Honeywell

HW-AV-LTE-M

CLSS Pathway

Product Installation Document

1 Overview

The CLSS Pathway (HW-AV-LTE-M) is a dual-path cellular communicator. It transmits data from a fire alarm control panel (FACP) to a central monitoring station. It communicates over AT&T and Verizon networks. The SIM cards are configured in an active/active state, and will automatically fail over from Verizon to AT&T in the event of a cellular outage. It transmits Contact ID, SIA, or 4x2 data from the fire alarm control panel to the supervising station or monitoring center (Supported SIA formats- SIA8, SIA20, SIA2000. Supported 4x2 frequencies - 1400 Hz, 2300 Hz).

This document includes instructions for mounting and wiring only. For this purpose, the guide uses the optional enclosure HW-AV-ENC.

1.1 Other Features

This communicator also has other features, including secondary datra transmission via an Ethernet connection as well as monitoring dry-contact relay outputs.

1.2 Information Sources

- For more detailed procedures and all configuration options refer to the *Installation and Operation Manual* (LS10340-000HW-E)
- For quick install and to configuration the CLSS Pathway refer to the *Quick Start Guide* (LS10339-000HW-E), which comes with the communicator.
- To access the most updated versions of all product documentation, log on to CLSS Site Manager and access the help section.

2 Mounting the Communicator

CAUTION: REQUIRED ENCLOSURE
THE CLSS PATHWAY SHALL ONLY BE MOUNTED WITHIN A HW-AV-ENC ENCLOSURE.

Notes

- Inform the central monitoring station to put your Account on test.
- If installing on an existing operational panel, inform the operator and the local authority that the panel will be temporarily out of service.
- Check that you have the communicator, 3-ft antenna, and the *Quick Start Guide* from the carton box.
- Only a regulated UL-listed UOJZ, UTOU, or NBSX control panel or power supply should power the communicator.
- The communicator must be connected to a UL-listed control panel with power limited circuits.
- For UL installations, secure the communicator to a UL-listed enclosure, such as a UL-listed junction box or HW-AV-ENC.
- Install the communicator only at a dry indoor location.
- The location and wiring methods must be in accordance with the *National Electrical code*, *ANSI/NFPA 70*.
- Install in accordance with the *National Fire Alarm and Signaling Code, NFPA 72*.
- Mount the communicator inside an enclosure, for example HW-AV-ENC, as shown in Figure 1 below.
- Enclosure should be close nipple to the fire alarm control panel.

2.1 Before Mounting

1. Know whether to install CLSS Pathway for dialer capture or for panel relay monitoring.
2. If it is for dialer capture, know whether to install the CLSS Pathway with LAN (dual-path communications) or without LAN (sole path).
3. The panel should be programmed to support the CLSS Pathway.
4. Before mounting and wiring, ensure that the panel is powered down.

2.2 To Mount the Communicator

1. In the *Quick Start Guide* (included with the product), locate the installation sticker at the bottom right of the last page.
2. Check that the sticker has the serial number and the configuration key to program the communicator.
3. Place the sticker on the inside lid of the enclosure for programming steps and for future reference.
4. Mount the enclosure box on the wall next to the fire panel using the wall mounting holes.

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5. If using the HW-AV-ENC enclosure, mount it onto the two mounting holes as shown in Figure 1 and secure it with the hardware supplied with the enclosure.
   For other enclosures, use the communicator box mounting flanges as a template to drill holes for appropriate sized mounting hardware (not supplied).
6. Slide the box onto the mounting studs and secure with the hex nuts provided in the enclosure kit.

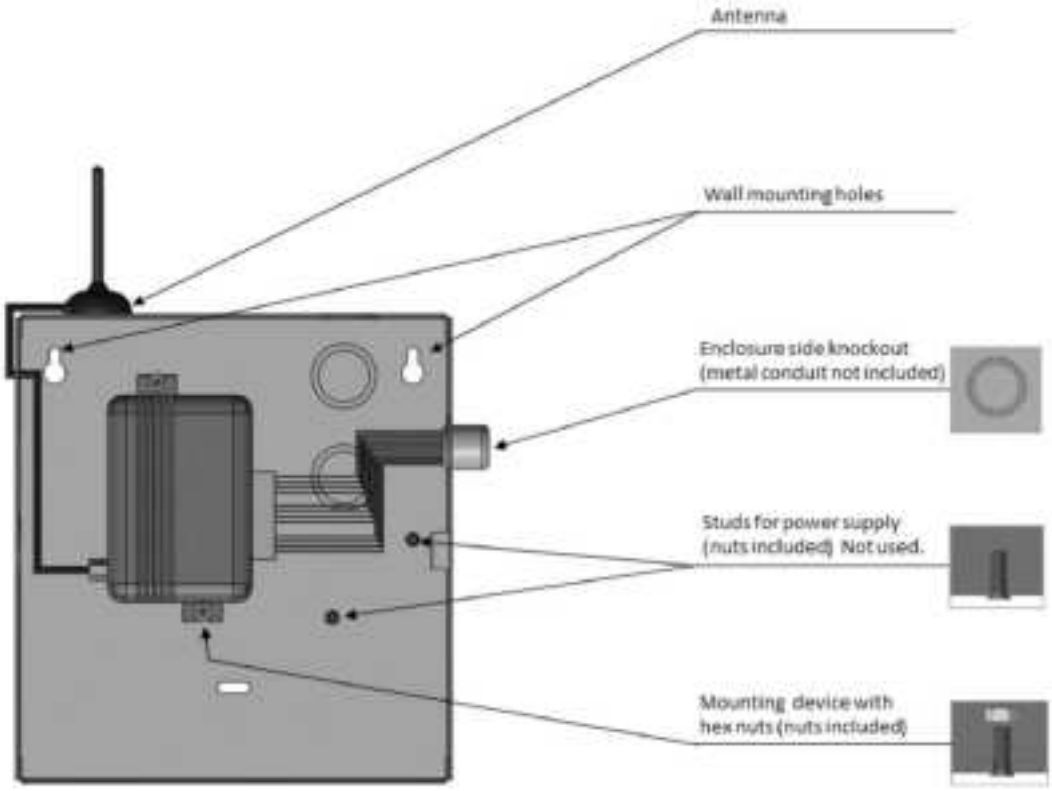

Figure 1 Mounting the Communicator into the Enclosure

3 Installing the Antenna

The antenna comes with an SMA connector, which provides easy connection with the communicator.

Important

- Do not use a damaged antenna with the communicator. Replace the damaged antenna immediately.
- Use only a manufacturer approved antenna. Non-approved antennas or modifications could impair service quality, damage the device, and violate FCC regulations.
- A location below the ground level or a metal structure may impact the network coverage.
- The antenna should be positioned perpendicularly to the ground, either right side up or upside down.
- Keep the antenna away from any sources interfering with or blocking the RF signal.
  For example, a metal object may shield the cellular radio RF signal.
- The antenna should be at least 7.8" (20 cm) away from people.
- The antenna must not be co-located or operating with any other antenna or transmitter.
- Ensure that the panel supplies 24V DC power from its constant power output.

3.1 To Connect the Antenna

1. Route the antenna cable through the small rubber grommet located on the top left side of the enclosure.
2. Attach the magnet on the bottom of the antenna onto the top wall of the enclosure.
3. Locate the antenna connector on top of the communicator.
4. Thread the antenna cable end onto the antenna connector and tighten.
5. Loop the excess cable length inside the enclosure.

Note

If external antenna (not provided with the unit) is used:

- Impedance of the antenna and the cable must be 50 ohms.
- Supported frequency must either be between 700/850 or 1700/1900 MHz.
- Connector: SMA Connector, SMT 13.5 mm, 50 ohms.
- The maximum length of cable should not exceed 20 feet.

4 Wiring the Communicator

You can wire the communicator either for capturing dialer data from a panel's dialer interface or for monitoring dry contact relay outputs.

4.1 Wiring for Dialer Capture

For dialer capture, you connect both telephone ports of the fire panel with the communicator. If a dual-path connection is needed, connect the LAN port of the CLSS Pathway with the customer's network router.

4.1.1 Preparations

- For panel dialer ports with 8-pin RJ type connectors, use an RJ45 connector with the other end as a pigtail.
- Use only the Pin 4 wire, which is typically Blue with White stripe, for RING connection.
- Use only the Pin 5 wire, which is typically solid Blue, for TIP connection.
- Cut all other wires.
- Enclosure should be close nipple to the fire alarm control panel.
- All wirings must be within a conduit.
- The terminal strips can accommodate solid or stranded wires with sizes from 14 to 22 AWG.

4.1.2 Wiring the Panel to the Communicator

Connect the panel to the communicator as follows:

CAUTION: RESETTABLE POWER TERMINALS
DO NOT USE RESETTABLE POWER TERMINALS.

Panel's Terminals	Panel's Connector	Connections at CLSS Pathway
AUX	+	Connect to +
GND	-	Connect to -
Primary Dialer	RING	Connect to RING
	TIP	Connect to TIP
Backup Dialer	RING2	Connect to RING2
	TIP2	Connect to TIP2

4.1.3 Powering On

1. Power ON the communicator and the panel.
2. Ensure that the panel and the communicator are receiving power.
3. Ensure that the Green LED on the communicator is continuously ON indicating successful connections.

NOTE: Refer to Section 7, "Troubleshooting" if there is an issue to resolve.

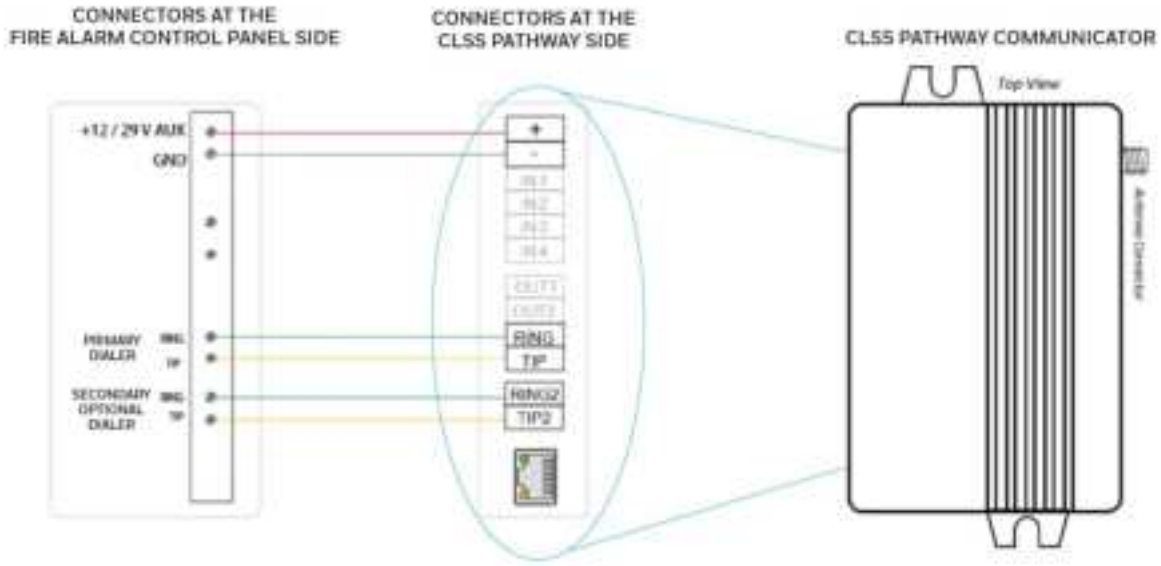

Figure 2 Wiring for Dialer Capture

4.2 Wiring for Dry Contact Relay Outputs

The communicator can be wired to monitor dry contact relay outputs. This wiring is done without connecting to a dialer interface.

CAUTION: WIRING RESTRICTIONS

- All wiring must be within a conduit.
- Do not use resettable power terminals.

4.2.1 To Wire for the Dry Contact Relay Outputs

1. Install a 10K resistor between the communicator ground and its input.
2. Connect the panel relay terminals and the communicator as shown in Figure 3.
3. Ensure that the connections are as specified in the following table:

Panel's Terminal	Connections at the CLSS Pathway
AUX	Connect to AUX (+) of the Communicator.
GND	Connect to GND of the Communicator.
Trouble Relay Output	Connect to the IN1 port of the Communicator.
Fire Alarm Relay Output	Connect to the IN2 port of the Communicator.
Supervision Alarm Relay	Connect to the IN3 port of the Communicator.
Waterflow Relay Output	Connect to the IN4 port of the Communicator.

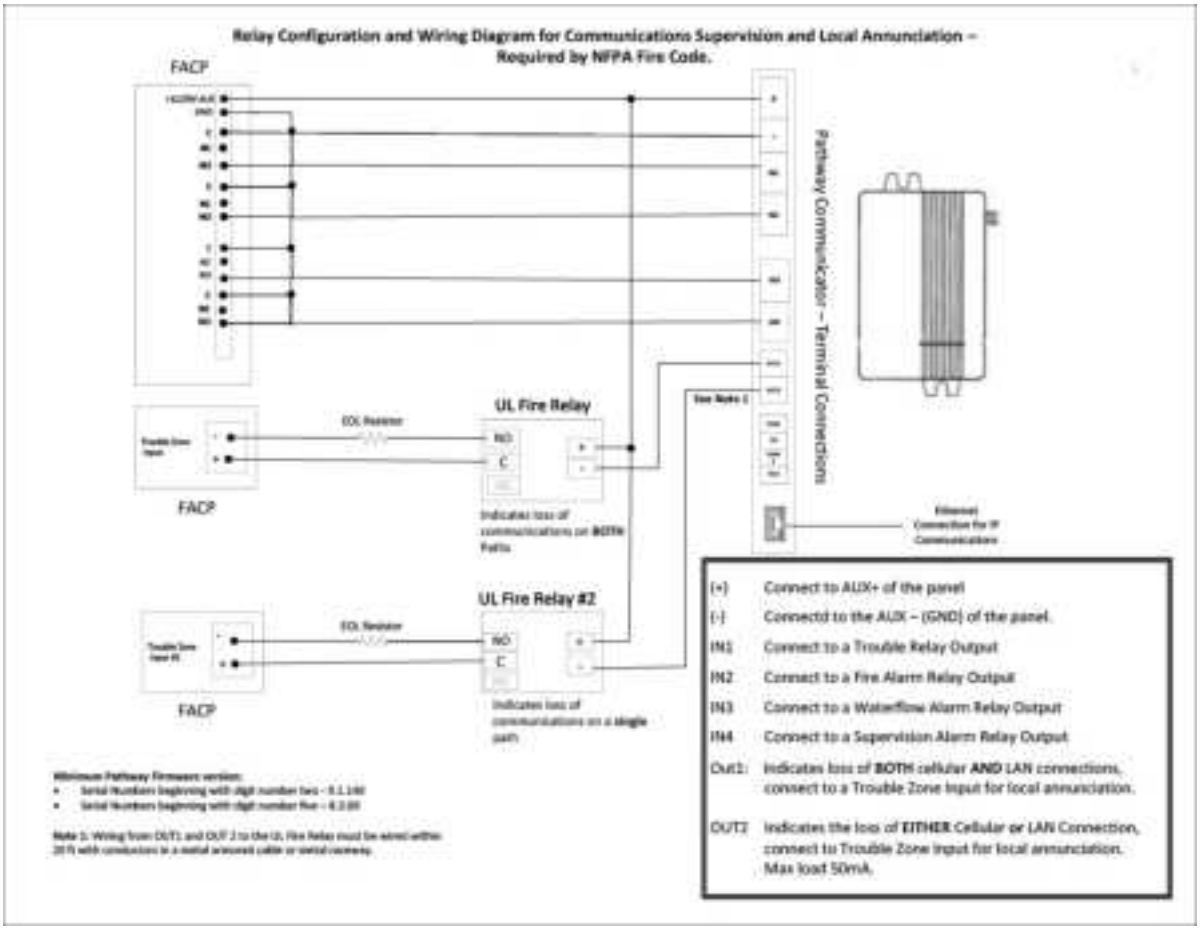

Figure 3 Wiring for Dry Contact Relay Monitoring

4.2.2 Powering On

1. Power ON the communicator and the panel.
2. Ensure that the panel and the communicator are receiving power.
3. Ensure that the Green LED on the communicator is continuously ON indicating successful connections.

NOTE: Refer to Section 7, "Troubleshooting" if there is an issue to resolve.

4.3 For Dual-path Communications

1. Connect the LAN port of the communicator to the customer's network.

2. Observe that the Yellow LED for network connectivity is flashing to indicate a live Ethernet connection.
3. The RJ45 Connector LEDs have the following states:

RJ45 Connector	LED State	Indication	Action
Yellow LED	Constantly ON	Connected with good signal	None
Green LED	Blinking	Cable connection and communication with the router are good.	None

NOTE: Refer to Section 7, "Troubleshooting" if there is an issue to resolve.

5 Programming the Connected Panel

Program the panel according to the panel's programming document and as follows:

- Enable the PSTN dialer of the panel
- Select the DTMF mode (for tone dialing)
- Select the communication format: Contact ID or SIA or 4x2
- Provide any telephone number for dialing. Ex: 999999
- Enter the 4-digit account number

6 Activating the CLSS Pathway

A panel event activates the CLSS Pathway communications.

After a successful wiring, perform the event activation in the CLSS App for the communicator to send event codes from the panel. You can create a test event on the panel to perform this one-time activation.

The flashing Green LED on the communicator indicates successful event activation and data transfer.

7 Troubleshooting

7.1 Connection Troubles

Resolved Status Indication: The Communicator LED starts flashing. Continuous ON indicates a good connection.

LED Status	Possible Causes	Corrective Actions
Off	• The communicator is not connected to the panel.	Ensure that the wirings are as per the wiring diagrams.
	• The panel is not supplying power.	Measure the AUX output of the panel.
	• The communicator device is damaged.	Replace with an undamaged communicator.
Flashing Slow	• Trying to establish connection.	Reposition the antenna.
	• No cellular signal available.	
Flashing every 5 seconds	Low signal connectivity	Reposition the antenna.

7.2 LAN Network Troubles

Resolved Status Indication: The RJ45 connector's flashing LED indicates data transfer. Continuous ON indicates a good connection with the panel and router.

LED Color	LED Status	Possible Causes	Corrective Actions
Yellow	OFF	The LAN cable is not plugged into the communicator.	✓ Ensure that the wirings are as per the wiring diagrams. ✓ Measure the AUX output of the panel. ✓ Replace with an undamaged communicator.
Green	OFF	• The router is not providing an IP via DHCP.	Check your DHCP server settings if DHCP is in use.
		• There is no Internet access.	Use another device in the same network and check your router settings.

7.3 Event Troubles

Resolved Status Indication: The RJ45 connector's flashing LED indicates data transfer. The *Connected Life Safety Services* App as well as *CLSS Site Manager* start receiving events.

Trouble	Corrective Actions
No events are received	1. Verify the RING and TIP connections: ✓ Ensure that the RING and TIP terminals are connected to a TELCO ring and tip and not to the R-1/ T-1 terminals. ✓ Ensure that there is no connection trouble. 2. Then, check for communication failure error messages at the panel and fix the error, if any. 3. Disable the *Wait for Dial Tone* options in the panel.
Cellular connectivity issues	1. Go to the Device Registration screen in the CLSS App. 2. Ensure that the signal strength shown on it is at least one to two bars. 3. Reposition the antenna for higher signal strength.

Honeywell International Inc.
12 Clintonville Rd.
Northford, CT 06472
800.627.3473
Technical support: CLSS.Tech@Honeywell.com

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