Alarm Point Distance Locator Manual

The APDL is an Alarm Point Distance Locating device exclusively for use with Signaline Fixed Temperature Heat Sensing Cables. The APDL is designed to interface between a listed fire alarm releasing or control panel or addressable module and a single length of Signaline Heat Sensing Cable. An important design feature of the APDL is the continued correct operation of the fire alarm control/releasing panel or addressable module regardless of faults which may occur in the APDL such as loss of power to the unit. APDL complies with the relevant FM standard and is enclosed in an IP65 rated enclosure.

Features

- Alarm point distance locating device for use with Signaline Fixed Temperature Heat Sensing Cables:
  Signaline FT-68
  Signaline FT-68-R
  Signaline FT-88
  Signaline FT-88-R
  Signaline FT-105
  Signaline FT-105-R
  Signaline FT-185-R
- Alternating metres/feet display of alarm point
- Cable selection
- Leader cable calibration
- Detection of alarm point from 100m to 3000m (300ft to 10000ft)
- Installation settings saved in event of power loss
- IP65 rated enclosure for indoor/outdoor use with smooth sides or 4 sizes of M knock-outs (N.B. FM Approved for indoor use only).
- Simple installation and operation
- Backlit 16x2 character LCD display
- Continued correct operation of fire alarm control/releasing panel or addressable module regardless of faults which may occur in the unit such as loss of power.
- To maintain system certification any fire alarm control unit connected to the APDL is to be FM approved and any power supply used to deliver power to the APDL is to be ANSI/UL 1481 certified.

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Enclosure

Dimensions	W180mm x H130mm x D78mm
Rating	IP65
Finish	Polycarbonate with hinged removable cover and removable internal front plate. Light grey with smoked grey cover.
Approvals	FM Class 3210
Knockouts Long Side	M25 (25mm) & M16 (16mm)
Knockouts Short Side	M32 (32mm) & M20 (20mm)

Power Requirements

Operating voltage	9 to 28VDC
Normal Operation	<10mA (LCD back-light off)
Alarm Locating	<90mA (LCD back-Light on)
PS transient protection	1500W for 1ms

Operating Temperature

Range	0 to 49°C (32°F-120°F)

APDL Accuracy

0°C to 15°C	<±6.5% of alarm point distance
15°C to 25°C	<±5% of alarm point distance
26°C to 49°C	<±6.5% of alarm point distance

Terminal Blocks

Spacing	9.52mm (0.375")
Rating	25A at 300 vdc
Wire Size	0.6 to 2mm

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The APDL allows accurate location of an alarm point along a length of Signaline Linear Heat Detection (LHD) cable. Location of the alarm point may not always be possible by visual inspection on low temperature LHD cable due to the cable triggering an alarm before physical damage has occurred or, on longer lengths of LHD cable, it may be too time consuming or inconvenient.

Caution

The following items are cautionary notes that will help prevent equipment damage or malfunction caused by static discharge.

Static charges produce voltages high enough to damage electronic components. Follow these precautions when installing, servicing, or operating the APDL:
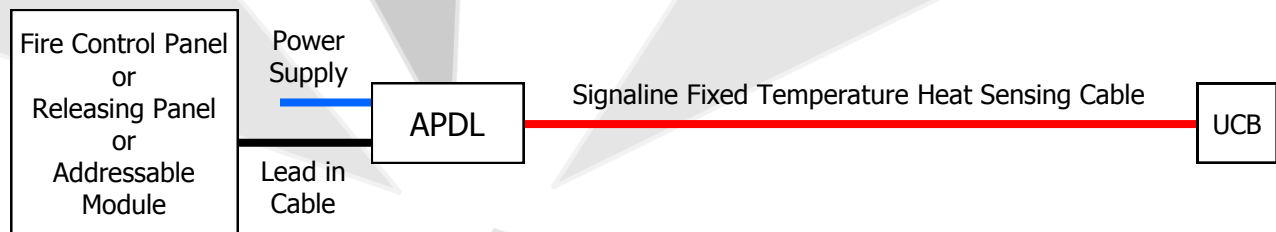
- Work in a static-free area.
- Discharge any static electricity you may have accumulated. By touching a known, securely grounded object.
- Do not handle the printed circuit board (PCB) without proper protection against static discharge.

In the event that the APDL malfunctions after encountering a static discharge correct operation of the unit can be restored by interrupting power to the unit for a brief period (approximately 10s).
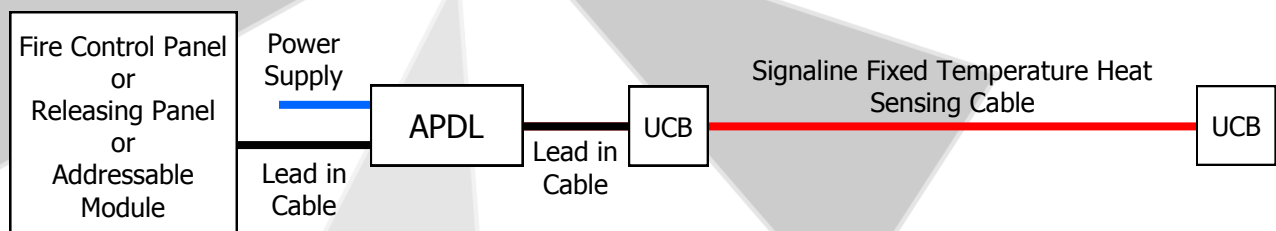
Installation

The APDL must be installed in accordance with NFPA 70, 72 or in accordance with your local fire service department regulations. The APDL may be installed in two configurations:

Configuration 1

Configuration 2

SIGNALINE HEAT

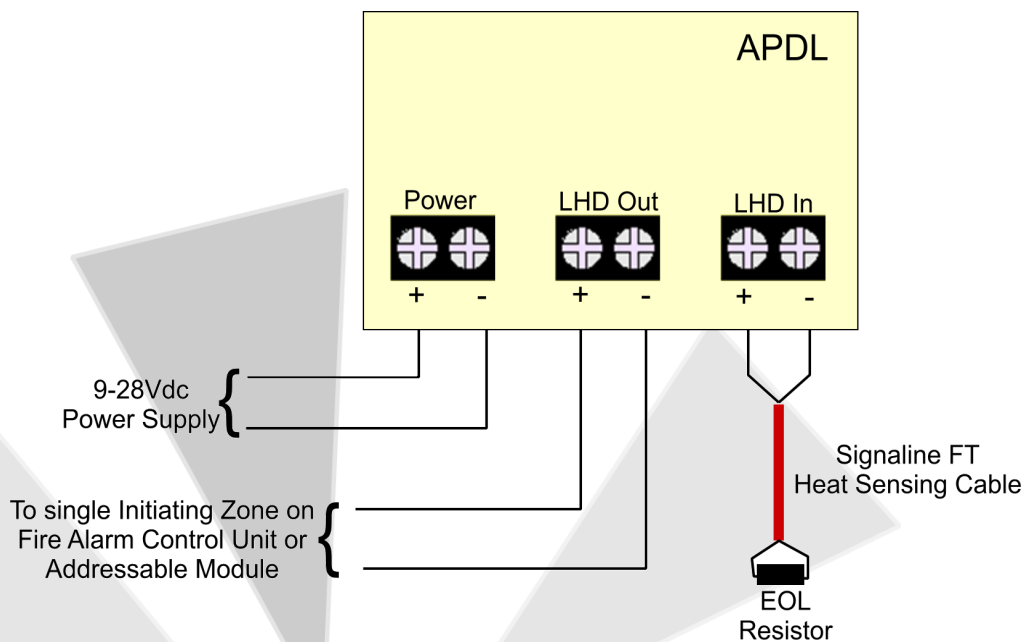## Alarm Point Distance Locator Manual

Front panel release

Accessing the Terminal Block

1) Unscrew the lid
2) The wiring terminals are located behind the front panel which is clipped in position by two plastic retainers on the right hand side
3) Use a flat head screw driver to release the front panel where shown Do not unscrew the 4 chrome plated cross head screws.
4) To replace the front panel, press the panel back in place

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Configuration 1

In the first installation the Signaline FT is connected directly to the APDL unit via the LHD IN terminals (see Drawing 1 below). The APDL is then connected to the fire alarm control/releasing panel or addressable module via the LHD OUT terminals. Power is supplied either from the auxiliary power output of the panel or module or from a separate listed power supply.
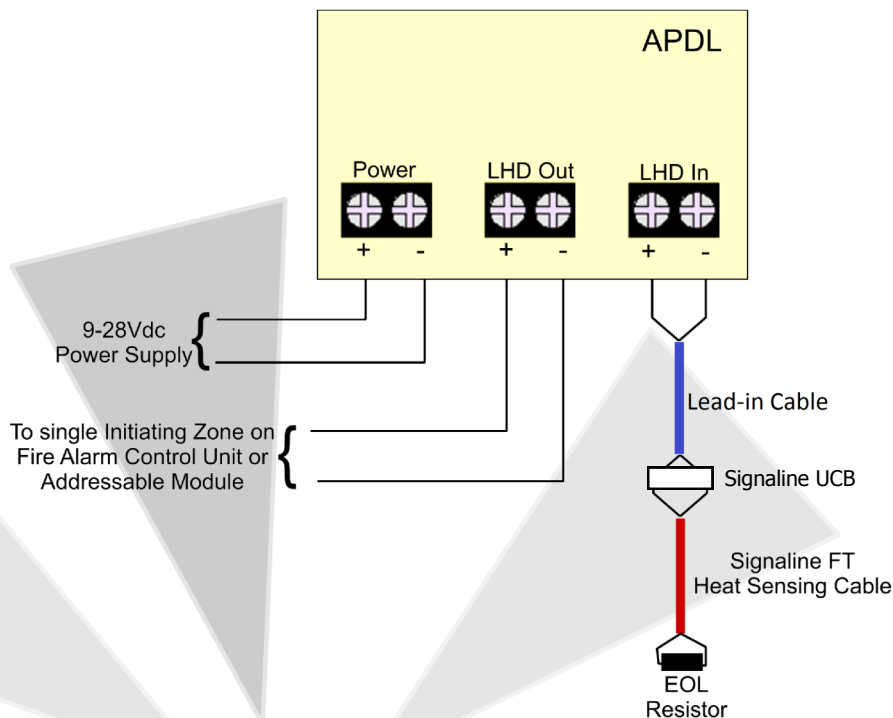

In this configuration the following steps should be followed during the <u>first</u> installation:

- Apply power to the APDL.
- The display will show "**Installation**" for approximately 2 seconds.
- The display will show "**Cal Leader Cable**" on the top line and "**Yes**" on the bottom line.
- Press the *SELECT* button to change the bottom line to "**No**".
- Press the *SET* button.
- The display will show "**Calibrated**" on the top line and "**0 mV**" on the bottom line.
- Press the *SET* button again to continue.
- The display will show "**Select Cable**" on the top line and "**68 C/154 F**" on the bottom line.
- Press the *SELECT* button to change the cable to the appropriate type.
- Once the correct cable is selected press the *SET* button.
- The display will scroll "**Alarm Point Distance Locator -** " across the top line and "**Normal Operation**" on the bottom line

Configuration 2

In the second installation a leader cable is connected between the Signaline FT cable and APDL unit via the LHD IN terminals (*see Drawing 2 below*). The APDL-Z1 is then connected to the fire alarm control/ releasing panel or addressable module via the LHD OUT terminals. Power is supplied either from the auxiliary power output of the panel or module or from a separate listed power supply.

In this configuration the following steps should be followed during the <u>first</u> installation:

- Apply power to the APDL.
- The display will show "**Installation**" for approximately 2 seconds.
- The display will show "**Cal Leader Cable**" on the top line and "**Yes**" on the bottom line.
- When calibrating the two ends of leader cable are connected together in the Signaline UCB.
- <u>Hold down</u> the distance locate switch and press the *SET* button.
- The display will show "**Calibrated**" on the top line and a value dependant on the length of leader cable in "**mV**" on the bottom line. (Once the value is displayed the distance locate switch can be released).
- Press the *SET* button again to continue.
- The display will show "**Select Cable**" on the top line and "**68 C/154 F**" on the bottom line.
- Press the *SELECT* button to change the cable to the appropriate type.
- Once the correct cable is selected press the *SET* button.
- The display will scroll "**Alarm Point Distance Locator -** " across the top line and "**Normal Operation**" on the bottom line

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Operating Instructions

Once the APDL unit has been correctly installed, during normal operation the display will scroll "**Alarm Point Distance Locator -** " across the top line and "**Normal Operation**" on the bottom line. In the event of an alarm being initiated on the fire alarm control/releasing panel due to a short on the linear heat detection cable the **Distance Locate** Switch should be held down. A slight delay (less than 1 second) will occur while the unit calculates the distance to the alarm point before the display will read "**Alarm Point**" on the top line. The bottom line will then display the distance along the cable to the alarm point from the beginning of the linear heat detection cable. While the **Distance Locate** switch is held down the unit will cycle between displaying the alarm point distance in metres and feet.
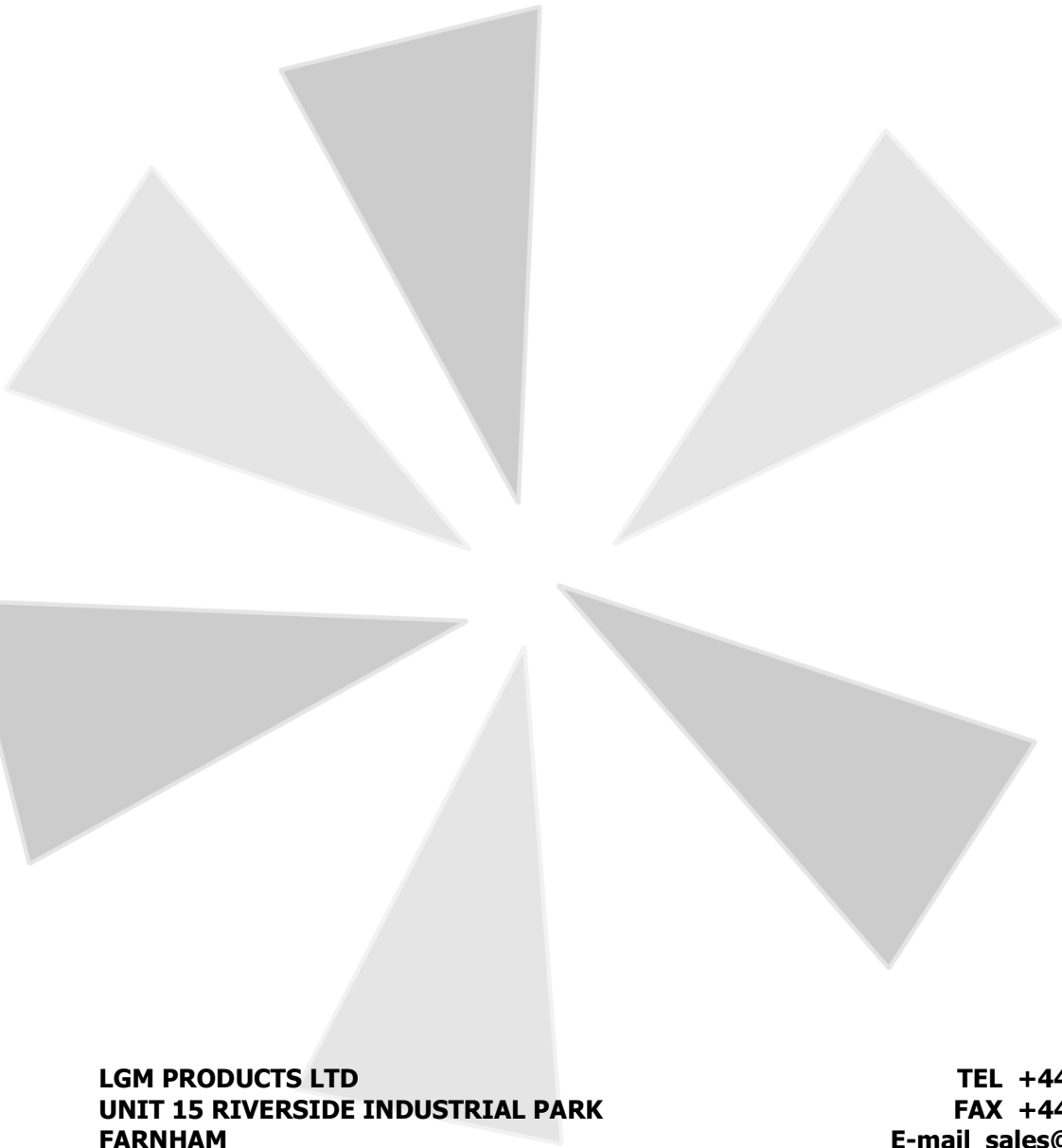
During the time the **Distance Locate** switch is held down the linear heat detection cable will be electrically disconnected from the fire alarm control/releasing panel or addressable module and subsequently put the panel or module into a trouble condition. This is deliberate and intended and will ensure that the APDL cannot be left in the **Distance Locate** position accidentally. Once the **Distance Locate** switch is released the linear heat detection cable will be electrically reconnected to the fire alarm control/releasing panel or addressable module. It should be noted that during normal operation the linear heat detection cable is completely electrically disconnected from the APDL unit and therefore tolerant of any faults which may occur in the unit.

Resetting Installed Parameters

If the incorrect cable type was selected or leader cable calibration was performed incorrectly it is possible to reset the APDL unit to the initial state so the installation parameters may be reprogrammed. To perform a reset hold down the *SET* and *SELECT* buttons while the unit is off and power the unit up holding down the buttons. The display will read "**Installed**" and then change to "**Installation**" after approximately 2 seconds of holding the buttons down. The installation procedure should then be repeated according to the type of installation.

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