INTRODUCTION

The Model HZM-Z from Siemens Industry, Inc. is an intelligent device that connects a single zone of conventional devices to a DLC (FireFinder-XLS System) or FS-DLC (FS-250 System) device loop. The HZM-Z can power up to fifteen compatible 2-wire, ionization or photoelectric smoke detectors or it can power one PB-1191 Beam Detector. It can also monitor an unlimited number of shorting devices such as waterflow switches, thermal detectors, manual stations, etc.

Each HZM-Z can be assigned a custom message using either the Zeus Programming Tool (FireFinder-XLS System) or the FS-CT2 (FS-250 System). Refer to the Zeus Quick Start Manual, P/N 315-033875, or the FS-250 Programming Manual, P/N 315-049403, as applicable. The alarm verification configuration is used only for non-shorting detectors.

The HZM-Z supports Class A and Class B wiring. The module uses one address on the device loop. It does not require any mechanical address programming. Use the DPU Device Programming Unit to program and test the module.

Figure 1
HZM-Z Module

The HZM-Z is not listed for use in mass notification applications.

CONTROLS AND INDICATORS

The HZM-Z has a multicolor LED, visible through the cover plate, which indicates the condition of the circuit. This multicolor LED displays red for alarm, yellow for trouble, and green for normal operation (See Figure 1).

PRE-INSTALLATION

Setting The Module Address

1. Using the DPU Device Programming Unit, plug the programming cable into the programming points on the HZM-Z (See Figure 1).
2. Set the address for the HZM-Z by following the instructions in the DPU Manual, P/N 315-033260.
INSTALLATION

Remove all system power before installation, first battery then AC. (To power up, connect the AC first, then the battery.)

Electrical Connections

After you have set the HZM-Z address, connect the field wiring. There are three basic connections to the HZM-Z: initiating devices, DLC or FS-DLC device loop, and 24 VDC power. All terminals are power limited.

Initiating Devices

(Figures 2, 3, and 4)

The HZM-Z supports one zone of initiating devices in either Class A or Class B. The initiating devices are connected to terminals 5–8 on the HZM-Z terminal block. The HZM-Z is a polarity insensitive module and terminals 1 and 2 can be connected to either line of the DLC or FS-DLC Device Loop. Figure 2 shows the Class A wiring. Figure 3 shows the Class B wiring.

NOTES
1. Wire 18 AWG minimum, 12 AWG maximum, 35 ohms Max.
2. Supervised, power limited to NFPA 70 per NEC 760.
3. Voltage 24VDC.
4. Positive and negative ground fault detected at <60K ohms for terminals 5–8.

Figure 2
HZM-Z Initiating Devices Wiring Diagram
Class A/Style D (ULC DCLA) Installation

Figure 3
HZM-Z Initiating Devices Wiring Diagram
Class B/Style B (ULC DCLB) Installation
Figure 4 shows the wiring for the PB-1191 beam detector. When the PB-1191 is used, the 2-position plug from jumper J1 must be removed.

Follow the steps listed below to remove the 2-position plug from J1:

a. Remove the screw from the center of the HZM-Z plastic cover and place it to one side.
b. Remove the circuit board and locate jumper J1.
c. Remove the 2-position plug from J1.
d. Reassemble the circuit board and plastic cover using the screw that was removed in the first step.
e. Be sure to use the correct end of line device with the HZM-Z in this configuration.

![Figure 4]

**NOTE:**
Positive and negative ground fault detected at <60K ohms for terminals 5, 8.

*Figure 4*
*HZM-Z Wiring Diagram For PB-1191 Installation*
Device Loops

NOTES
1. Loop resistance 50 ohms Max with 252 devices on the loop. Refer to the DLC Installation Instructions, P/N 315-033090 if the number of devices is less than 252.
2. Wire 18 AWG minimum, 12 AWG maximum.
3. No EOL device required.
4. Supervised, power limited to NFPA 70 per NEC 760.
5. Positive and negative ground fault detected at <60K ohms for terminals 5-8 on HZM-Z.

The HZM-Z communicates with the FireFinder-XLS via its DLC device loop. The device loop may be wired Class A or Class B. Figure 5 shows both wiring types. Refer to the DLC Installation Instructions, P/N 315-033090 for additional wiring information.

Do not mix wiring types; Zone 1 and Zone 2 must be the same wiring type.

NOTES
1. Loop resistance 50 ohms Max with 252 devices on the loop. Refer to the FS-250 Installation, Operation and Maintenance Manual if the number of devices is less than 252.
2. Wire 18 AWG minimum, 12 AWG maximum.
3. No EOL device required.
4. When wiring Class B, no jumper required between terminal +OUT and +IN, terminal -OUT and -IN.
5. Supervised, power limited to NFPA 70 per NEC 760.
6. Positive and negative ground fault detected at <60K ohms for terminals 5-8 on HZM-Z.

The HZM-Z communicates with the FS-250 via its FS-DLC device loop. The device loop may be wired Class A or Class B. Figure 6 shows both wiring types. Refer to the FS-250 Installation, Operation and Maintenance Manual, P/N 315-049353, for additional wiring information.

NOTES
1. Loop resistance 50 ohms Max with 252 devices on the loop. Refer to the FS-250 Installation, Operation and Maintenance Manual if the number of devices is less than 252.
2. Wire 18 AWG minimum, 12 AWG maximum.
3. No EOL device required.
4. Supervised, power limited to NFPA 70 per NEC 760.
5. Positive and negative ground fault detected at <60K ohms for terminals 5-8 on HZM-Z.

Figure 5
HZM-Z Device Loop Wiring Diagram For FireFinder-XLS

Figure 6
HZM-Z Device Loop Wiring Diagram For FS-250
24 VDC Power

In a FireFinder-XLS System, the HZM-Z receives its power from the 24 VDC power output on TB3 of the PSC-12 or PSX-12. In an FS-250 System, the HZM-Z receives its power from the 24V power output on the control panel or auxiliary power supply. The 24 VDC power may be wired only as Class B. Since the HZM-Z monitors the power at its screw terminals, you can star or T-tap the power connection. Refer to Figure 7 for the wiring diagram.

NOTES
1. Wire 18 AWG minimum, 12 AWG maximum.
2. No EOL device required.
3. Supervised, power limited to NFPA 70 per NEC 760.
4. A power supply which is resettable, power limited and UL listed for fire protective signaling use and is rated between 18.8-28.2 VDC.
5. Positive and negative ground fault detected at <60K ohms for terminals 5-8 on HZM-Z.

Mounting

1. Mount the HZM-Z in a standard two gang electrical box. The box must have a depth of at least 3½ inches.
2. When the field wiring for the initiating devices, device loop, and 24 VDC is connected, press the HZM-Z into the box and fasten it with the four screws provided.
3. Attach a dress bezel if necessary, making sure that the ALARM LED is aligned with the hole in the bezel.

COMPATIBILITY

The devices in Table 1 are listed for use with the HZM-Z.

<table>
<thead>
<tr>
<th>Siemens Detector Model</th>
<th>Base</th>
<th>Installation Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1/3/3H</td>
<td>DB-3S</td>
<td>315-081943-19</td>
</tr>
<tr>
<td>D1A3/3A</td>
<td>DB-3S</td>
<td>315-081943-19</td>
</tr>
<tr>
<td>D1B3/3B</td>
<td>AD-3I</td>
<td>315-093234-7</td>
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<tr>
<td>DT-11</td>
<td>DB-11 DB-3S with DB-ADPT</td>
<td>315-095429-5</td>
</tr>
<tr>
<td>Hi121</td>
<td>DB-11, DB-11E</td>
<td>A6V10281365_a</td>
</tr>
<tr>
<td>OHi21</td>
<td>DB-11, DB-11E</td>
<td>A6V10281367_a</td>
</tr>
<tr>
<td>OP121</td>
<td>DB-11, DB-11E</td>
<td>A6V10281367_a</td>
</tr>
<tr>
<td>PBA-1191</td>
<td>PBB-1191</td>
<td>315-095424-3</td>
</tr>
<tr>
<td>PE-11/11T</td>
<td>DB-11 DB-3S with DB-ADPT AD-11P</td>
<td>315-094198-10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>315-095659-11</td>
</tr>
</tbody>
</table>

• Use up to fifteen detectors, any combination of those listed.
• Only one PB-1191 (consisting of a PBA-1191 detector and PBB-1191 base), and no additional devices, can be connected to an HZM-Z.
• Detector operated accessories cannot be used with the HZM-Z.
• The model numbers listed are the UL compatibility identifiers.
## ELECTRICAL RATINGS

<table>
<thead>
<tr>
<th>Initiating Device Zone:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Zone Resistance</td>
</tr>
<tr>
<td>Supervisory Voltage Range</td>
</tr>
<tr>
<td>Max. Zone Current</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>24VDC Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage Range</td>
</tr>
<tr>
<td>Max. Current</td>
</tr>
<tr>
<td>Standby Current</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DLC / FS-DLC Loop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Current</td>
</tr>
</tbody>
</table>
Cyber security disclaimer

Siemens products and solutions provide security functions to ensure the secure operation of building comfort, fire safety, security management and physical security systems. The security functions on these products and solutions are important components of a comprehensive security concept.

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