

867 Style W, LX-Bus™ Notification Module

Description

The 867 module provides one supervised Style W notification appliance circuit for powering polarized 12 or 24 VDC fire notification devices in XR100/XR500 or XR150/XR350/XR550 Series panels. The 867 connects to the panel LX-Bus and provides ground fault, open, and short condition supervision on the notification circuit. The 867 has four LEDs to indicate circuit Trouble and Ground Fault conditions, as well as module power supply and data monitoring.

The 867 has a Silence switch that allows technicians to disable the module bell output during service and maintenance checks.

Rotary Switch Addressing

The 867 module contains two pairs of rotary switches for setting the module Bell Relay Address and a Supervisory zone address. Having a separate Bell Relay Address allows the activation of multiple modules in groups that are still monitored by individual Supervisory zones.

Supervisory Zone Addressing

The Supervisory Address switches allow you to set the zone address for the module, which is then programmed into the panel as a Supervisory Type zone. A trouble condition on the bell circuit, or a loss of communication between the 867 module and the panel can cause the panel to display a trouble for the zone on the keypad(s), and/or trip zone outputs and report the trouble to the central station.

The 867 module occupies just one single zone address on the LX-Bus. For example, on an XR500 Series panel, with the switches set to 02 as shown in Figure 1, the Supervisory Address zone number would be 502, 602, 702, 802, or 902, depending on the LX-Bus selected. The zone number is then programmed as a Supervisory Type zone to monitor panel data communication. Refer to Table 1.

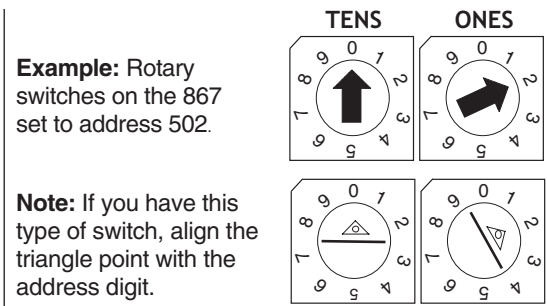


Figure 1: Rotary switch styles

Start Address		Panel LX-Bus Numbers and their corresponding Zone Numbers					
Switch Tens	Switch Ones	XR100 and XR150 Series	XR500 and XR550 Series (LX500 - LX900)				
			XR350 Series (LX500 - LX700)			4(LX800)	5(LX900)
		1(LX500)	1(LX500)	2(LX600)	3(LX700)		
0	0	500	500	600	700	800	900
0	1	501	501	601	701	801	901
0	2	502	502	602	702	802	902
0	3	503	503	603	703	803	903
0	4	504	504	604	704	804	904
...
9	5	595	595	695	795	895	995
9	6	596	596	696	796	896	996
9	7	597	597	697	797	897	997
9	8	598	598	698	798	898	998
9	9	599	599	699	799	899	999

Table 1: LX-Bus Addresses

Bell Relay Address

The switches labeled Bell Relay Address allow you to set an output number for the module that can then be activated by any one of the panel zones or by the Fire Bell and Burglary Bell output. See Table 1.

When activated, the 867 module provides a programmed bell output for the duration of the Bell Cutoff time or until manually silenced by an authorized user. See **Bell Ring Style**.



Bell Ring Style

The 867 module allows the cadence of the bell output to be specified by setting the Bell Ring Style jumper located below the wire terminal. Activate the 867 by either the Fire Bell output (see Zone Information), the Fire Alarm Output (see output programming), or by a panel Zone Alarm Output on an XR100/XR500 or XR150/XR350/XR550 Series (see Alarm Action).

When activated, any one of the following cadences are available from the 867 module:

Jumper Setting	Bell Cadence
Steady	On for duration of Bell Cutoff time
Pulsed	One second on, one second off for duration of programmed Bell Cutoff time
Temporal	Temporal Code 3 as defined in NFPA-72, section A-3-7.2(a). (.5 second on, .5 second off, .5 second on, .5 second off, .5 second on, 2 seconds off.)
California Schools	As defined in West's Annotated California Codes, section 32002 (Short, intermittent sounds for 10 seconds, then off for 5 seconds.)

Silence Switch Operation

The Silence switch on the 867 allows technicians to test or perform maintenance on the fire system without sounding the fire alarm notification devices. When the switch is placed in the Silence position, the module **TRBL** LED turns on and an open condition is reported on the Supervisory Zone address.

Style W Circuit Operation

For normal operation, all notification devices are connected in parallel on the Style W circuit. A 10K Ohm End-of-Line resistor (supplied with the module) installs at the last device in the circuit. The Style W circuit operation is defined as follows:

- During a *normal* condition on the circuit, no LEDs are lit and a normal condition is reported on the Supervisory Zone address.
- During an *open* or *short* condition on the circuit, the 867 module turns on the **TRBL** LED and reports an open condition on the Supervisory Zone address
- During a *ground fault* condition on the circuit, the 867 turns on the **TRBL** and **GND FAULT** LEDs and reports an open condition on the Supervisory Zone address.

Powering the Module

The bell power must be supplied by a regulated, power limited, auxiliary power supply listed for Fire Protective Signaling with a maximum output of 5 Amps at 12 or 24 VDC. The power supply output connects to the 867 module **Bell In** terminals 1 and 2.

Power Supply Supervision

The power supply must be supervised and provide a set of Normally Closed trouble contacts that connect to the Power Supply Monitor zone (terminals 7 and 8) on the 867 module. An open on the supervision circuit causes the Power Supply Monitor LED to light and an open condition to be reported on the panel Supervisory Zone address.

Installation

The 867 mounts in the panel enclosure using the standard three-hole configuration.

1. Mount the plastic standoffs to the enclosure using the three provided Phillips head screws.
2. Insert the screws from the outside of the enclosure through the holes and into the plastic standoff which mounts on the inside of the enclosure and tighten.
3. After securing the standoffs onto the enclosure, snap the 867 onto the standoffs.

Wiring

See the panel installation guide for wiring diagrams and approved notification appliances.

Note: Be certain that the 867 Module is fully wired and configured before connecting to the LX-Bus.

Connect the **Red, Yellow, Green, and Black** wires from the panel LX-Bus to the 867 module matching harness wires.

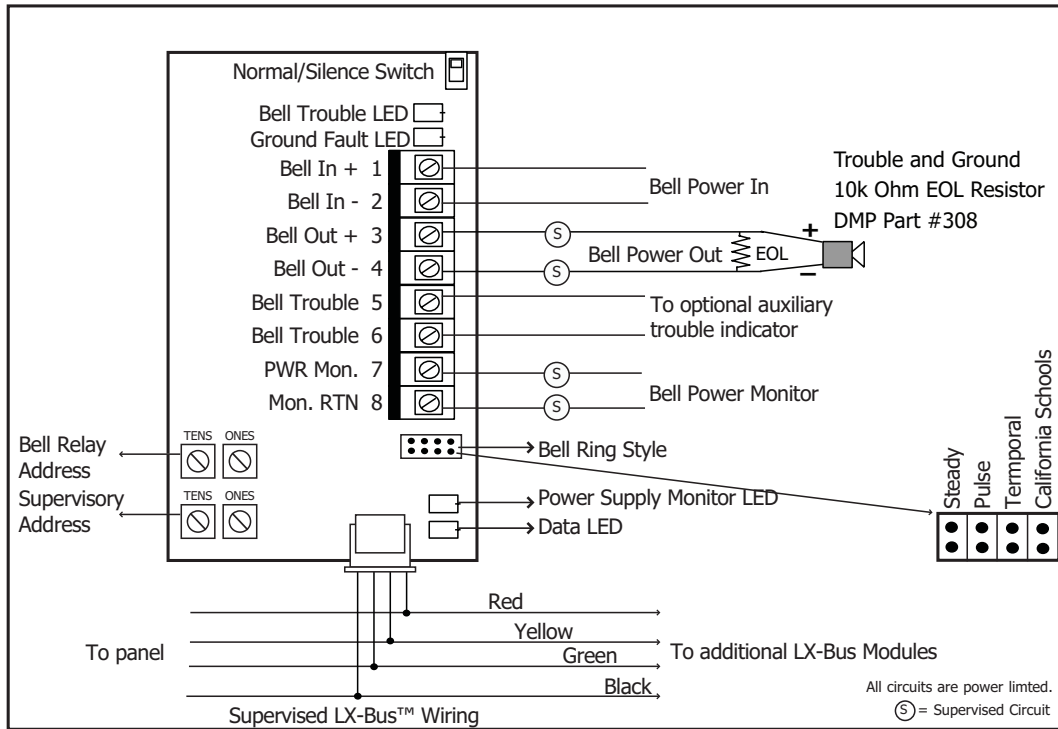


Figure 2: 867 Wiring

Wiring Specifications for LX-Bus

When planning an LX-Bus installation, keep in mind the following specifications:

1. DMP recommends using 18 or 22-gauge **unshielded** wire for all keypad and LX-Bus circuits. **Do Not** use twisted pair or shielded wire for LX-Bus and keypad bus data circuits. To maintain auxiliary power integrity when using 22-gauge wire do not exceed 500 feet. When using 18-gauge wire do not exceed 1,000 feet. Install an additional power supply to increase the wire length or add devices.
2. Maximum distance for any one circuit (length of wire) is 2,500 feet regardless of the wire gauge. This distance can be in the form of one long wire run or multiple branches with all wiring totaling no more than 2,500 feet. As wire distance from the panel increases, DC voltage on the wire decreases.
3. Maximum number of devices per 2,500 feet circuit is 40.
Note: Each panel allows a specific number of supervised keypads. Add additional keypads in the unsupervised mode. Refer to the panel installation guide for the specific number of supervised keypads allowed.
4. Maximum voltage drop between the panel (or auxiliary power supply) and any device is 2.0 VDC. If the voltage at any device is less than the required level, add an auxiliary power supply at the end of the circuit. When voltage is too low, the devices cannot operate properly.

Refer to the panel's Installation Guide and the LX-Bus/Keypad Bus Wiring Application Note (LT-2031) for more information. Also see the 710 Module Installation Sheet (LT-0310).

Specifications

Operating Voltage
LX-Bus: 8.0 to 15.0 VDC

Operating Current
LX-Bus: 30mA maximum
Bell Power: 30mA standby
86mA maximum

Alarm-Switching Current: 5 Amps at 12 or 24 VDC

Module Dimensions: 3" x 5"

Power Supplies

505-12 5 Amps @ 12 VDC

Panel Compatibility

XR100/XR500 and XR150/XR350/XR550 Series panels.

Certifications

California State Fire Marshal (CSFM)
FCC Certified Part 15
New York City (FDNY COA #6167)
ANSI/UL 1023 Household Burglar
ANSI/UL 985 Household Fire Warning
ANSI/UL 864 Fire Protective Signaling



800-641-4282

www.dmp.com

Designed, Engineered
and Assembled in U.S.A.

INTRUSION • FIRE • ACCESS • NETWORKS

2500 North Partnership Boulevard

Springfield, Missouri 65803-8877