

For Use With Control/Communicators Supporting V-Plex® Loop Devices **INSTALLATION AND SETUP GUIDE**

GENERAL INFORMATION

The ADEMCO 4297 V-Plex® loop extender module is an accessory for use with Ademco control panels that support V-Plex (polling loop) devices. The 4297 module receives signals from the control panel via its "input" loop, and then re-transmits boosted copies of these signals via its "extension" loop.

- The 4297 draws power for its internal circuitry and its extension loop from a supplementary power supply such as the control panel's auxiliary power output.

Also, the 4297 isolates open and short circuit faults occurring on its extension loop from its input loop. These characteristics allow the 4297 module to be used to extend the control panel's polling loop, to provide additional polling loop current, and to provide electrically isolated branch loops.

- The 4297 module is fully supervised and causes the control panel to trigger supervision fault indications for devices wired to the extension loop when operating power to the module fails, or when an open or short circuit occurs on the extension loop. Refer to the control panel's installation instructions for the type of supervision fault indication provided.

Important Notes:

- * The 4297 **cannot** be used to increase the number of polling loop zones supported by the control panel.
- * The 4297 is **not** designed to be used in a Class A wiring configuration.

MOUNTING

For UL burglary and all fire installations:

Mount the 4297 module inside a UL Listed enclosure such as the control panel's enclosure. Note that the enclosure must be UL Listed for the desired application; i.e., use an attack-resistant enclosure with a tamper switch for commercial burglary applications.

For non-UL certified installations:

Mount the 4297 module directly on a surface using the slotted holes located on the back of its housing (mounting screws provided). Feed the wires through the slot on the side or through the breakout located on the back of the housing. Affix the connections label provided to the inside of the 4297 module's cover or in the control panel cabinet, if used.

WIRING CONNECTIONS

The 4297 module provides a 9-position terminal block for making power, earth ground and polling loop connections. The screw terminal assignments on this terminal block are described in Figure 1.

UL NOTE: Use only 14-22 gauge wire.

ULC

For ULC fire installations, the 4297 can be used to connect the fire alarm control panel to the Vista fire transmitter. It is not to be used to connect fire alarm detectors to the ADEMCO (Vista) fire transmitter.

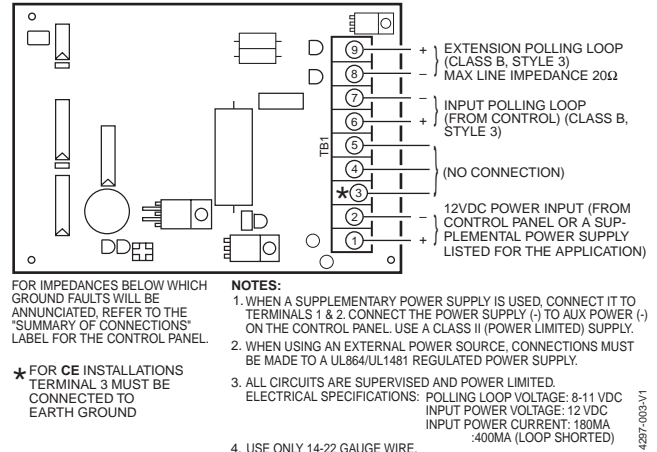


Figure 1. 4297 Wiring Connections

Power Supply Connections

The 4297 module can draw power for its internal circuitry and its extension loop from a supplementary power supply such as the control panel's auxiliary power output. See Figure 2.

UL	<ul style="list-style-type: none"> • All power-limited wiring must be separated from non-power limited and high-voltage wiring by 1/4" (6.4 mm). • Refer to the control panel installation instructions for programming / installation requirements.
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When Using One 4297

Use one 4297 to extend the polling loop, to provide additional polling loop current, or to provide an extension loop which is electrically isolated from the input loop.

Make the connections shown in Figure 3 when only one 4297 module is used. Make sure that the wire run length limits indicated in Table 1 are not exceeded.

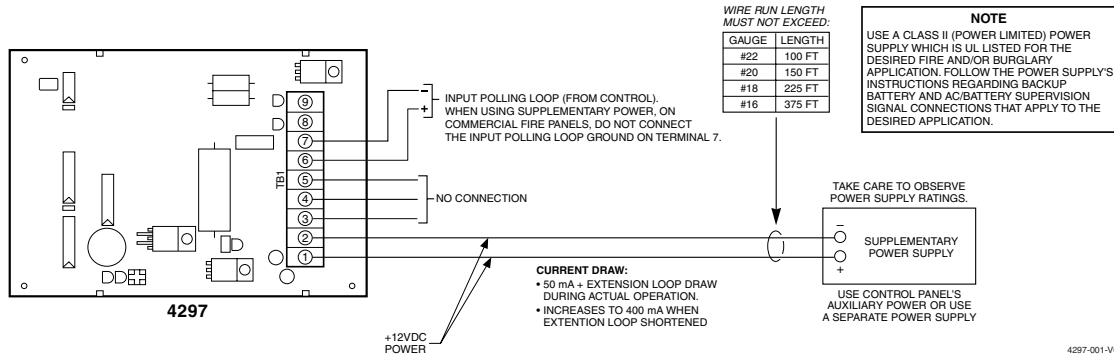
When Using Multiple 4297s

Use multiple 4297s to provide up to eight extension loops which are electrically isolated from each other, or to provide more current than one 4297 can supply.

Make the connections shown in Figure 4 when multiple 4297 modules are used. Do not wire 4297 modules in series (i.e., do not wire one module's extension loop to another module's input loop). Do not use more than eight 4297 modules in parallel unless otherwise stated in the control panel's installation instructions. Make sure that the wire run length limits indicated are not exceeded.

Important Notes:

- * Twisted pair is recommended for all polling loop wire runs.
- * If an intercom system is being used, keep the polling loop wiring as far from the intercom wiring as possible (minimum 6 inches). If this spacing cannot be achieved, use shielded wire. Note that use of shielded wire reduces the maximum permissible polling loop wire run length, as indicated in Table 1 on page 2.



Note: See the Installation & Setup Guide for the control panel being used for specific power and wiring requirements.

Figure 2. Typical Supplementary Power Supply Connections

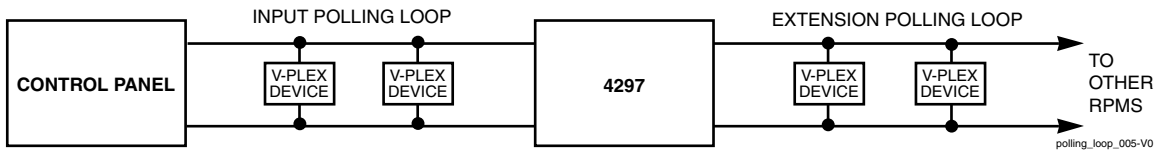
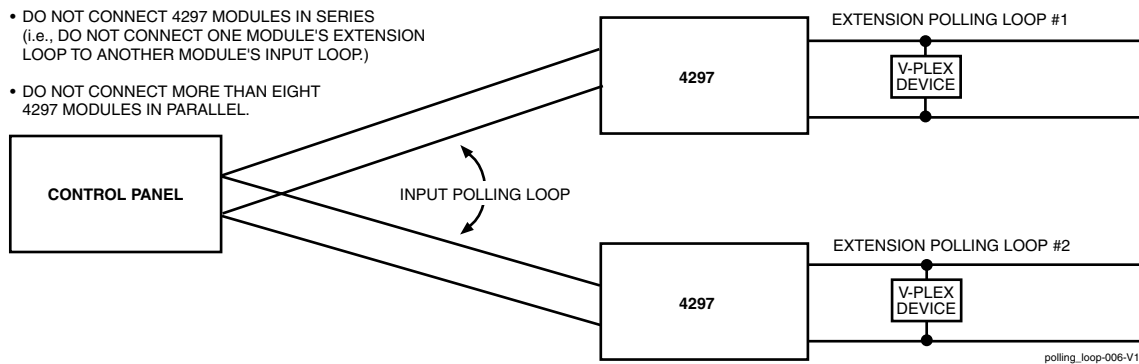


Figure 3. Connections Using One 4297 Module



- DO NOT CONNECT 4297 MODULES IN SERIES (i.e., DO NOT CONNECT ONE MODULE'S EXTENSION LOOP TO ANOTHER MODULE'S INPUT LOOP.)
- DO NOT CONNECT MORE THAN EIGHT 4297 MODULES IN PARALLEL.

Figure 4. Typical Connections Using Multiple 4297 Modules

CONFIGURATION GUIDELINES

These guidelines apply to control panels that support V-Plex polling loop devices. Some of these control panels may have additional limitations; refer to the control panel's Installation & Setup Guide for specific power and wiring requirements.

Maximum number of devices:

- All input loops (combined) = 64 devices max.
- All input loops (combined) plus 1 output loop = 119 devices max.

Maximum wire length limits:

Refer to Table 1 (at right) for wire length per gauge, and observe the maximum wire length limits.

- No individual wire run can exceed 2400 ft. max.
- 1 input loop plus 1 output loop (combined) = 4000 ft. max
- All input loops (combined) plus 1 output loop = 6400 ft. max

Note: Reduce wire length by ½ if using unshielded wire in conduit, or if using shielded wire.

Maximum Current:

- All input loops (combined) = 128mA maximum current limit.
- Each output loop = 128mA
- Any single wire run = 64mA

Wire Gauge	Wire Length
#22	650 ft.
#20	950 ft.
#18	1500 ft.
#16	2400 ft.

SPECIFICATIONS

Physical:

6-7/16"W x 4-1/4"H x 1-1/4"D (163mm x 108mm x 32mm)

Electrical:

12V Input Rating:

Input Voltage: 12VDC

Input Current: 50mA + Extension loop drain (128mA max) during normal operation. Increases to 400mA when extension loop shorted.

Float Voltage: 13.65VDC

Standby Time: Exceeds 4 hrs with 1.2AH or larger battery

Recharge Time: Up to 48 hours

Miscellaneous: PTC thermistor provides reverse battery connection protection

Extension Polling Loop Rating:

Output Current: 128mA max. Do not draw more than 128mA on any individual extension loop wire run.

Maximum line impedance: 20 ohms.

Miscellaneous: Refer to **Table 1**, for limits on polling loop wire run length. The extension loop is power limited.

SEE THE CONTROL PANEL'S INSTALLATION INSTRUCTIONS FOR COMPLETE INFORMATION REGARDING THE LIMITATIONS OF THE ENTIRE SECURITY SYSTEM.

Regulatory Agency Listings

UL 609 commercial burglary, **UL864** commercial fire, **UL985** household fire, and **UL1023** household burglary. **NFPA-72** Compliant

For the latest warranty information, please go to:
www.honeywell.com/security/hsc/resources/wa

FEDERAL COMMUNICATIONS COMMISSION STATEMENTS

The user shall not make any changes or modifications to the equipment unless authorized by the Installation Instructions or User's Manual. Unauthorized changes or modifications could void the user's authority to operate the equipment.

CLASS B DIGITAL DEVICE STATEMENT

This equipment has been tested to FCC requirements and has been found acceptable for use. The FCC requires the following statement for your information:

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- If using an indoor antenna, have a quality outdoor antenna installed.
- Reorient the receiving antenna until interference is reduced or eliminated.
- Move the radio or television receiver away from the receiver/control.
- Move the antenna leads away from any wire runs to the receiver/control.
- Plug the receiver/control into a different outlet so that it and the radio or television receiver are on different branch circuits.
- Consult the dealer or an experienced radio/TV technician for help.

INDUSTRY CANADA CLASS B STATEMENT

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

FCC / IC STATEMENT

This device complies with Part 15 of the FCC Rules, and RSS210 of Industry Canada. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Cet appareil est conforme à la partie 15 des règles de la FCC & de RSS 210 des Industries Canada. Son fonctionnement est soumis aux conditions suivantes: (1) Cet appareil ne doit pas causer d'interférences nuisibles. (2) Cet appareil doit accepter toute interférence reçue y compris les interférences causant une réception indésirable.

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