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Installation & Wiring Instructions LF-100b Line Fault Monitor

The LF-100b provides an efficient and economical means of monitoring phone lines for failure or cutting. A line fault is detected within 10 to 20 seconds of its occurrence. If it is still present after a further programmable interval (15 or 30 seconds) a Form C relay contact is activated (de-energized). The red **FAULT** LED will illuminate. The contact will reset upon restoration of phone line integrity. Typical applications are alarm systems with cellular or radio back-up, activated on cutting the phone line. A built-in RJ31X switch / jack **J1** is provided for quick disconnect in the event of a faulty (run-away) dialer.

CONNECTIONS

Connect the incoming phone line to the **T** and **R** terminals. Connect the house phones to the **T1** and **R1** terminals. When properly wired, house phones will be disconnected while control panel dialer is active. House phones should function when dialer is idle or if cable is unplugged from RJ31X jack **J1**.

Connect the **+12** and **NEG** terminals to a +12V power source at the control panel or other device.

Connect the relay to the control panel zone, cellular back-up unit or other device, as shown in **Figure 1**. Relay terminals **COM** and **NC** are connected while a telephone line is detected. When the telephone line is bad, the **COM** terminal is disconnected from the **NC** terminal and connected to the **NO** terminal (after the programmed delay). The output relay is configured in fail-safe mode (normally energized) when a good phone line is detected.

Connect the terminal marked **EARTH** to the earth ground.

Optional **SUPERVISION** solder pads may be connected to a tamper circuit by soldering an end-of-line resistor across the pads marked **2** and **7**. These pads connect to the RJ31X jack **J1** pins 2 and 7. The wires on the control panel side of the cable are connected to a tamper zone. Unplugging the RJ31X jack will result in a tamper condition.

PROGRAMMING THE ALARM DELAY TIME

The line fault condition is signaled by the de-energizing of the relay after a pre-programmed delay time of 15 to 30 seconds. This delay begins immediately after detection of the fault, which will take place 10 to 20 seconds after its occurrence. Therefore, the effective delay is 25 to 35 seconds or 40 to 50 seconds. The delay time is programmed by moving the mini-jumper **JP1** on the line fault monitor board.

LED INDICATORS

The red **FAULT** LED illuminates when a line fault is detected.

The green **TEST** LED illuminates every 10 seconds to indicate a phone line test is in progress (LED alternates ON / OFF every 5 seconds).

The green **HOOK** LED illuminates when a telephone, control panel dialer, or other phone device is in the off-hook state.

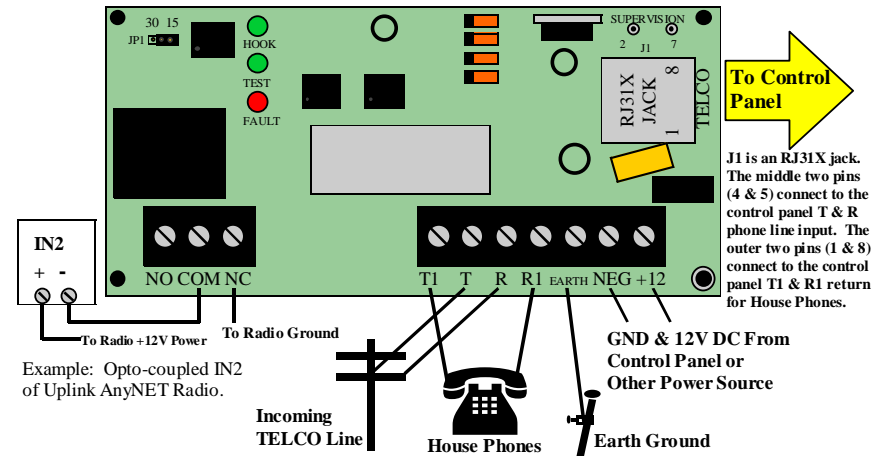


Figure 1: Wiring Example

SPECIFICATIONS

Voltage: 12 Volts DC (10 to 13.8V)
 Current Draw: 55mA
 Transients: Transient clamping response = less than 1 nS.
 Clamping voltage = 340V RMS @ 1 Amp.
 PCB Dimensions: 2.2 x 4 x 0.75 inches.