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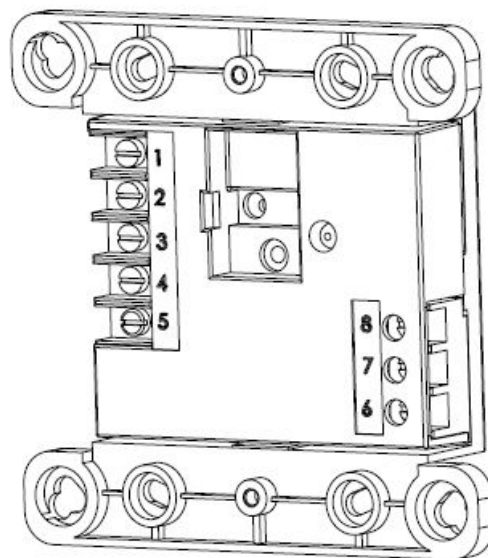


## OPERATION

The Model LIM-1 Loop Isolator module from Siemens Industry, Inc., isolates short circuits on MXL and FireFinder-XLS intelligent device loops. By placing devices between LIM-1s during installation, a short in the wiring within that group is disconnected from the rest of the loop. The remainder of the devices continues to operate. The LIM-1 operates in both Class A and Class B circuits. A yellow LED flashes when a device detects a short circuit. The LIM-1 then isolates that part of the loop. When the short is removed, the LIM-1 automatically restores the loop to normal operation. The LIM-1 does not have a loop address and therefore does not require address programming nor does it reduce the loop capacity below 60 (MXL) or 252 (XLS) devices.

## ELECTRICAL RATINGS

Active 5VDC Module Current	0mA
Active 24VDC Module Current	760uA
Standby 24VDC Module Current	760uA



**Figure 1**  
**Model LIM-1**

## INSTALLATION

Remove all system power before installation, first the battery and then the AC. Refer to Figure 1 for the location and number of the screw terminals on the LIM-1. The LIM-1 has two input terminals, two output terminals, and an earth ground as listed below:

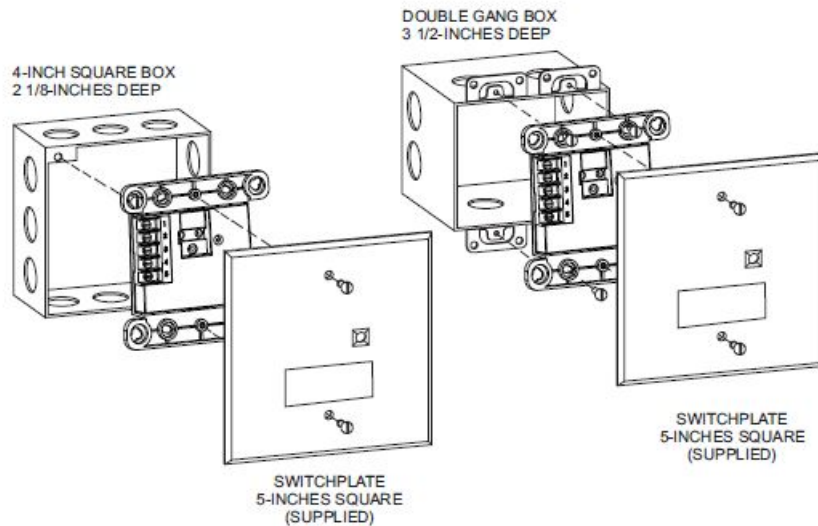
### Terminal Number/Description

- 1 Loop + IN
- 2 Loop – IN
- 3 Loop + OUT
- 4 Loop – OUT
- 5 Earth Ground

## MECHANICAL INSTALLATION

(See Figure 2)

1. Use a standard 3 1/2-inch deep, double gang electrical switch box or a 4-inch square electrical box that is 2 1/8 inches deep.
2. Connect the field wiring. Press the LIM-1 into the box and fasten the module plate to the box.
3. Cover the module front plate with the plate supplied and fasten it with the screws supplied.

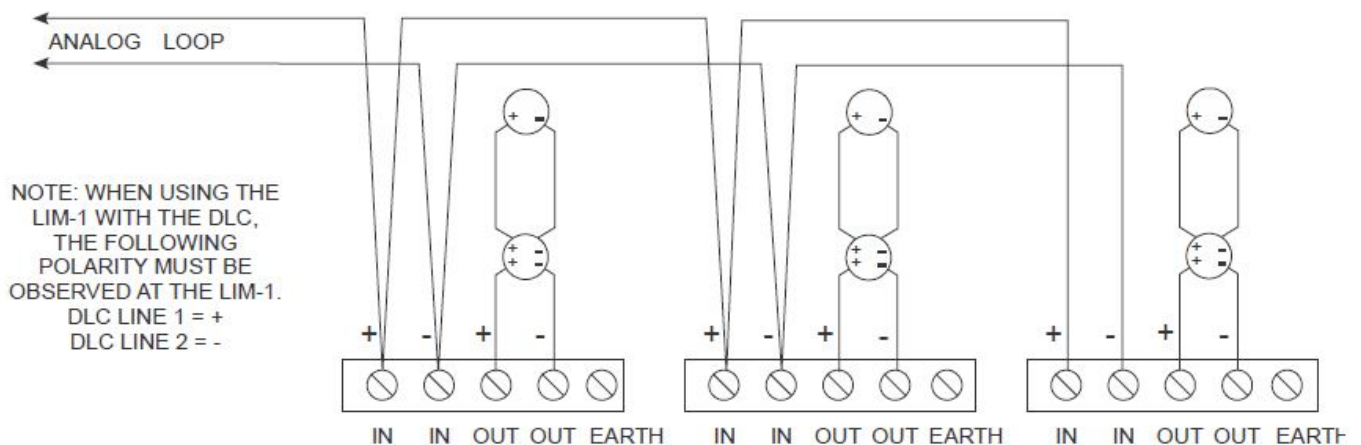


**Figure 2**  
**Mounting the LIM-1**

The LIM-1 may be used in two circuit configurations.

### Class B (See Figure 3)

In Class B wiring each LIM-1 isolates a branch on the circuit. Note that a short on the main branch causes the entire loop to fail. To prevent this, mount the LIM-1s at the MXL or FireFinder-XLS enclosure and run each branch independently.



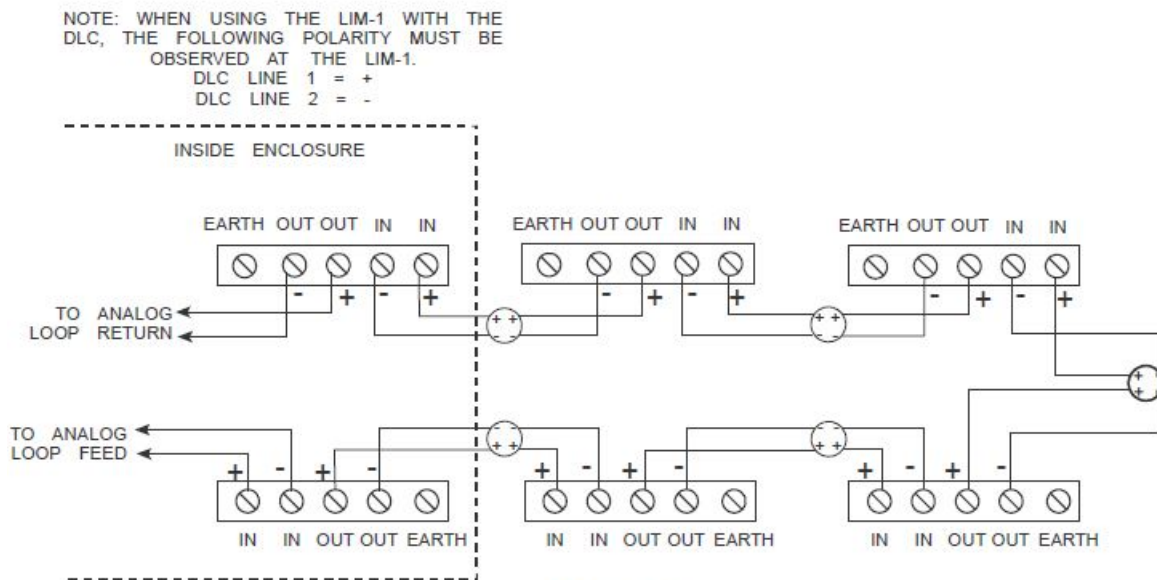
**Figure 3**  
**LIM-1 Wiring Diagram**  
**Class B Installation**

**NOTES for Figure 3:**

1. All wiring must comply with national and local codes.
2. In order to provide adequate protection, it is recommended that you do not install more than 20 devices on a single LIM-1.
3. The minimum wire gauge is 18 AWG.
4. The total wire resistance (both wires) between LIM-1s cannot exceed 10 ohms.
5. Do not install more than 12 LIM-1s per loop.
6. All circuits are supervised.
7. Refer to the MXL/MXLV Manual, P/N 315-092036, the MLC Installation Instructions, Document ID A6V10328217, or the DLC Installation Instructions, Document ID A6V10239107, for the list of compatible devices.
8. All terminals are power limited.

#### Class A Single Loop (See Figure 4)

In Class A wiring the LIM-1s are wired in series with the loop wiring. This results in a single continuous loop. If any group in the loop has a short, that group is lost and a Class A circuit failure results. The MXL or FireFinder-XLS displays communication errors for the devices and a Class A failure for the loop itself.



**Figure 4**  
**LIM-1 Wiring Diagram**  
**Class A Installation (Single Loop)**

#### NOTES for Figure 4:

1. All wiring must comply with national and local codes.
2. In order to provide adequate protection, it is recommended that you do not install more than 20 devices on a single LIM-1.
3. The minimum wire gauge is 18 AWG.
4. The total wire resistance (both wires) between LIM-1s cannot exceed 10 ohms.
5. Do not install more than 12 LIM-1s per loop.
6. All circuits are supervised.
7. Refer to the MXL/MXLV Manual, P/N 315-092036, the MLC Installation Instructions, Document ID A6V10328217, or the DLC Installation Instructions, Document ID A6V10239107, for the list of compatible devices.

8. All terminals are power limited.

## Contact Information

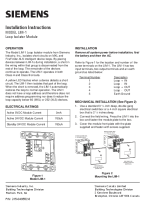
Siemens Industry, Inc. Building Technologies Division Florham Park, NJ.  
P/N 315-049552-6.

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[firealarmresources.com](http://firealarmresources.com).

## Documents / Resources

	<p><a href="#">SIEMENS LIM-1 Loop Isolator Module</a> [pdf] Instruction Manual LIM-1, LIM-1 Loop Isolator Module, Loop Isolator Module, Isolator Module, Module</p>
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## References

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