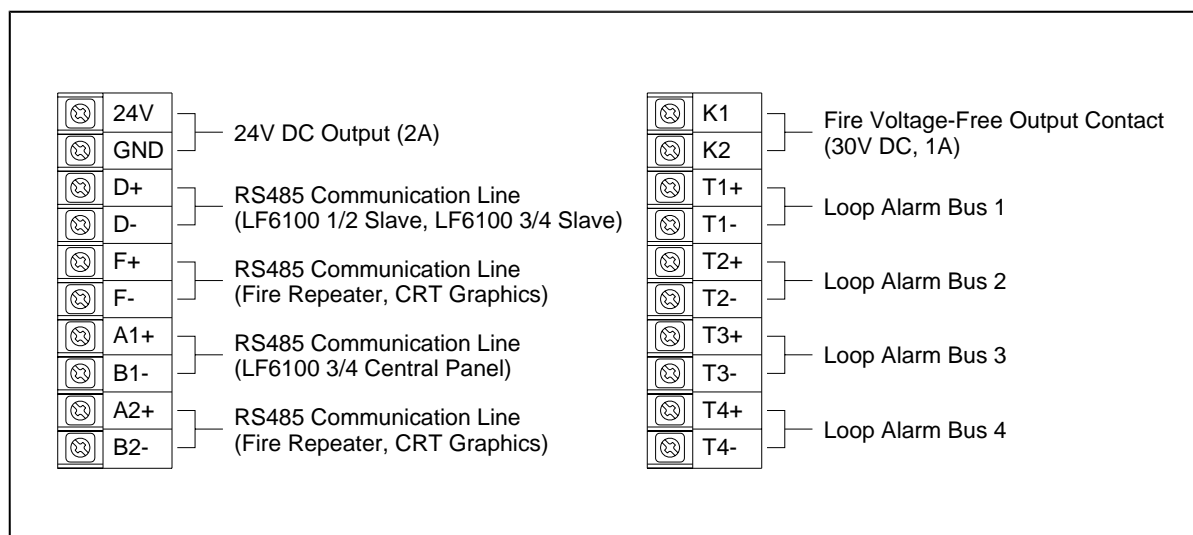
A secure direct link control panel can also be installed for up to 16 critical facilities which are mainly used to start or stop an exterior device independently even upon failure of the main fire alarm controller. It is used for critical elements such as fire pumps, smoke control fans or other facilities which requires direct control even upon failure of the system's processor. It is totally independent from the main controller but has the same functionality for monitoring alarm and line faults. The direct link control panel is secured with a lock and key for access restriction.



Wiring:

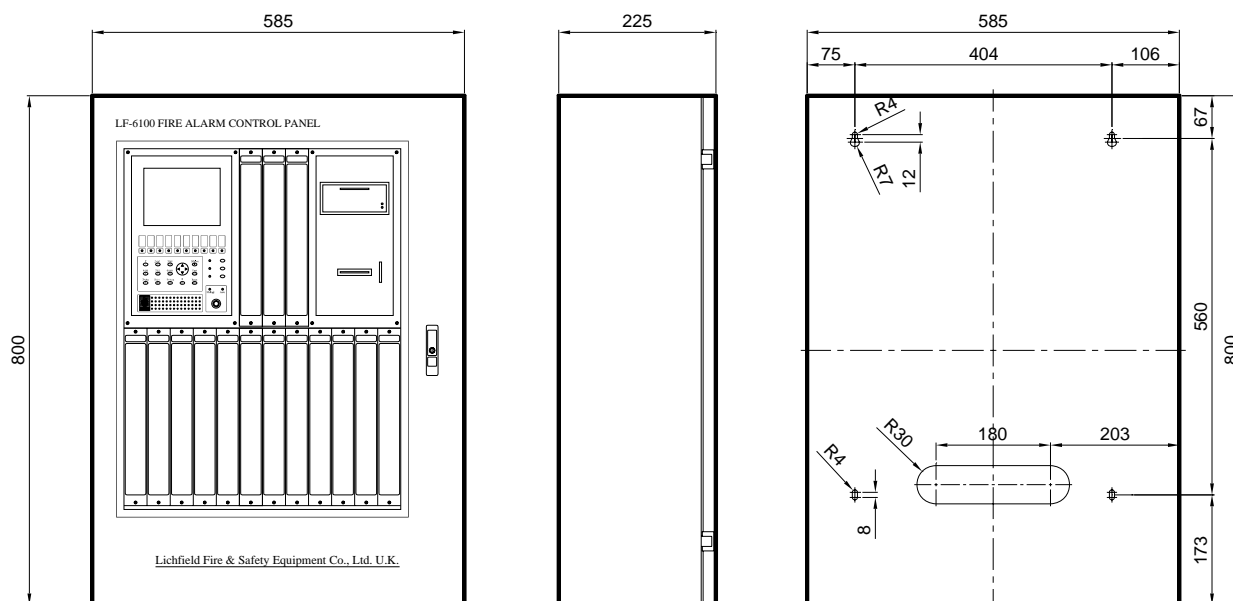
Minimum Wiring Requirements:

- Detection Loop and Module Control Bus – 1 x 1.5mm² color coded twisted pair cable
- 24V DC Power – 2 x 2.5 wire



External Wiring Terminals

Dimensional Details:



Note: All dimensions are in millimeters



TECHNICAL SPECIFICATION

Detector Loops	3 - 4 Loops
Loop Capacity	250 address points for each bus
Max Capacity	1000 addresses points
Main Power Supply	AC 220V (+10%~-15%), 50Hz
Back-up Power Supply	DC 24V, 4AH (built-in)
Power Consumption	Supervising status: $\leq 3W$; alarm status: $\leq 10W$ (all 25 units fire detectors are in fire alarm status)
External Control Unit	Up to 16
External Control Unit Contact Capacity	DC 30V, 1A
Polling Cycle	≤ 10 seconds (single point continues searching in abnormal situation)
Signal Transmission Distance	$\leq 1000m$ (RVS-2x1x1.0mm ²); $\leq 1500m$ (RVS-2x1x1.5mm ²)
Alarm Line Wiring Method	2 wire bus
Voltage in Alarm Bus	24V (18V~26V)
Operating Temperature	0°C ~ 55°C
Relative Humidity	$\leq 95\%$
Event Storage Capacity	Up to 999 events
Associated Operation Programmable Number	2500 Logic Expressions
Fire Alarm Output Relay	1 set (KA1, KA2) voltage free contact, normally open
Network Interface	RS485

ORDERING INFORMATION

Model Number	Description
LF-6100 / 3	3 Loops - 750 Devices Fire Alarm Control Panel
LF-6100 / 4	4 Loops - 1000 Devices Fire Alarm Control Panel



LF-6150

Repeater Panel



Features:

- 1000 Point Address Monitoring
- LCD Screen Display
- Up to 30 Repeater Panels per System
- Easy Installation (Wall-mounting)
- Small Size
- User Friendly
- 4-wire connection
- Low Power Consumption
- LED Status Indicators
- Internal Sounder with Silence Button

Description:

The LF-6150 Repeater Panel is responsible for replicating fire and trouble information of a specific region from the Fire Control Unit. The device can monitor the alarm or the trouble state of 4 zones with up to 1000 addressable points at most and display its information.

Fire alarm and Fault alarm LEDs are provided to indicate the status of the monitored devices and the communication between the repeater and the Main Control Unit.

The address and time of actuation of all programmed points shall be displayed on the LCD Screen Display upon fire or fault indication.

An internal speaker is also provided and would activate as soon as alarm information is displayed. The Silence button cancels the operation of the internal speaker.

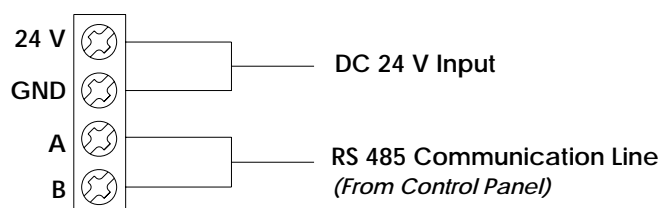
For security purposes, the Repeater Panel's menu operation is password protected so only authorized personnel would be allowed to change the system settings.

The repeater's design widely applies to suit normal industrial and residential buildings with its high resistance to humidity, wide operating temperature range, high reliability, sleek design and ease of installation and configuration.

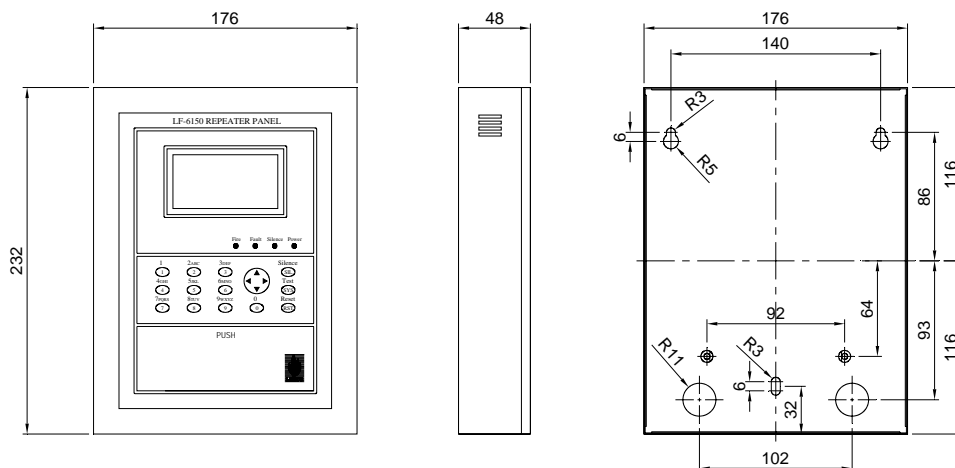


Wiring:

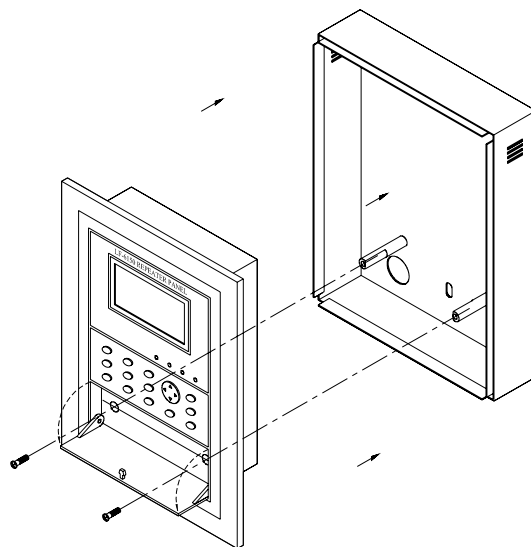
The signal wire adopts RVS-2×1.0mm² twin-color twisted multi-stock plastic flexible cord, whose sectional area is no less than 2.5mm².



Dimensional Details:



Installation Details:



Note: All dimensions are in millimeters



TECHNICAL SPECIFICATION:

Main Power Supply	24 VDC	
Consumption	Supervising Status	≤1.5W
	Alarm Status	≤2.4W
Signal Transmission Distance	≤1500m	
Operating Temperature	0°C ~ 55°C	
Relative Humidity	≤95%	
Dimension	223x176x48mm	
Weight	2.0kg	
Installation Method	Wall-mounted	



LF-AV-6125

Audible and Visual Alarm Indicator



Features:

- Built-in CPU
- Addressable Output Device
- Quick Response Time
- Piezoelectric Horn
- Automatic or Manual Activation
- Data Transfer Speed and Reliability
- High Performance at Low Cost
- Wall Mount Type
- Four Wire Operation
- Use LF-DP-6190 for device addressing

Description:

The LF-AV-6125 Audible and Visual Alarm Indicator adopts a built-in integrated circuit, a piezoelectric sounder and a flasher which when combined, produces a high energy conversion efficiency for effective output of light and sound while utilizing a minimum amount of power. It is also directly connected to the detection loop of the Fire Panel to effectively monitor the device for faults or control for alarm activation.

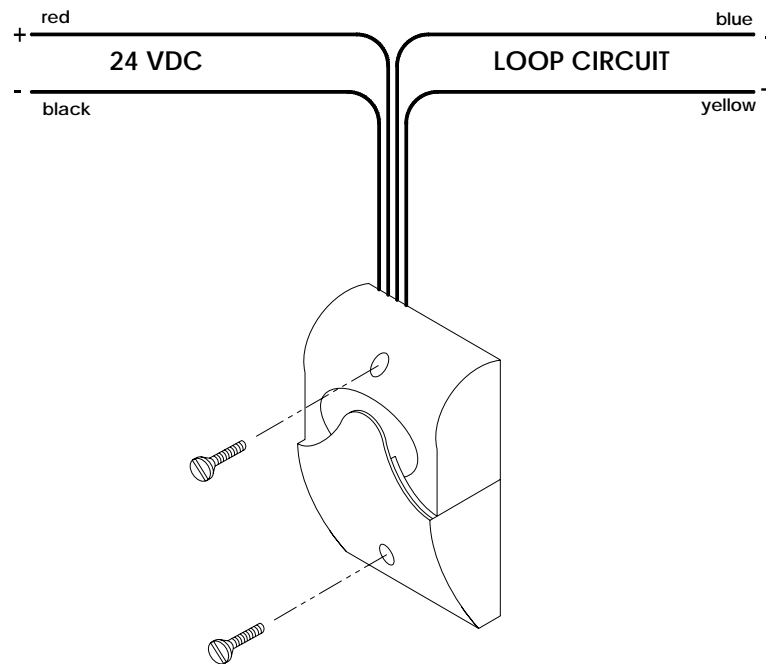
It has a built-in input and output circuitry specially designed for audible and visual alarm indication. The Fire Alarm Controller can be programmed to selectively activate individual audio-visual indicators as deemed necessary.

It also adopts preemptive alarm technology which organizes the data received from the audio-visual indicator. The information with the highest priority would transfer first. Other collected data shall be transmitted to the device based on its priority status which ensures the rapid response of the system.

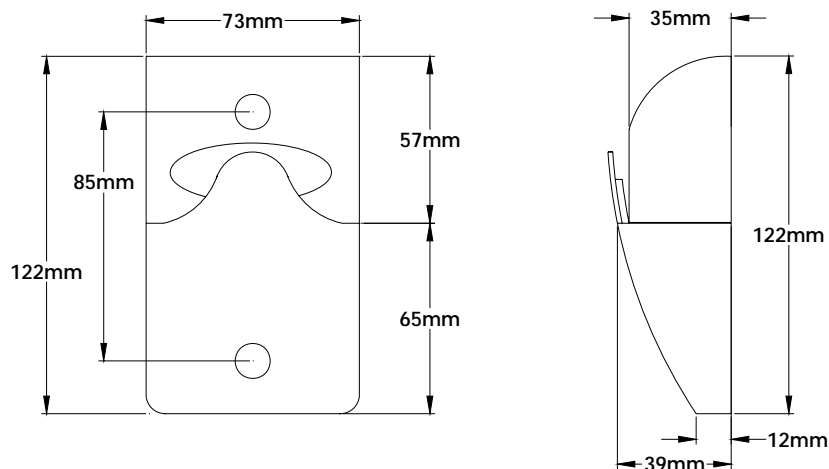
The indicator's design widely applies to all kinds of industrial and commercial construction with its high resistance to humidity, wide operating temperature range, high reliability and ease of installation and configuration.



Wiring and Installation Details:



Dimensional Details:





TECHNICAL SPECIFICATION:

Operating Voltage	18 ~ 26V DC
Standby Current	$\leq 500\mu\text{A}$
Alarm Current	$\leq 60\text{mA}$
Sound Level	80dB
Flash Rate	1.33Hz $\pm 20\%$
Modified Tone Cycle	0.75S $\pm 20\%$
Wiring	4-wire
Operating Temperature	-10°C ~ +50°C
Relative Humidity	$\leq 95\%$
Dimension	148x100x58mm
Weight	Approx 600g
Color	Red/White



LF-CDI-6107

Conventional Zone Interface



Features:

- Low Profile Design
- Built-in CPU
- Interfaces Conventional Series Devices
- ALARM FIRST! – Less than 1 second
- Up to 20 Conventional Devices per Module
- Data Transfer Speed and Reliability
- Polarized Wiring
- LED Status Indicators
- High Performance at Low Cost
- Four Wire System
- EMI and RFI Resistant
- Use LF-DP-6190 for device addressing

Description:

The LF-CDI-6107 Conventional Zone Interface provides the means of connecting a single zone of conventional detectors to the Fire Alarm Control Panel. Typical connections would be conventional type smoke, heat, manual call point, heat sensing cables, and gas detectors. It can be used as an addressable alarm initiating device for conventional devices and as a control input for other auxiliary functions.

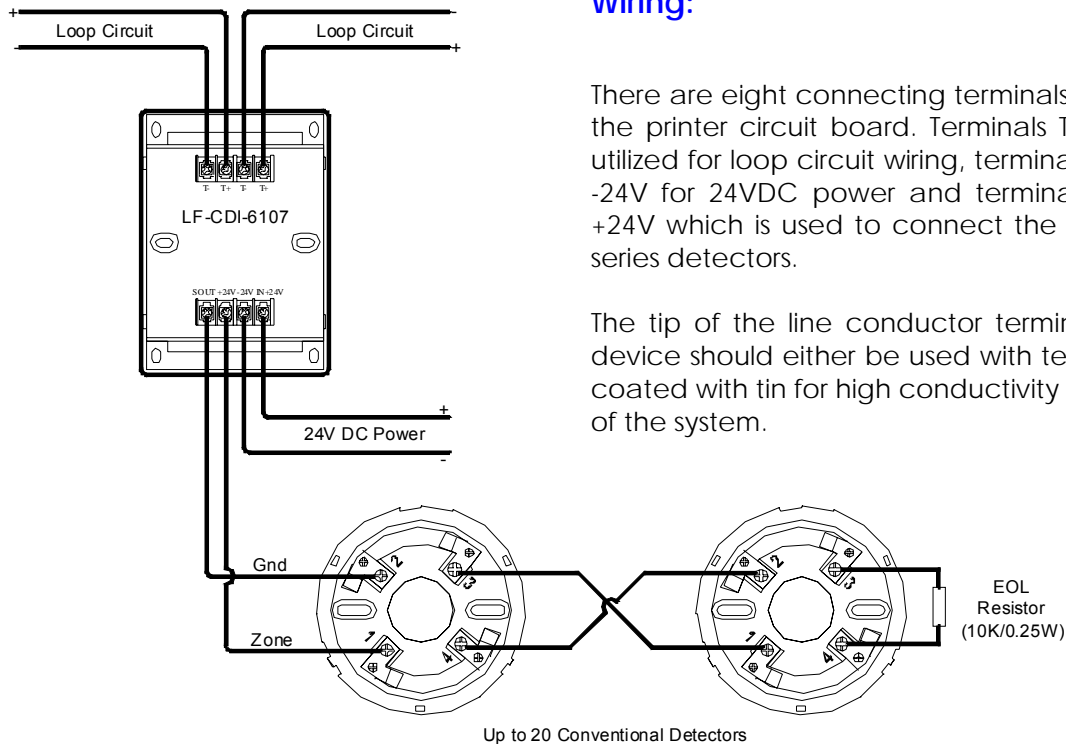
The conventional zone interface can connect up to 20 conventional devices. Any combination of smoke or heat detector, manual call point and gas detector can be used.

Other collected data shall be transmitted to the controller based on their priority status which ensures the rapid response of the system. Fire Alarm can be received in less than 1 second.

The module's design widely applies to all kinds of industrial and commercial constructions with its high resistance to humidity, wide operating temperature range, high reliability and ease of installation and configuration.



Lichfield Fire & Safety Equipment Co., Ltd. U.K.

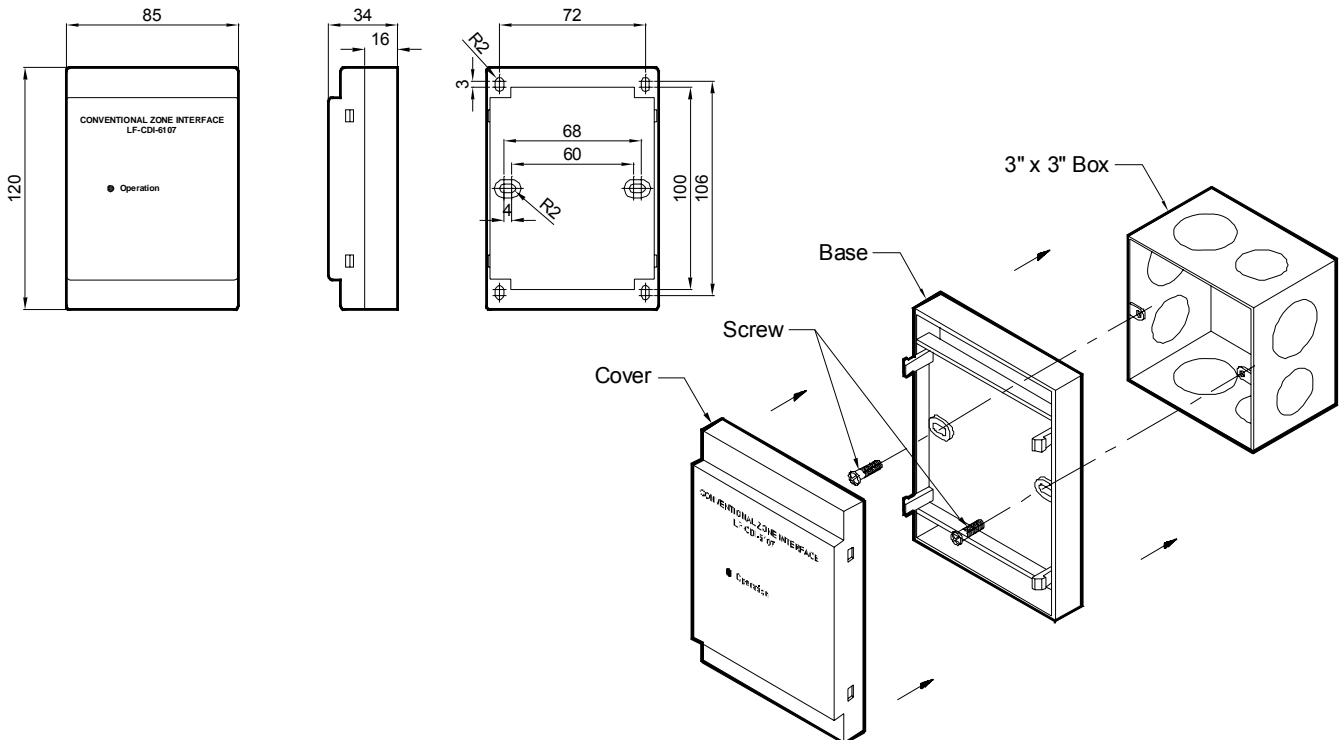


Wiring:

There are eight connecting terminals mounted on the printer circuit board. Terminals T+ and T- are utilized for loop circuit wiring, terminal IN+24V and -24V for 24VDC power and terminal S OUT and +24V which is used to connect the conventional series detectors.

The tip of the line conductor terminating at the device should either be used with terminal lugs or coated with tin for high conductivity and reliability of the system.

Dimensions and Installation Details:



Note: All dimensions are millimeters.



TECHNICAL SPECIFICATION

Operating Voltage	18 ~ 26V DC
Standby Current	$\leq 350\mu\text{A}$
Alarm Current	$\leq 1.5\text{mA}$
Operating Temperature	$-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$
Relative Humidity	$\leq 95\%$
Max Quantity per Loop	250
Max Quantity of Conventional Device	20
Dimensions	120 x 85 x 34mm
Weight	Approx 100g
Color	Off-white



LF-CSW-6154

Remote Control Module



Features:

- Totally Independent from Main Controller
- Low Profile Design
- Fast and Accurate Response Time
- Feedback Monitoring
- Selectable Normally Open or Close Contact Input
- Polarized Wiring
- High Performance at Low Cost

Description:

The LF-CSW-6154 Remote Control Module provides the means of directly controlling an auxiliary device and its status as well.

With its flexibility, the user has the option of either utilizing a normally open or normally close dry contact available on the module. It has the provision of connecting a normally open switch feedback input to monitor the status of the controlled auxiliary device.

LF-CSW-6154 is used together with the External Control Unit of the LIFECO LF-6100 Series Addressable Fire Alarm System which is mainly used to start or stop an exterior device independently even upon the failure of the main fire alarm controller. It is used for critical elements such as fire pumps, smoke control fans or other facilities which require direct control even upon failure of system's processor.

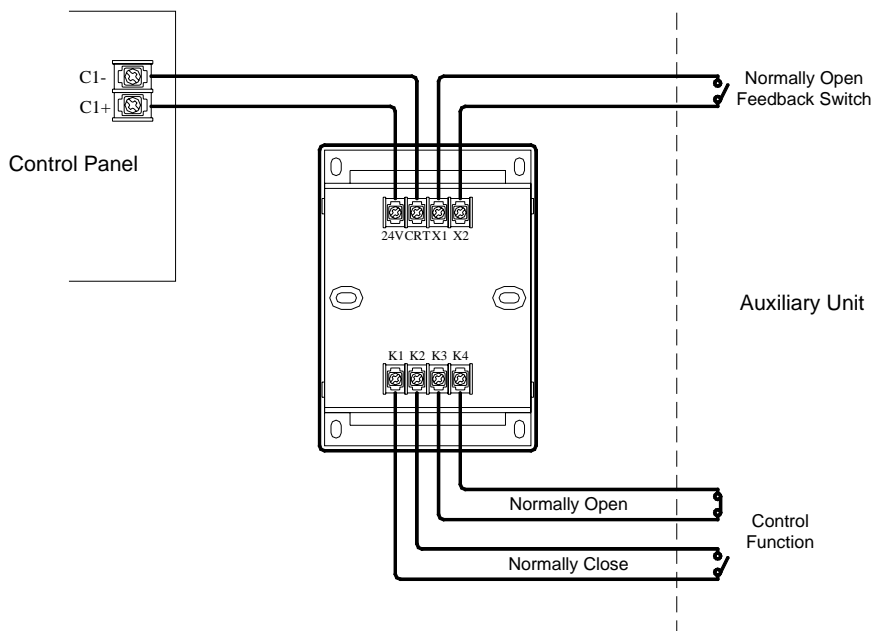
It is totally independent from the main controller but has the same functionality for monitoring alarm and line faults.



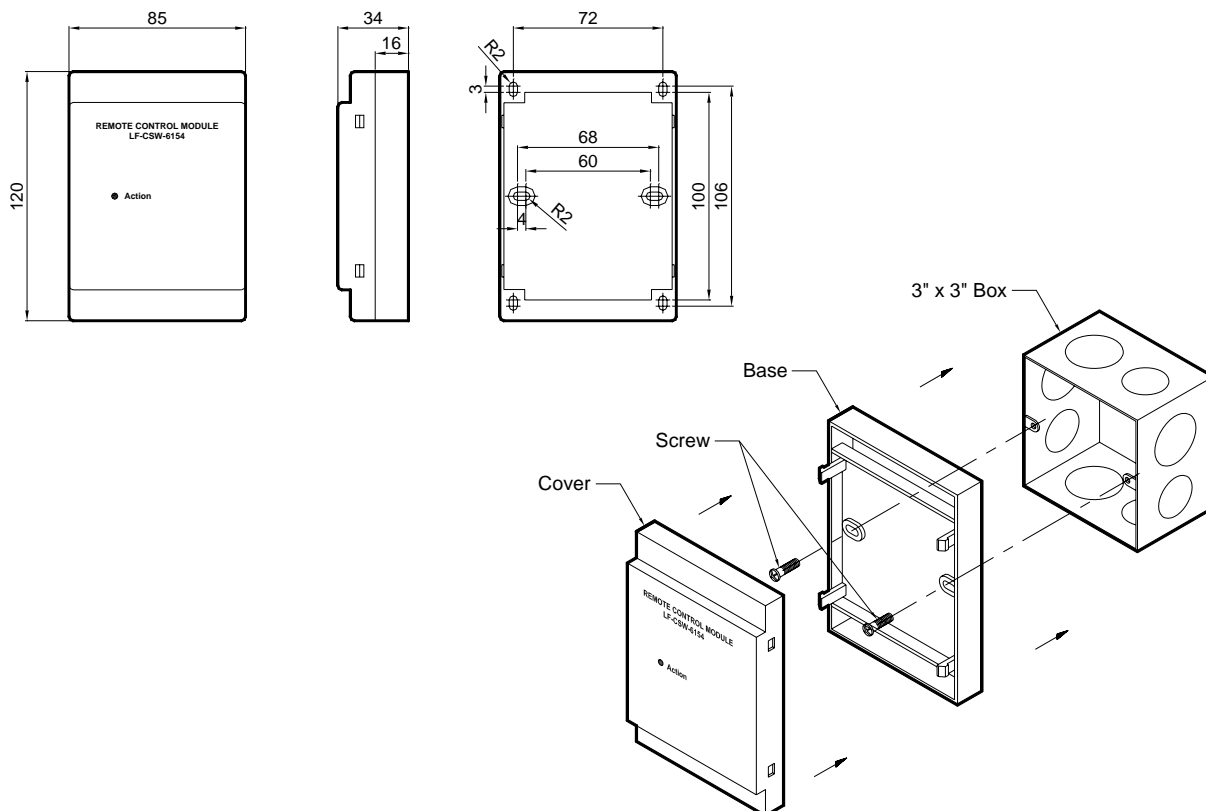
Wiring:

There are eight connecting terminals on each module. Terminal 24V and CRT are utilized for multi-line output contact connections from the control panel, terminal K1 and K2 are normally open dry contact, terminal K3 and K4 are normally close dry contact and terminal X1 and X2 which is used to connect a normally open feedback line input for monitoring.

The tip of the line conductor terminating at the module terminals should either be used with terminal lugs or coated with tin for high conductivity and reliability of the system.



Dimension and Installation Details:



Note: All dimensions are millimeters.



TECHNICAL SPECIFICATION

Input Voltage	DC 24V
Standby Current	$\leq 500\mu\text{A}$
Alarm Current	$\leq 2\text{mA}$
Dry Contact Rating	DC 24V 2A, AC 220V 0.5A
Operating Temperature	0°C ~ +50°C
Material	ABS Plastic
Weight	100g
Dimensions	120x85x34mm
Color	Off-White



LF-DB-LI

Detector Isolating Base



Features:

- Loop Powered
- Polarity Sensitive
- Isolates Short Circuit faults and spurs
- Red LED Indicator

Description:

The LF-DB-LI isolating base is intended for use with the LIFECO LF-6100 Series detectors.

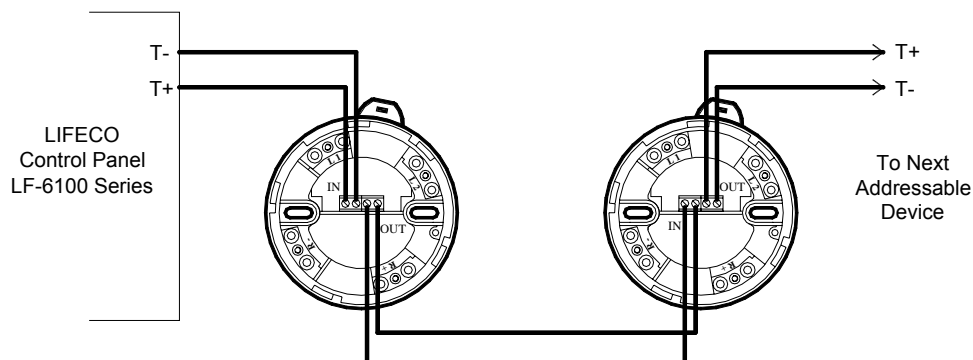
The LF-DB-LI isolating base senses and isolates short circuit faults on LF-6100 loops and spurs. In short-circuit conditions the integral red LED is illuminated. The detector associated with the base remains active under short-circuit conditions. Power and signals to the affected section are restored automatically when the fault is cleared.

Under normal operating conditions, a low impedance is present between the -IN and -OUT terminals of the base, so that power and signals pass to the next base in line.

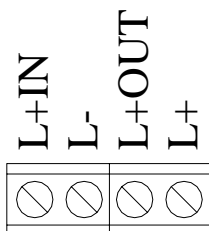
If a short-circuit or abnormal low impedance occurs, the fall in voltage is sensed and the base isolates the negative supply in the direction of the fault. The isolated section is tested using a current pulse every five seconds. When the short-circuit is removed, the power will automatically be restored.



Wiring:



Terminal Block Connections



Isolating Base Terminal Functions

- L1 not used
- L2 not used
- R+ positive connection to remote LED
- R- negative connection to remote LED

TECHNICAL SPECIFICATION

Operating Voltage	18 ~ 26V DC
Standby Current	780μA max
Action Current	4.6mA max
Operating Temperature	-10°C ~ +50°C
Relative Humidity	≤95% Non-Condensing
Material	ABS Plastic
Weight	Approx 100g
Color	Off-white



LF-DP-6190

Address Programmer



Features:

- Address Coding and Reading of addressable devices
- Analog Value Reading
- Calibrated Value Reading
- Low Voltage Indicator
- Optional Power Supply (9V Internal Battery or External 24 VDC)
- LCD Screen
- Easy to Use

Description:

The LF-DP-6190 Address Programmer is responsible for addressing fire alarm devices such as call points, detectors and modules connected in a loop. Up to 250 devices can be given identification per loop.

The programmer has both internal 9V battery and external 24 VDC power supply methods available. The power supply switch is located at the left side of the programmer.

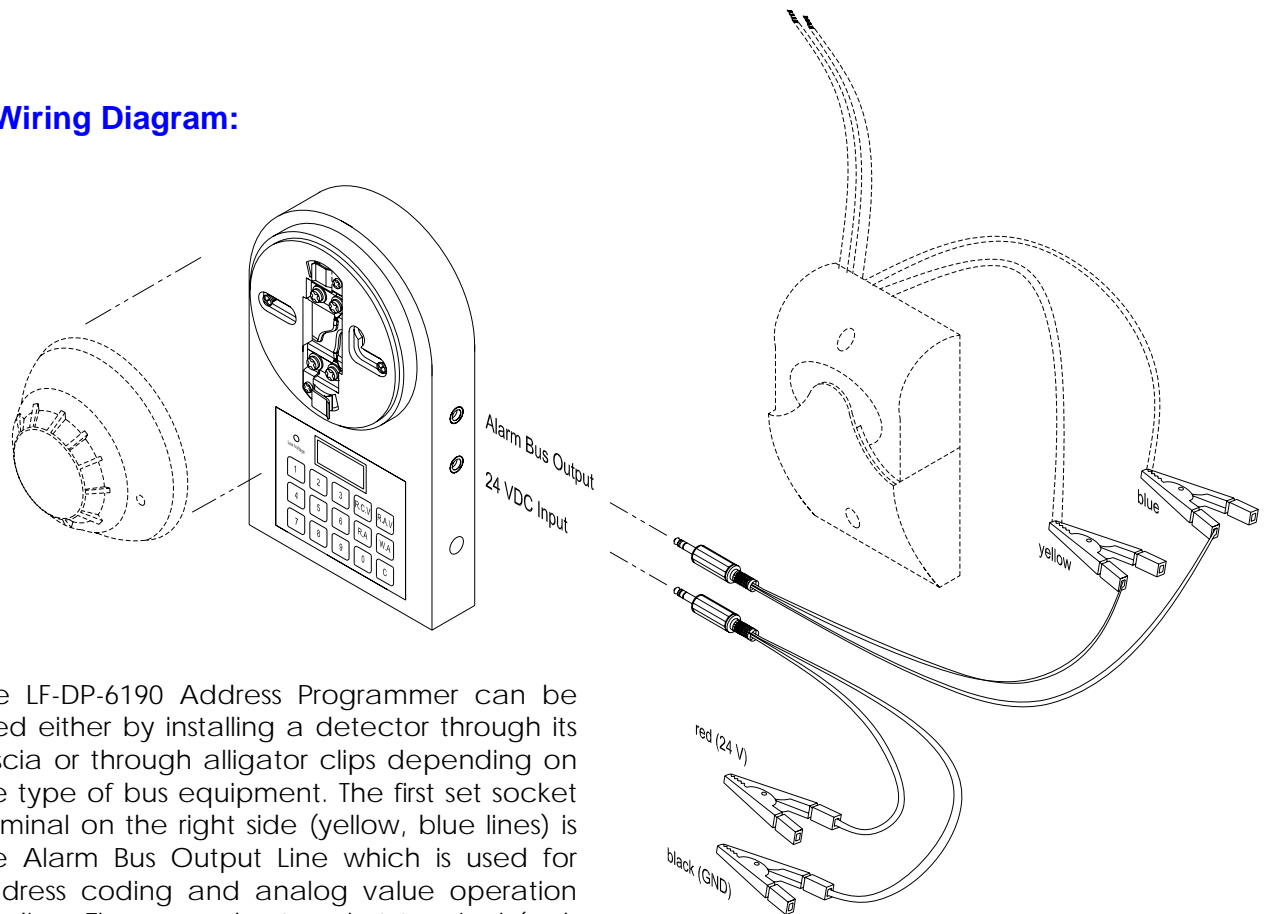
New input codes can be addressed into bus equipments by the Write Address (W.A) button and be displayed on the LCD screen.

Also, bus equipments' address code can be read by pressing the Read Address (R.A) button and be displayed on the LCD screen.

Calibrated and Analog Value of bus equipments can also be read and be displayed on the LCD screen by pressing R.C.V and R.A.V. buttons respectively.

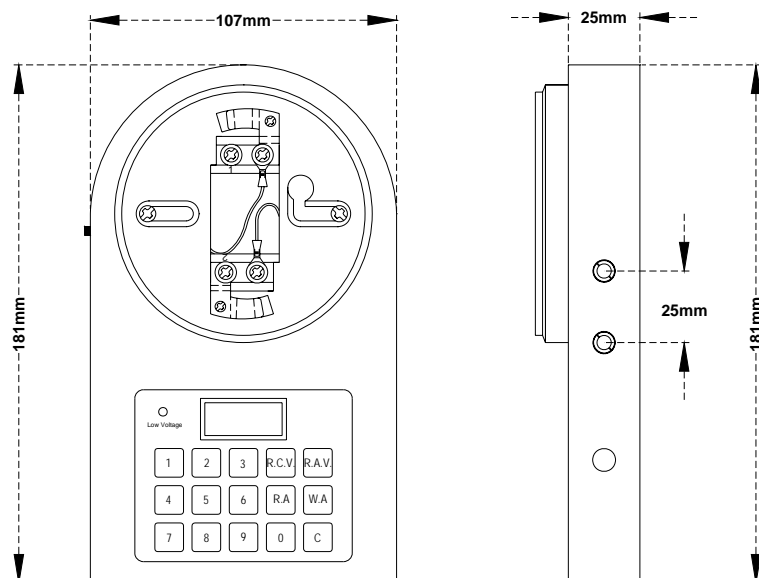


Wiring Diagram:



The LF-DP-6190 Address Programmer can be used either by installing a detector through its fascia or through alligator clips depending on the type of bus equipment. The first set socket terminal on the right side (yellow, blue lines) is the Alarm Bus Output Line which is used for address coding and analog value operation reading. The second set socket terminal (red, Black lines) is 24 V Power Supply Input Line which is used when the programmer uses external power supply.

Dimensional Details:





TECHNICAL SPECIFICATION:

Operating Voltage	24 VDC or 18VDC
Quiescent Current	1.7mA max/24VDC
	1.7mA max/18VDC
Operating Current	2.7mA max/24VDC
	2.2mA max/18VDC
Operating Temperature	-10°C ~ + 50°C
Relative Humidity	≤95%
Dimension	181x107x25mm
Color	Off-White



LF-FD-6104

Intelligent UV Flame Detector



Features:

- Low Profile Design
- Sensitive Ultraviolet Sensor
- Equipped with CPU Central Processor
- LED Indicator
- Polarized Wiring
- ALARM FIRST! – Less than 1 second
- High Performance at Low Cost
- Dust, Corrosion and Humidity Resistant
- Twist Lock Base
- Use LF-DP-6190 for device addressing

Description:

The LF-FD-6104 Intelligent UV Flame Detector has a wide angular sensitivity that can reliably and quickly detect the presence of a flame within its field of view by sensing the ultra violet radiation emitted.

The detector has been designed for internal use and is particularly suited for installations where flame can be expected to develop initially rather than smoke due to the nature of combustible materials such as film, video and computer tapes.

It also adopts preemptive alarm technology which organizes the data received from the detectors. The information with the highest priority would transfer first.

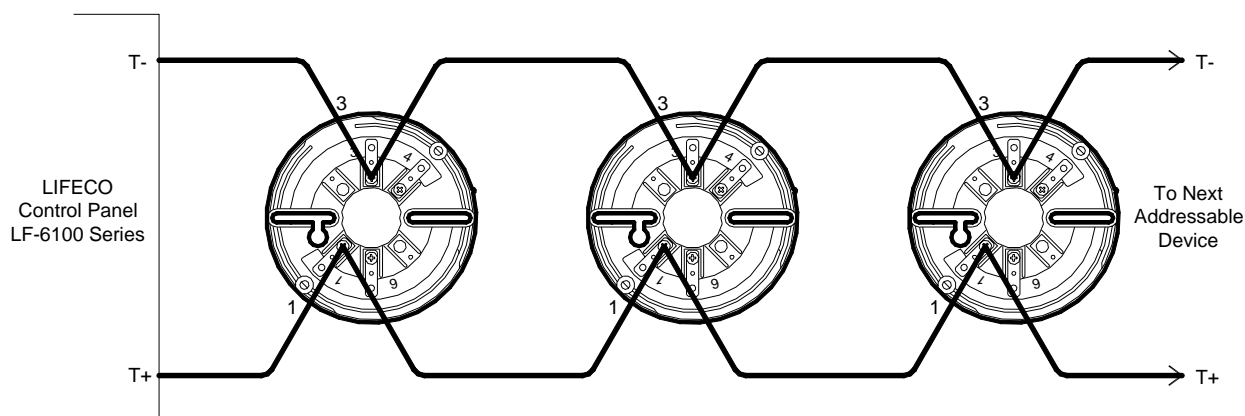
Other collected data shall be transmitted to the controller based on their priority status which ensures the rapid response of the system. Fire Alarm can be received in less than 1 second.

The detector's design widely applies to all kinds of industrial and commercial constructions with its high resistance to humidity, wide operating temperature range, high reliability and ease of installation and configuration.



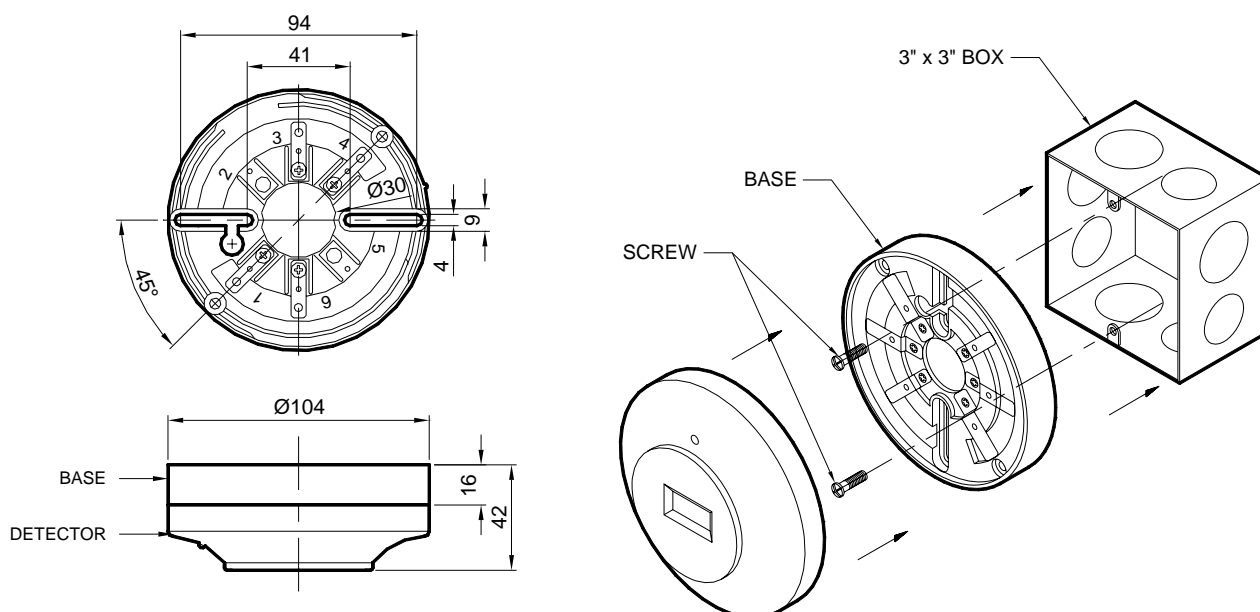
Description:

There are four connecting terminals on each detector base. Terminal 1 and 3 utilized for loop wiring and terminal 4 and 6 are not in use. The tip of the line conductor terminating at the detector base should either be used with terminal lugs or coated with tin for high conductivity and reliability of the system.



The detector circuit requires a twisted pair copper cable with a diameter of not less than 1.5mm². The total resistance of the conductor based on the loop length should not exceed 30Ω.

Dimensions and Installations:



Note: All dimensions are in millimeters.



TECHNICAL SPECIFICATION

Operating Voltage	18 to 26V DC
Standby Current	≤2.5mA
Alarm Current	≤2.8mA
Detection Angle	120°
Operating Temperature	-10°C ~ +50°C
Relative Humidity	≤95% Non-Condensing
LED Indication (Red)	Pulsing - Stanby
	Steady - ALARM
Dimensions	Ø104 x 42mm (w/ base)
Material	ABS Plastic
Weight	Approx 150g
Color	Ivory



LF-HD-6102

Intelligent Heat Detector



Features:

- Low Profile Design
- Fixed Point Type
- Equipped with CPU Central Processor
- 2-wire non polarity design
- Electronic Heat Thermistor
- Automatic Judge Fire Alarm
- ALARM FIRST! – Less than 1 second
- High Performance at Low Cost
- Twist Lock Base
- Provision for Remote LED Indicator
- Use LF-DP-6190 for device addressing

Description:

The LF-HD-6102 intelligent heat detector provides an advanced method of detection, address programming and supervision, combined with sophisticated control panel communication. The detector uses a state-of-the-art thermistor providing 143°F (62°C) fixed temperature.

The LF-HD-6102 intelligent heat detector is compatible with the LF-DP-6190 field programmer/tester. This programmer is compact & portable with menu driven accessories which makes programming and testing detectors faster, easier and more reliable than other methods.

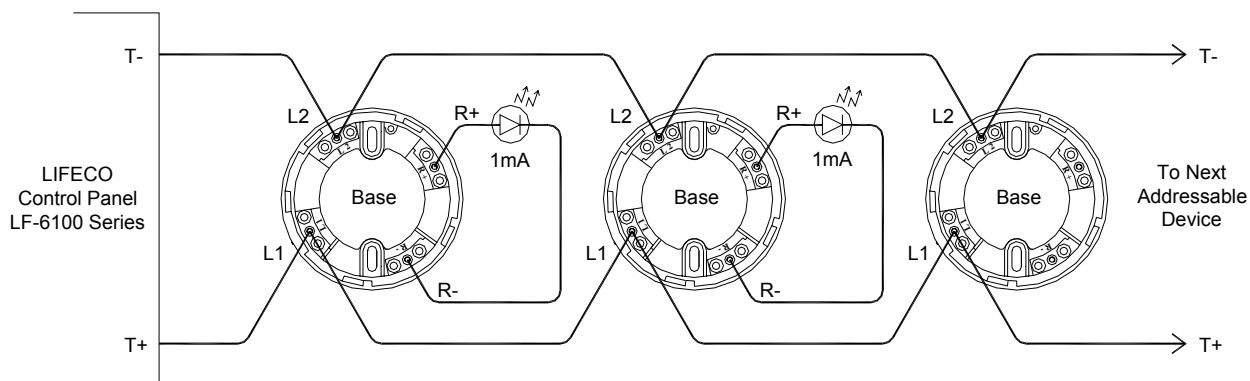
The LF-HD-6102 is a plug-in, two wire detector, compatible with the LF-6100 Series Control Panel. Each detector has a microcomputer chip technology and highly solid state electronic circuitry.

This detector, which is shock and corrosion resistant, respond only to heat, so its suitable for use in areas where normal conditions would prohibit the use



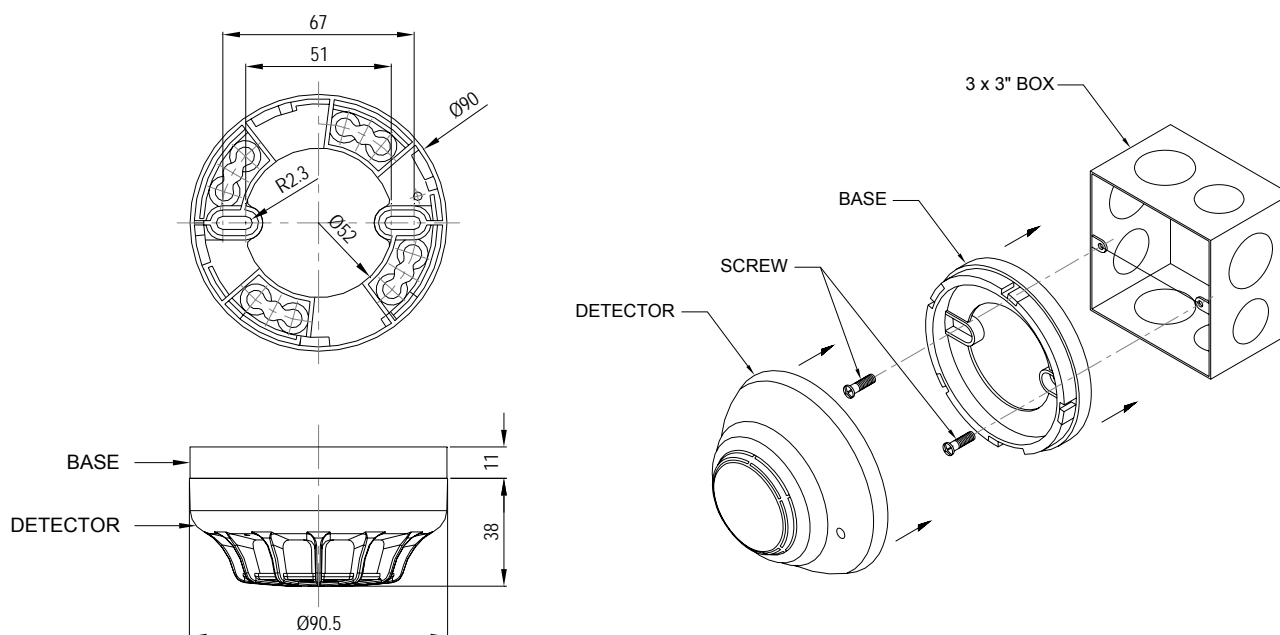
Description:

There are four connecting terminals on each detector base. Terminal L1 and L2 utilized for loop wiring and terminal R+ and R- is used to connect a Remote LED Indicator. The tip of the line conductor terminating at the detector base should either be used with terminal lugs or coated with tin for high conductivity and reliability of the system.



The detector circuit requires a twisted pair copper cable with a diameter of not less than 1.5mm². The total resistance of the conductor based on the loop length should not exceed 30Ω.

Dimensions and Installations:



Note: All dimensions are in millimeters.



TECHNICAL SPECIFICATION

Operating Voltage	18 ~ 26V DC
Standby Current	$\leq 350\mu\text{A}$
Alarm Current	$\leq 1.5\text{mA}$
Operating Temperature	-10°C ~ +50°C
Relative Humidity	$\leq 95\%$ Non-Condensing
Remote LED Indicator	24V DC, 1mA
LED Indication (Red)	Pulsing - Standby
	Steady - ALARM
Dimensions	Ø91 x 45.5mm (w/ base)
Material	ABS Plastic
Weight	Approx 100g
Color	Off-white



LF-LI-6190

Short-Circuit Isolator



Features:

- Low Profile Design
- Built-in CPU
- Self-restoring
- Up to 50 Addressable Devices per Isolator
- Data Transfer Speed and Reliability
- Polarized Wiring
- LED Status Indicators
- High Performance at Low Cost
- Two Wire System

Description:

The LF-LI-6190 Short-Circuit Isolator provides short circuit protection on LIFECO addressable device circuits. When a short is detected by the LF-LI-6190, it isolates the affected segment of the circuit, allowing the remaining devices to continue operation.

The LF-LI-6190 is self-restoring, automatically reconnecting to circuit segment when the fault is removed

The isolator's design widely applies to all kinds of industrial and commercial constructions with its high resistance to humidity, wide operating temperature range, high reliability and ease of installation and configuration.

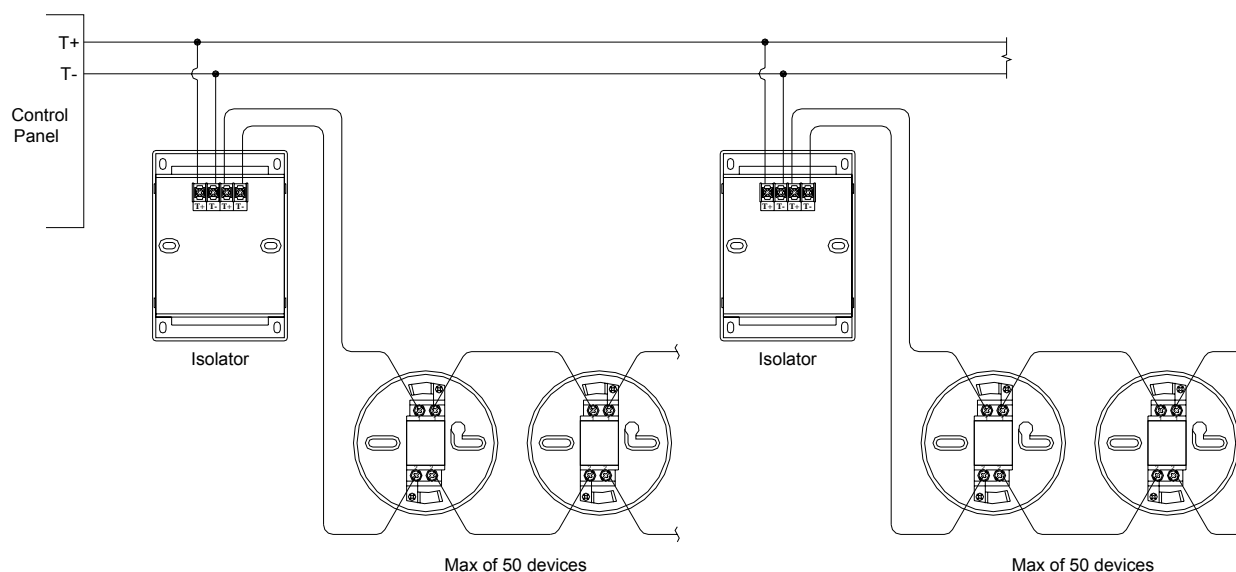


Wiring Diagram:

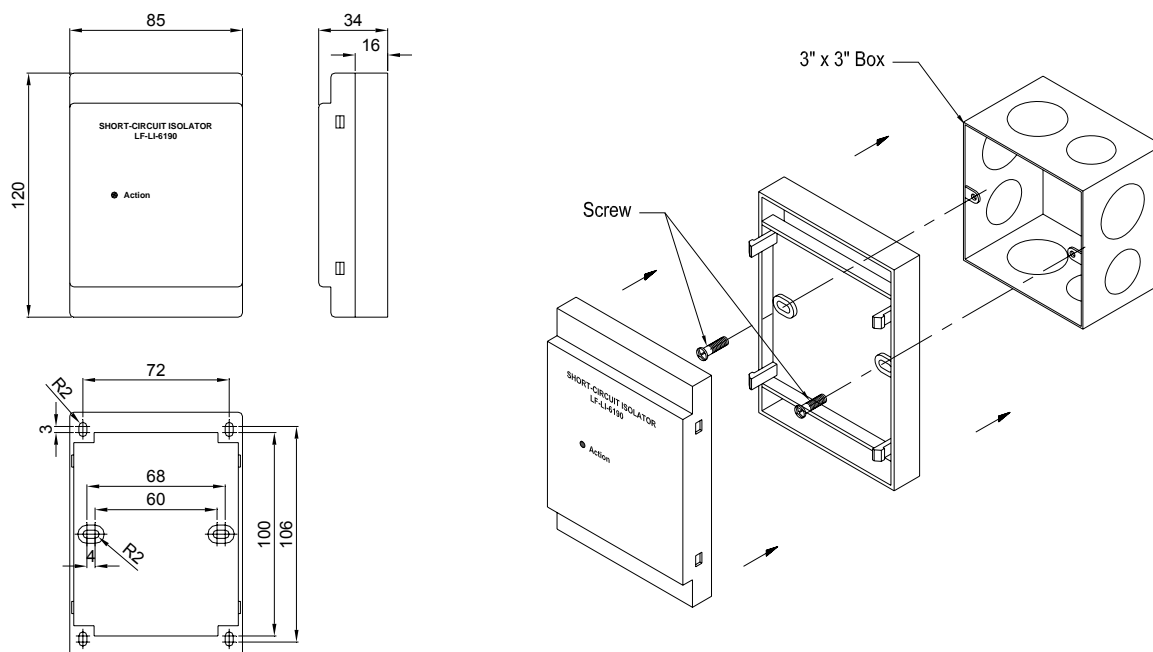
Warning: Observe proper polarity on the module when terminating.

The tip of the line conductor terminating at the isolator base should either be used with terminal lugs or coated with tin for high conductivity and reliability of the system.

The Short-Circuit Isolator loop circuit requires a twisted pair copper cable with a diameter of not less than 1.0mm². The total resistance of the conductor based on the loop length should not exceed 30Ω.



Dimensions & Installation:



Note: All dimensions are in millimeters.



TECHNICAL SPECIFICATION

Operating Voltage	DC 24V
Standby Current	$\leq 500\mu\text{A}$
Alarm Current	$\leq 8\text{mA}$
Short-Circuit Control Initiation Current	$\leq 300\text{mA}$
Operating Temperature	$-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$
Relative Humidity	$\leq 95\%$
Dimensions	120 x 85x 34mm
Weight	Approx 225g
Color	Off-white



LF-MCP-6103

Addressable Manual Call Point



Features:

- Built-in CPU
- ALARM FIRST! – Less than 1 second
- Data Transfer Speed and Reliability
- LED Status and Alarm Indicator
- Easy Operation – Push to Activate
- Resettable Type
- Ergonomic Construction
- Durable Design
- High Performance at Low Cost
- Two Wire Operation
- Use LF-DP-6190 for device addressing

Description:

The LF-MCP-6103 Manual Call Point has a 2 way communication with the Fire Alarm Control Panel thus making it an intelligent initiating device. With its sleek and durable design, it can be installed anywhere along corridors, hallways and exits for easy access to operate in cases where there is a requirement for manually activating an alarm signal.

It also adopts preemptive alarm technology which organizes the data received from the detectors. The information with the highest priority would transfer first.

Other collected data shall be transmitted to the controller based on their priority status which ensures the rapid response of the system. Fire Alarm can be received in less than 1 second.

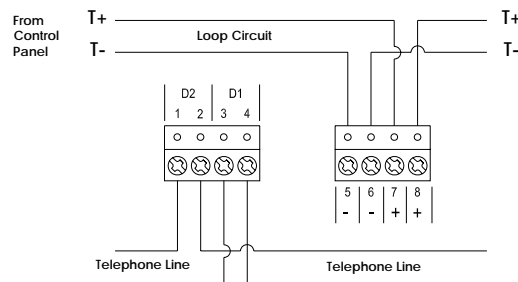
The manual call point's design widely applies to all kinds of industrial and commercial constructions with its high resistance to humidity, wide operating temperature range, high reliability and ease of installation and configuration.



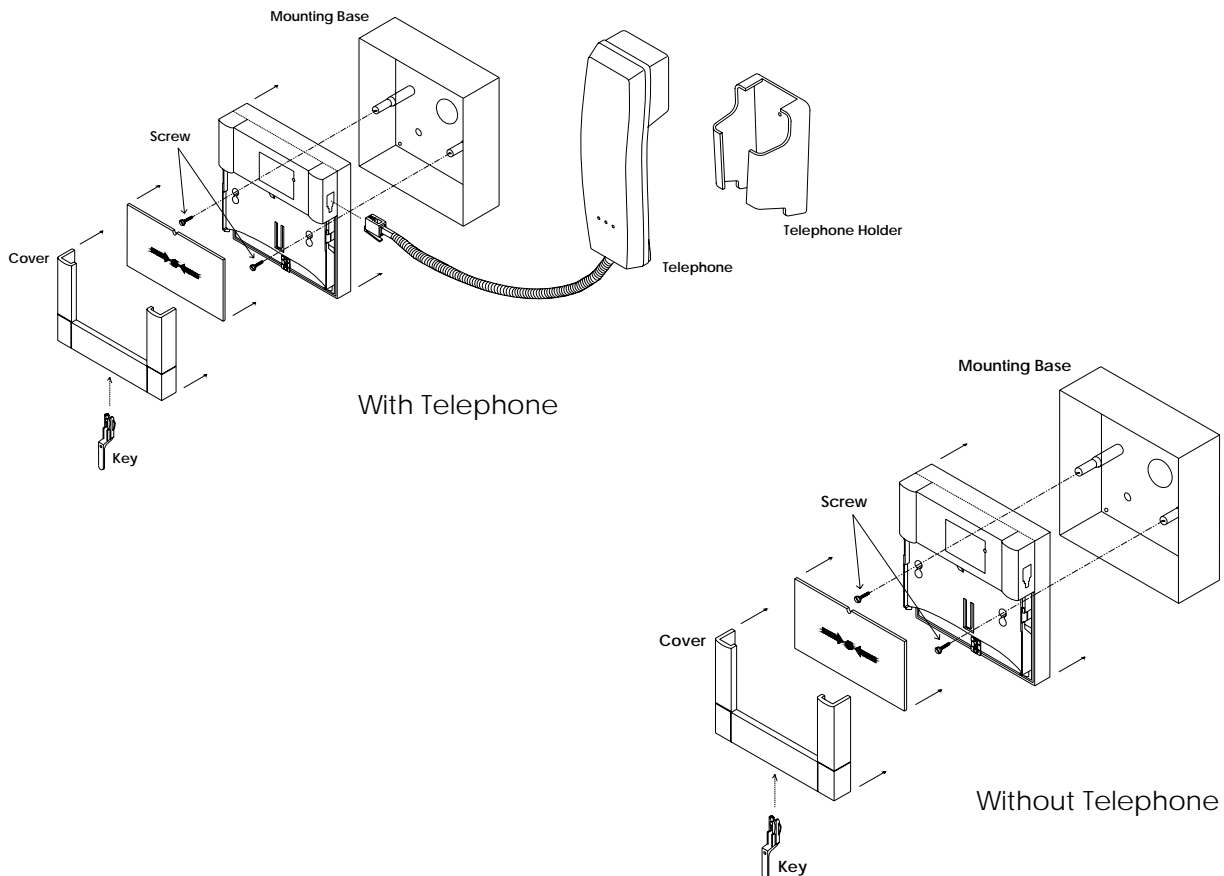
Lichfield Fire & Safety Equipment Co., Ltd. U.K.

Wiring:

There are eight connecting terminals mounted on the printed circuit board. Terminals 1, 2, 3 and 4 are used to connect to the telephone jack for access to the Main Fire Telephone and terminals 5, 6, 7 and 8 are utilized for loop circuit. The tip of the line conductor terminating at the device should either be used with terminal lugs or coated with tin for high conductivity and reliability of the system.

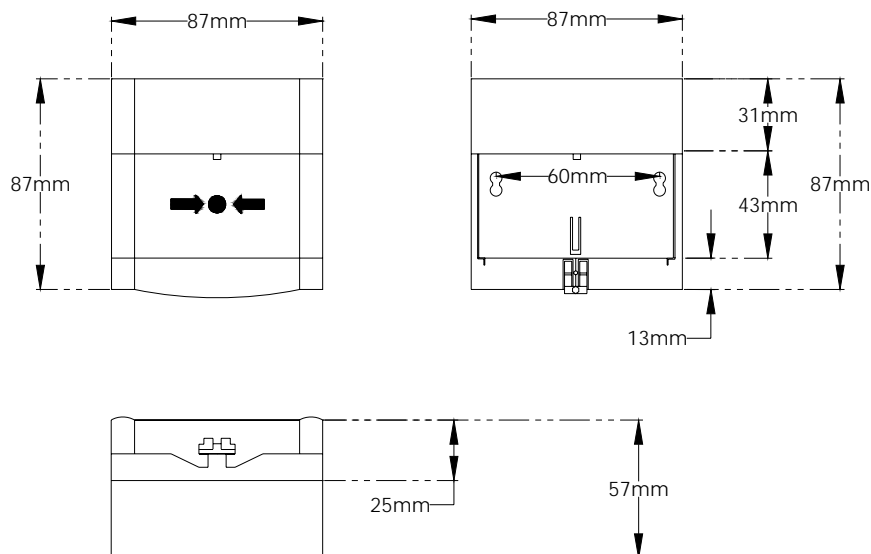


Installation:





Dimensional Details:



TECHNICAL SPECIFICATION:

Operating Voltage	24 VDC
Standby Current	$\leq 250\mu\text{A}$
Alarm Current	$\leq 2\text{mA}$
Operating Temperature	$-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$
Relative Humidity	$\leq 95\%$
Dimension	87x87x57mm
Weight	Approx 150g
Color	Red



LF-PE-6101

Intelligent Photo-electric Smoke Detector



Features:

- Low Profile Design
- Built-in CPU
- Specialized Smoke Chamber Design
- Auto Analysis
- Dynamic Automatic Compensation
- High Veracity of Fire Judgment
- ALARM FIRST! – Less than 1 second
- Data transfer Speed and Reliability
- 2-wire non polarity design
- High Performance at Low Cost
- Twist Lock Base
- Provision for Remote LED Indicator
- Use LF-DP-6190 for Device Coding

Description:

The LF-PE-6101 intelligent type photo-electric smoke detector utilizes the light scatter sensing principle. It has an infrared light source, which emits signals and photo-diode, which senses the scattering light with the effect of smoke entering the chamber. The chamber is of light proof labyrinth type protected with thin metals mesh for protection from dust, insects and other external interferences.

The LF-PE-6101 intelligent smoke detector is compatible with the LF-DP-6190 field programmer/tester. This programmer is compact & portable with menu driven accessories which makes programming and testing detectors faster, easier and more reliable than other methods.

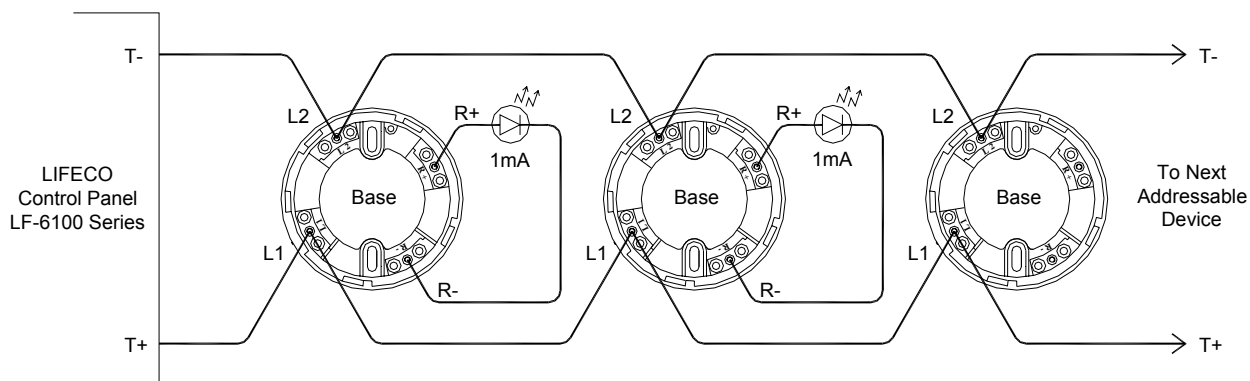
The LF-PE-6101 is a plug-in, two wire detector, compatible with the LF-6100 Series Control Panel. Each detector consists of a dust resistant, field-cleanable photoelectric chamber and microprocessor based electronics with a low-profile plastic housing. Every detector is shipped with a protective dust cover.

The detector's design widely applies to all kinds of industrial and commercial constructions with its high resistance to humidity, wide operating temperature range, high reliability and ease of installation and configuration.



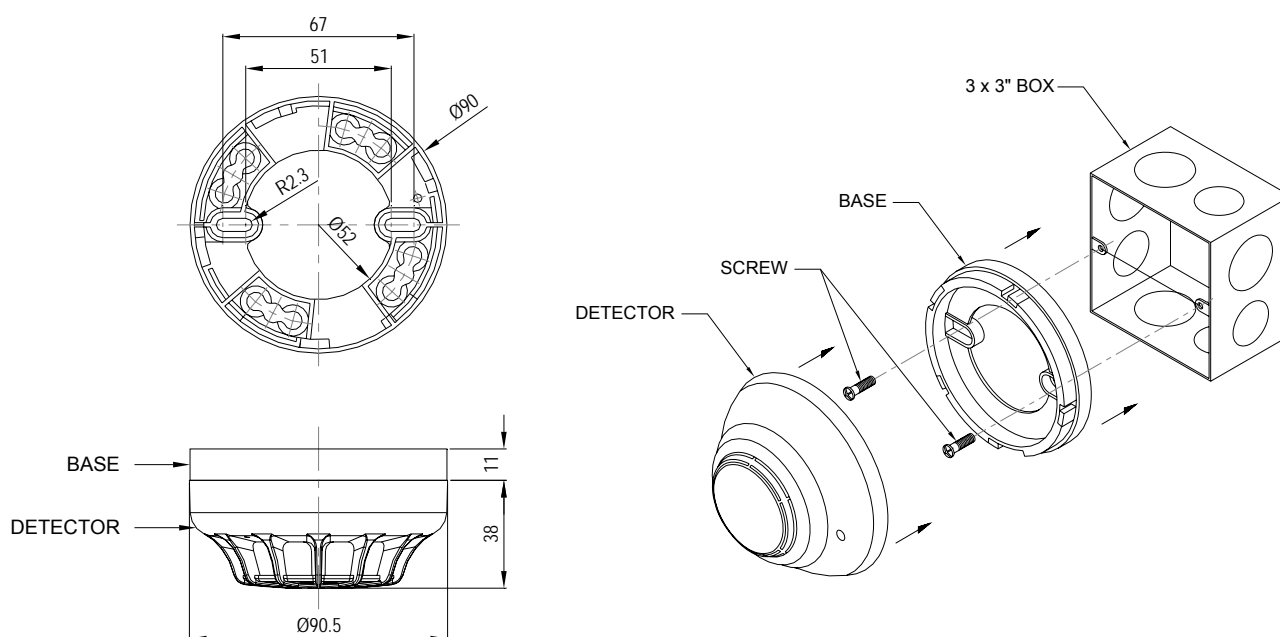
Description:

There are four connecting terminals on each detector base. Terminal L1 and L2 utilized for loop wiring and terminal R+ and R- is used to connect a Remote LED Indicator. The tip of the line conductor terminating at the detector base should either be used with terminal lugs or coated with tin for high conductivity and reliability of the system.



The detector circuit requires a twisted pair copper cable with a diameter of not less than 1.5mm². The total resistance of the conductor based on the loop length should not exceed 30Ω.

Dimensions and Installations:



Note: All dimensions are in millimeters.



TECHNICAL SPECIFICATION

Operating Voltage	18 ~ 26V DC
Standby Current	$\leq 350\mu\text{A}$
Alarm Current	$\leq 1.5\text{mA}$
Operating Temperature	-10°C ~ +50°C
Relative Humidity	$\leq 95\%$ Non-Condensing
Remote LED Indicator	24V DC, 1mA
LED Indication (Red)	Pulsing - Stanby
	Steady - ALARM
Dimensions	Ø91 x 45.5mm (w/ base)
Weight	Approx 100g
Material	ABS Plastic
Color	Off-white



LF-PHD-6110

Intelligent Combined Smoke and Heat Detector



Features:

- Low Profile Design
- Built-in CPU
- Specialized Smoke Chamber Design
- Electronic Heat Thermistor
- Auto Analysis
- Dynamic Automatic Compensation
- High Veracity of Fire Judgment
- ALARM FIRST! – Less than 1 second
- Data transfer Speed and Reliability
- 2-wire non polarity design
- High Performance at Low Cost
- Twist Lock Base
- Provision for Remote LED Indicator
- Use LF-DP-6190 for Device Coding

Description:

The LF-PHD-6110 intelligent type combined smoke and heat detector contains an optical smoke sensor and a thermistor temperature sensor whose outputs are combined to give the final analogue value.

The LF-PHD-6110 intelligent combined smoke and heat detector is compatible with the LF-DP-6190 field programmer/tester. This programmer is compact & portable with menu driven accessories which makes programming and testing detectors faster, easier and more reliable than other methods.

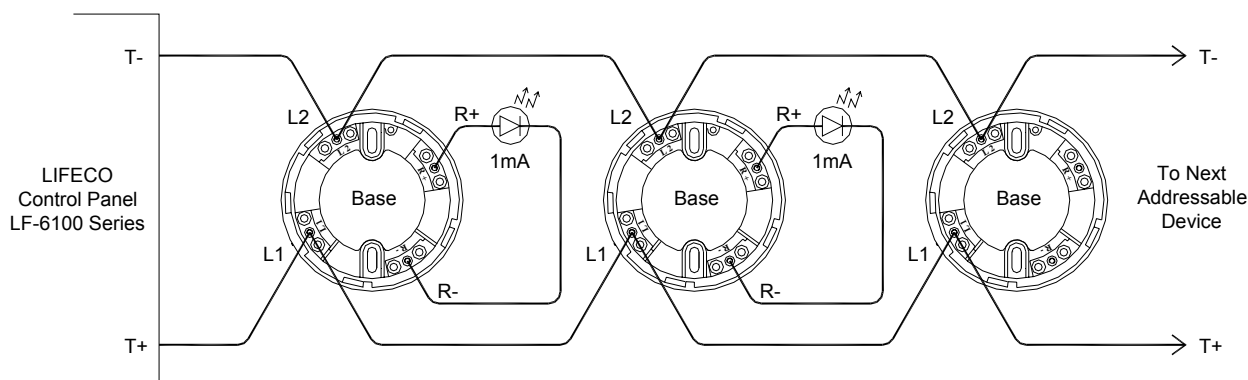
The LF-PHD-6110 is a plug-in, two wire detector, compatible with the LF-6100 Series Control Panel. Each detector consists of a dust resistant, field-cleanable photoelectric chamber and microprocessor based electronics with a low-profile plastic housing. Every detector is shipped with a protective dust cover.

The detector's design widely applies to all kinds of industrial and commercial constructions with its high resistance to humidity, wide operating temperature range, high reliability and ease of installation and configuration.



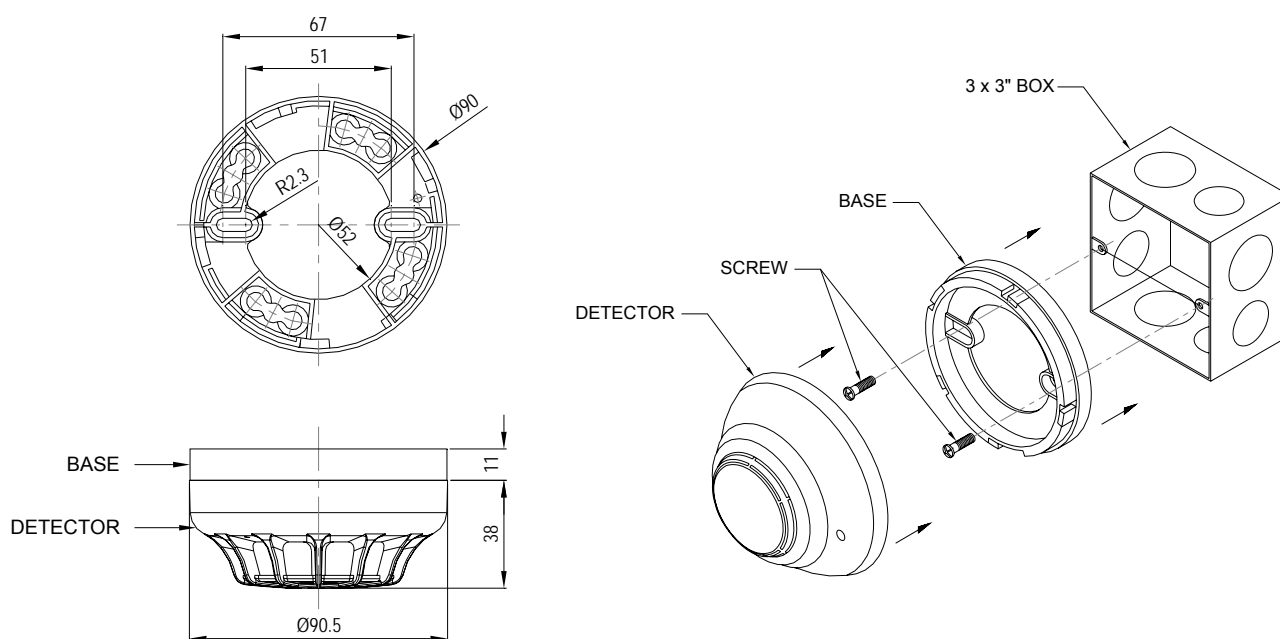
Description:

There are four connecting terminals on each detector base. Terminal L1 and L2 utilized for loop wiring and terminal R+ and R- is used to connect a Remote LED Indicator. The tip of the line conductor terminating at the detector base should either be used with terminal lugs or coated with tin for high conductivity and reliability of the system.



The detector circuit requires a shielded twisted pair stranded copper cable with a diameter of not less than 1.5mm². The total resistance of the conductor based on the loop length should not exceed 30Ω.

Dimensions and Installations:



Note: All dimensions are in millimeters.



TECHNICAL SPECIFICATION

Operating Voltage	18 ~ 26V DC
Standby Current	≤380μA
Alarm Current	≤1.5mA
Operating Temperature	-10°C ~ +50°C
Relative Humidity	≤95% Non-Condensing
Remote LED Indicator	24V DC, 1mA
LED Indication (Red)	Pulsing - Stanby
	Steady - ALARM
Dimensions	Ø91 x 45.5mm (w/ base)
Weight	Approx 100g
Material	ABS Plastic
Color	Off-white



LF-RM-6106

Relay Output Module



Features:

- Low Profile Design
- Built-in CPU
- Fast and Accurate Response Time
- Feedback Monitoring
- Data Transfer Speed and Reliability
- Polarized Wiring
- LED Status Indicators
- High Performance at Low Cost
- Two Wire System
- Use LF-DP-6190 for device addressing

Description:

The LF-RM-6106 Relay Module provides the means of directly controlling an auxiliary device and its status as well. The Relay Module can be operated either thru manual operation using switch inputs, or by automatic control using the Fire Panel logic functions.

It also adopts preemptive alarm technology which organizes the data received from the detection loop. The information with the highest priority would transfer first.

Other collected data shall be transmitted to the controller based on their priority status which ensures the rapid response of the system. Fire Alarm can be received in less than 1 second.

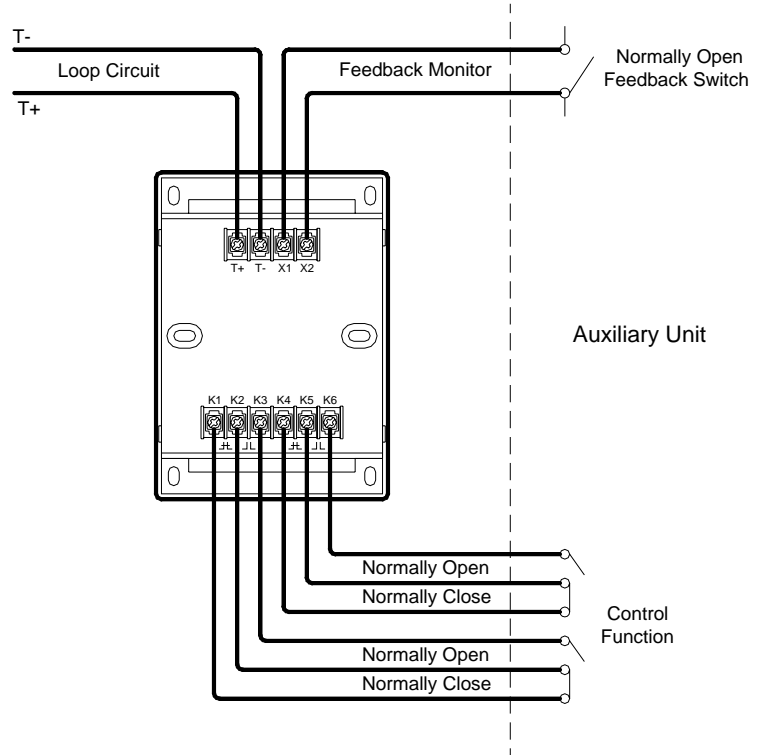
The Relay Module's design widely applies to all kinds of industrial and commercial constructions with its high resistance to humidity, wide operating temperature range, high reliability and ease of installation and configuration.



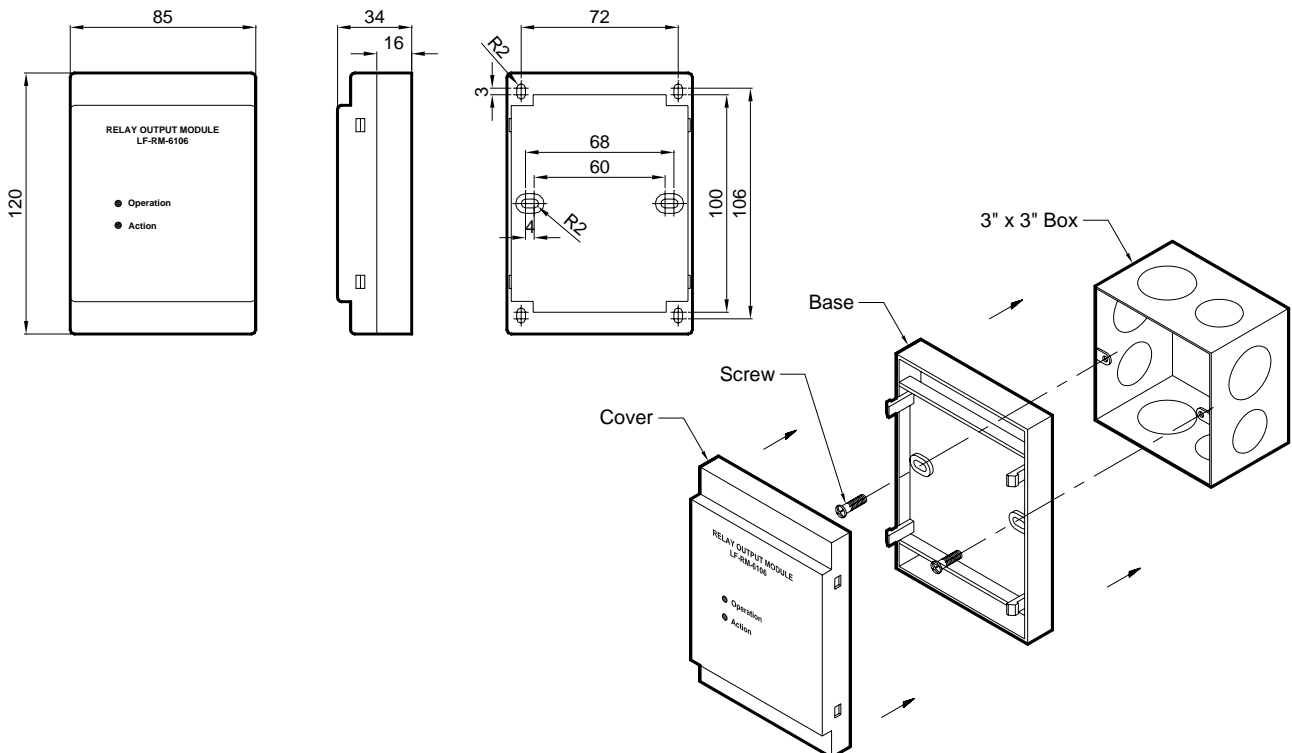
Wiring:

There are ten connecting terminals mounted on the printed circuit board. Terminals T+ and T- are utilized for loop circuit wiring, terminals X1 and X2 are used to connect to a normally open feedback line input for monitoring and terminals K1 to K6 are relay contacts wherein K1-K2 & K4-K5 are normally closed contacts and K2-K3 & K5-K6 are normally open contacts.

The tip of the line conductor terminating at the device should either be used with terminal lugs or coated with tin for high conductivity and reliability of the system.



Dimensions and Installation Details:



Note: All dimensions are millimeters.



TECHNICAL SPECIFICATION:

Operating Voltage	24 VDC
Standby Current	$\leq 380\mu\text{A}$
Alarm Current	$\leq 2\text{mA}$
Contact Capacity	DC 24V 2A, AC 220V 0.5A
Operating Temperature	$-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$
Relative Humidity	$\leq 95\%$
Dimension	120x85x34mm
Weight	Approx 200g
Color	Off-White



LF-SI-6105

Signal Input Module



Features:

- Low Profile Design
- Built-in CPU
- Interfaces Normally Open Dry Contacts
- ALARM FIRST! – Less than 1 second
- Data Transfer Speed and Reliability
- Polarized Wiring
- LED Status Indicators
- High Performance at Low Cost
- Two Wire System
- Use LF-DP-6190 for device addressing

Description:

The LF-SI-6105 Signal Input Module provides the means of connecting Direct Shorting Devices to the Fire Alarm Control Panel. The module converts a normally open contact input which could monitor and report the status of the contact to the Fire Panel. It can be used as an alarm input of contact type devices or as a control input for other auxiliary functions.

It also adopts preemptive alarm technology which organizes the data received from the detection loop. The information with the highest priority would

Other collected data shall be transmitted to the controller based on their priority status which ensures the rapid response of the system. Fire Alarm can be received in less than 1 second.

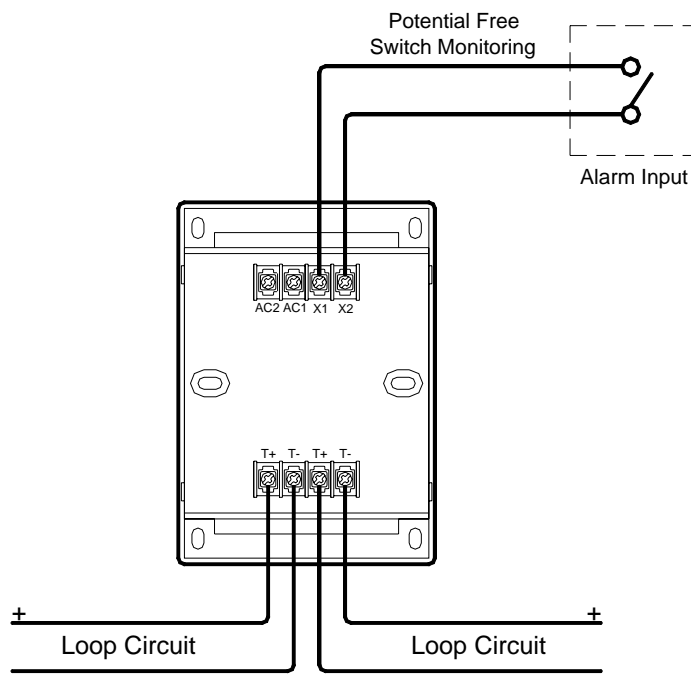
The module's design widely applies to all kinds of industrial and commercial constructions with its high resistance to humidity, wide operating temperature range, high reliability and ease of installation and configuration.



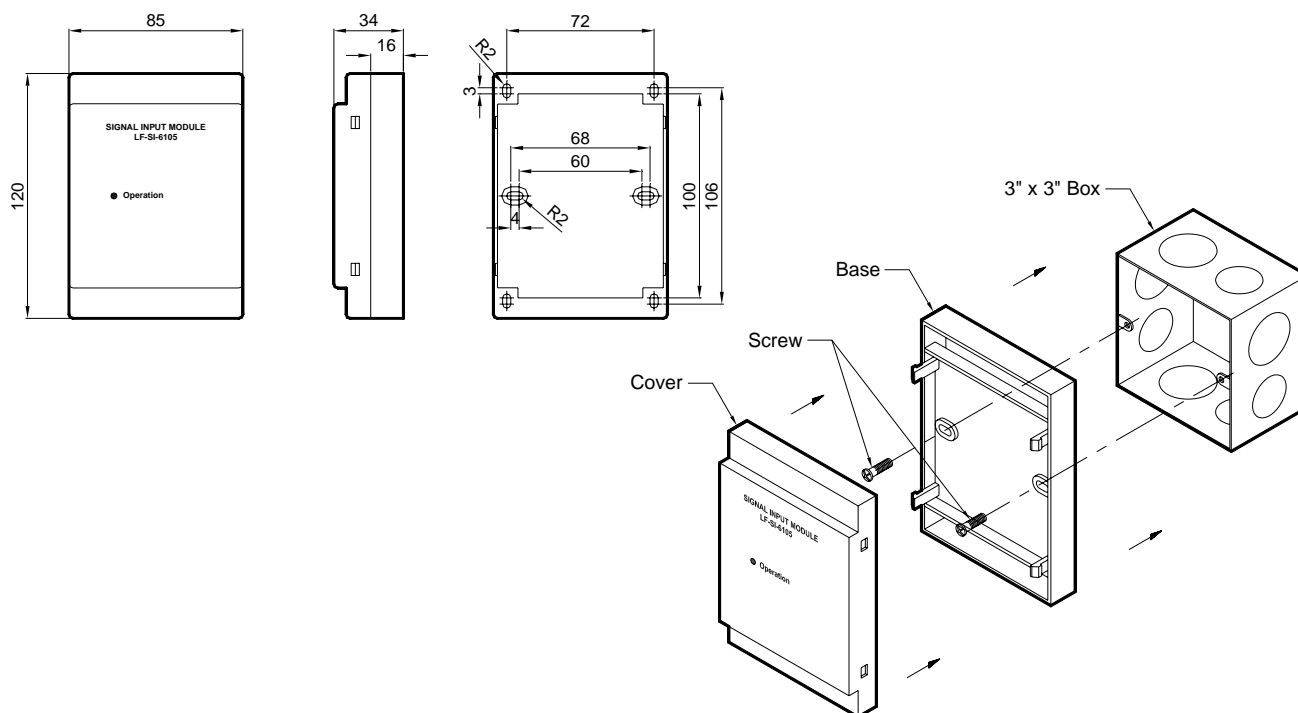
Wiring:

There are eight connecting terminals mounted on the printed circuit board. Terminals T+ and T- are utilized for loop circuit wiring, terminals X1 and X2 are used for potential free switch monitoring and terminals AC1 and AC2 are not used.

The tip of the line conductor terminating at the device should either be used with terminal lugs or coated with tin for high conductivity and reliability of the system.



Dimensions and Installation Details:



Note: All dimensions are millimeters.



TECHNICAL SPECIFICATION:

Operating Voltage	24 VDC
Input Signal	Potential Free Contact
Standby Current	$\leq 500\mu\text{A}$
Alarm Current	$\leq 2\text{mA}$
Operating Temperature	$-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$
Relative Humidity	$\leq 95\%$
Dimension	120x85x34mm
Weight	Approx 200g
Color	Off-White