ADEMCO 4208SN
V-Plex Eight Zone Expander

Installation and Setup Guide

FEATURES

The ADEMCO 4208SN is a V-Plex® eight zone expander for use with Resideo controls that support serial number V-Plex (polling loop) devices. Characteristics of this device include:

- Can be optionally powered from the control panel aux. power supply to reduce the amount of current draw from the polling loop.
- Uniquely identifies 8 EOLR supervised zones (all zones use 10k resistors, supplied).
- Each zone is identified by a unique serial number, which is assigned via on-board DIP Switches.
- Detects faults on all zones within 400ms of occurrence. Loops A & B can be programmed for fast (10ms) response.
- Provides cover tamper protection, which may be enabled or disabled via on-board DIP Switches.

UL

1. For dry, indoor use only.
2. Do not install in air-handling spaces.
3. All circuits are supervised and power-limited.
4. Use only 14-22 AWG wire.
5. Refer to the control panel installation instructions for specific programming / installation requirements.

MOUNTING

1. **Power should be disconnected before proceeding.**
2. **Be sure to mount the 4208SN before making any wire connections.**

UL

For all fire (NFPA) and UL Commercial Burglary installations, the 4208SN must be tamper protected or mounted in a tamper-protected cabinet.

This device is NFPA-72 Compliant.

When mounted remotely, tamper protection is required. Holes on the back of the module's housing permit it to be mounted horizontally or vertically. Wires can exit from the side or the breakout on the back of the housing. To enable tamper protection, set DIP Switch 8 to OFF and attach the tamper magnet (provided) (Figure 1) to the module inside cover. Be sure to enable the expansion zone tamper option at the control (program field *24 = 0). If the module's cover is removed, the magnet attached to the cover (positioned near the reed switch) will cause a tamper signal to be sent to the control for every active zone on the 4208SN module. When the installation is complete, install the cover and affix the Serial Number and Zone Assignment Tables to the inside cover of the control.

When mounted inside the cabinet with the control, the 4208SN should be mounted horizontally and does not need tamper protection, provided the cabinet is supervised. Insert two screws into the raised metal tabs leaving the heads app. 1/8" exposed, then hang the 4208SN using the two slots on the back.

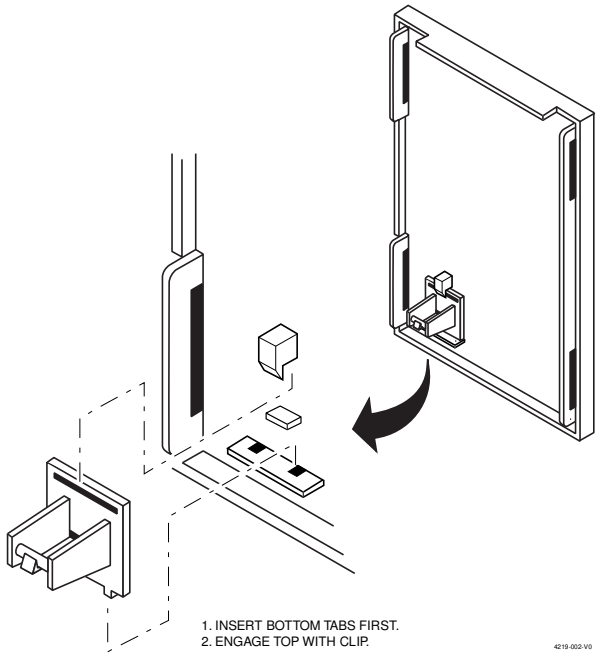

Figure 1. Tamper Magnet Installation

WIRING

CE

For CE installations, ADEMCO N6361 EMI suppression bead is required. Refer to the N6361 installation guide for wire routing instructions.

Polling loop and protection loop wires can be brought in either through the back or front of the unit by removing the knockouts. Use 22 gauge twisted pair wire for polling loop connections. All protection loops use 10k EOL resistors (included). A maximum resistance of 300 ohms is allowed on protection loops (excluding EOLR). See Figure 2 for all connections. Keep in mind that connections to the polling loop are always required, while aux. power connections are optional.

UL

For UL commercial and household fire installations, no more than one wire per terminal may be connected.

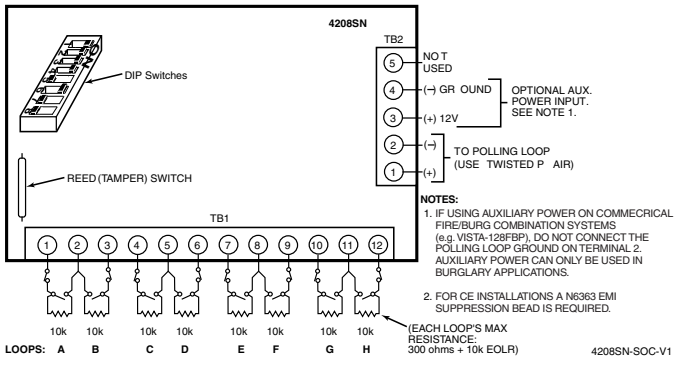

Figure 2. Wiring Diagram

DIP SWITCH SETTINGS

The DIP Switches are used to assign serial numbers to loops A through H. You can assign the serial number of any module loop to any of the control panel's expansion zones. You do not lose zone numbers if you do not use all eight module loops. To select serial numbers for loops A through H, follow the steps below using Figure 3 and Tables 1 through 4 for DIP Switch settings:

1. Select fast/slow response for loops A and B using DIP Switch 1: Fast = OFF (10msec) Slow = ON (400msec). Do not select fast response for a zone dedicated for Fire usage.
2. Select Serial Number Assignment Table containing the desired group of 8 serial numbers (Tables 1 through 4) using DIP switches 6 and 7.
3. Select the group of 8 serial numbers using DIP switches 2, 3, 4, and 5. See the Table selected in step 2 for serial number assignments. If using more than one 4208SN be sure to set each one to a different group setting.
4. Select the Tamper Protection setting using DIP Switch 8: Tamper Disabled = ON Tamper Enabled = OFF. Tamper will report for every active zone on the 4208SN module.

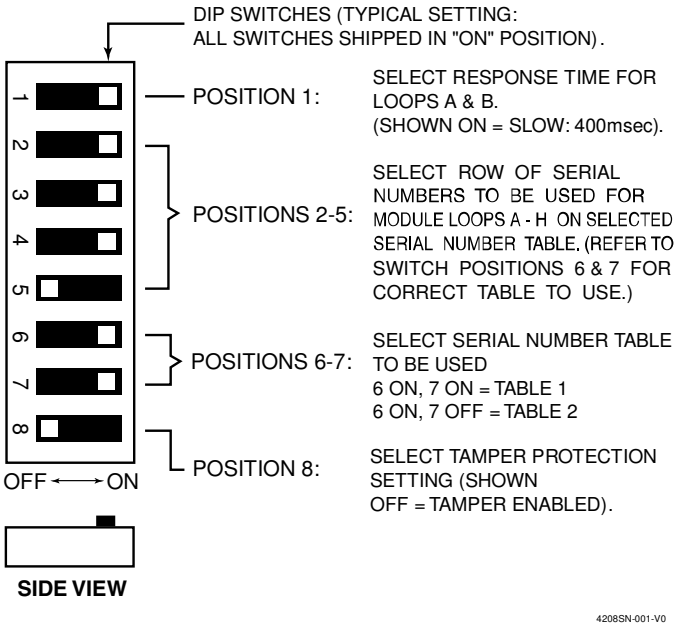

Figure 3. Dip Switch Settings

PANEL PROGRAMMING

When the 4208SN is used as a zone expander, each of the module loops that will be used must be assigned to one of the control panel's expansion zones. To accomplish this, assign a module loop's serial number to a control panel's expansion zone using procedures contained in the control panel's installation instructions. Expansion zones must be programmed as INPUT TYPE "6"–SL (Serial Number V-Plex Loop Device), which will enable the control panel to accept the serial number. Module loops can be programmed in any order and can be assigned to any legitimate control panel expansion zone.

If enrolling a serial number by faulting its associated loop, be sure that other V-Plex loop devices are not activated, as they may interfere with the device being enrolled.

When prompted to "enroll" the serial number for a particular zone, you may enter the serial number for the associated module loop manually through the keypad, through the V-Link downloader, or by momentarily .faulting (shorting) and restoring the terminals of the associated module loop twice when prompted by the keypad. If entering a serial number manually through the keypad, enter the serial number and press "*" to advance to the next prompt, which will ask you for the loop number. Enter a "1" for the loop number for each serial number entered.

If enrolling or entering a serial number, and the message "Duplicate of Zone XX" is displayed, another device with that same serial number is aready in the system. In that case, use a different serial number group setting on the 4208SN.

If desired, peel the label corresponding to the serial number assignment table used from the sheet of labels supplied, and apply it to the outside of the case cover or next to the module for future reference.

VERIFICATION OF PROGRAMMING

To verify proper 4208SN wiring and programming, fault each of the module loops that are used and verify that the control panel displays the correct zone number on the keypad.

WARRANTY

For the latest warranty information, please go to:www.resideo.com

Table 1: 4208SN Serial Number Assignments

THE DIP SWITCH SETTINGS PRESET THE LOOPS TO THE APPLICABLE SERIAL NUMBERS														
Dip Switch Settings (6 &7 ON selects serial numbers in this table)						Loop Serial Number								
2	3	4	5	6	7	Prefix	A	B	C	D	E	F	G	H
ON	ON	ON	ON	ON	ON	006-	5540	5541	5542	5543	5548	5549	5550	5551
ON	ON	ON	—	ON	ON	019-	6612	6613	6614	6615	6620	6621	6622	6623
ON	ON	—	ON	ON	ON	013-	9268	9269	9270	9271	9276	9277	9278	9279
ON	ON	—	—	ON	ON	020-	8900	8901	8902	8903	8908	8909	8910	8911
ON	—	ON	ON	ON	ON	027-	8532	8533	8534	8535	8540	8541	8542	8543
ON	—	ON	—	ON	ON	034-	8164	8165	8166	8167	8172	8173	8174	8175
ON	—	—	ON	ON	ON	041-	7796	7797	7798	7799	7804	7805	7806	7807
ON	—	—	—	ON	ON	048-	7428	7429	7430	7431	7436	7437	7438	7439
—	ON	ON	ON	ON	ON	055-	7060	7061	7062	7063	7068	7069	7070	7071
—	ON	ON	—	ON	ON	062-	6692	6693	6694	6695	6700	6701	6702	6703
—	ON	—	ON	ON	ON	069-	6324	6325	6326	6327	6332	6333	6334	6335
—	ON	—	—	ON	ON	076-	5956	5957	5958	5959	5964	5965	5966	5967
—	—	ON	ON	ON	ON	083-	5588	5589	5590	5591	5596	5597	5598	5599
—	—	ON	—	ON	ON	090-	5220	5221	5222	5223	5228	5229	5230	5231
—	—	—	ON	ON	ON	097-	4852	4853	4854	4855	4860	4861	4862	4863
—	—	—	—	ON	ON	104-	4484	4485	4486	4487	4492	4493	4494	4495

Table 2: 4208SN Serial Number Assignments

THE DIP SWITCH SETTINGS PRESET THE LOOPS TO THE APPLICABLE SERIAL NUMBERS														
Dip Switch Settings (6 ON, 7 OFF selects serial numbers in this table)						Loop Serial Number								
2	3	4	5	6	7	Prefix	A	B	C	D	E	F	G	H
ON	ON	ON	ON	ON	—	006-	5796	5797	5798	5799	5804	5805	5806	5807
ON	ON	ON	—	ON	—	019-	6868	6869	6870	6871	6876	6877	6878	6879
ON	ON	—	ON	ON	—	013-	9524	9525	9526	9527	9532	9533	9534	9535
ON	ON	—	—	ON	—	020-	9156	9157	9158	9159	9164	9165	9166	9167
ON	—	ON	ON	ON	—	027-	8788	8789	8790	8791	8796	8797	8798	8799
ON	—	ON	—	ON	—	034-	8420	8421	8422	8423	8428	8429	8430	8431
ON	—	—	ON	ON	—	041-	8052	8053	8054	8055	8060	8061	8062	8063
ON	—	—	—	ON	—	048-	7684	7685	7686	7687	7692	7693	7694	7695
—	ON	ON	ON	ON	—	055-	7316	7317	7318	7319	7324	7325	7326	7327
—	ON	ON	—	ON	—	062-	6948	6949	6950	6951	6956	6957	6958	6959
—	ON	—	ON	ON	—	069-	6580	6581	6582	6583	6588	6589	6590	6591
—	ON	—	—	ON	—	076-	6212	6213	6214	6215	6220	6221	6222	6223
—	—	ON	ON	ON	—	083-	5844	5845	5846	5847	5852	5853	5854	5855
—	—	ON	—	ON	—	090-	5476	5477	5478	5479	5484	5485	5486	5487
—	—	—	ON	ON	—	097-	5108	5109	5110	5111	5116	5117	5118	5119
—	—	—	—	ON	—	104-	4740	4741	4742	4743	4748	4749	4750	4751

SPECIFICATIONS

Physical:

Width: 6-7/16" (163mm)

Height: 4-1/4" (108mm)

Depth: 1-1/4" (32mm)

Electrical:

Current: 33.6mA when polling loop provides power to module; 0.6mA when using external power. See Table 5.

Polling Loop Voltage: 11V nominal; 8 - 11VDC range

Power Input (optional): 12VDC @ 33mA (from control panel's auxiliary power)

Expander Sensor Loop Response:

Slow: 400msec (all loops)

Fast: 10msec (option for loops A and B)

Note: These currents apply when polling loop input = 11VDC and 12VDC input is not connected to external supply.

Sensor Loop Max. Resistance: Up to 300 ohms of wire resistance + 10k EOLR.

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

Table 5. Current Draw Calculations

Power Input Source (8 – 11VDC)	**Current Draw** (all zones shorted)	
	From Polling Loop	**From Control Panel Aux. Power**
Polling Loop Only	33.6mA	N/A
Polling Loop and External Power Input	0.6mA	33mA

UL Do not use a remote power supply. On commercial fire panels, when using optional aux. power and ground from the control, do not additionally connect the polling loop ground to this device.

UL Listings:

Commercial Fire:	UL864
Household Burg:	UL1023
Household Fire:	UL985
Commercial Burg:	UL365, UL609, UL1076, UL1610

For UL Listed Commercial Fire Usage:

Use N.O. contacts. Style B, supervise these loops using Model # EOL 100 fire listed 10k EOLRs (purchased separately).

For UL Listed Commercial Burglary Usage:

Use N.O. or N.C. contacts. Supervise using EOLRs supplied.

FEDERAL COMMUNICATIONS COMMISSION (FCC) 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

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful 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:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

INDUSTRY CANADA (IC) STATEMENTS

This device complies with 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.

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.

Responsible Party / Issuer of Supplier's Declaration of Conformity: Ademco Inc., a subsidiary of Resideo Technologies, Inc., 2 Corporate Center Drive., Melville, NY 11747, Ph: 516-577-2000.

The product should not be disposed of with other household waste. Check for the nearest authorized collection centers or authorized recyclers. The correct disposal of end-of-life equipment will help prevent potential negative consequences for the environment and human health.

Any attempt to reverse-engineer this device by decoding proprietary protocols, de-compiling firmware, or any similar actions is strictly prohibited.

This product manufactured by Resideo Technologies, Inc. and its affiliates

K0797V2C 3/09 Rev. C

resideo

2 Corporate Center Drive, Suite 100
P.O. Box 9040, Melville, NY 11747

www.resideo.com