

# AMP-704

## Point Interface Module

### INSTALLATION INSTRUCTIONS

The AMP-704 Point Interface Module (PIM) allows for the connection of non-powered or externally powered hardwired devices to the Addressable Multiplex Loop (AML). The four inputs and cover tamper can be individually enrolled as zones on the control panel. The module is jumper-selectable for either N/C loops, SEOL, or DEOL resistors.

The AMP-704 PIM uses a 2-wire connection for power and to communicate with the control panel. This, in combination with low power devices, simplifies wiring and reduces installation cost. The AMP-704's low current draw also maximizes the number of modules that can be connected to an addressable loop. For additional information on AML wiring, please refer to the compatible panel's Installation Manuals.

### Specifications

Voltage .....	12V
Current Draw .....	3.4mA max (Burg Config.)
.....	6.7mA max (Fire Config.)
Loop resistance.....	100Ω (max.)
Normal loop response.....	400ms.
Temperature.....	32° - 120° F (0° - 49° C)
Humidity .....	0 - 93%, non-condensing

### Control Panel Compatibility

- PC4020/PC4020CF v3.0 and higher
- PC5010 v2.0 and higher\*
- PC5015 v2.2 and higher\*
- PC5020/PC5020CF v3.0 and higher\*

\*Requires PC5100 Addressable Expansion Module

**NOTE:** For Commercial Fire applications use the AMP-704 only in conjunction with models PC4020CF and PC5020CF control units.

### Mounting

Select a mounting location for the AMP-704. The module should be located in a dry location and as close as possible to the points to be protected. Alternatively to the method explained below, the PCB may be mounted in a metal cabinet using the standoffs provided with the unit, refer to Figure 3.

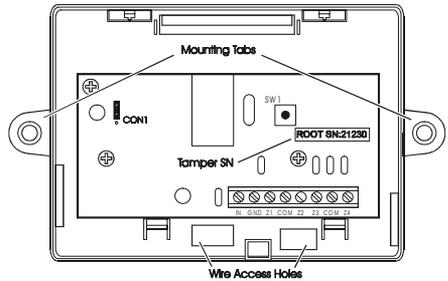
1. Remove the cover using a flat blade screwdriver to push in the tab at the bottom of the enclosure.
2. Pull the addressable loop and input wires through the wiring access holes located at the bottom of the backplate.
3. Mount the device securely to the wall using the two mounting tabs on the backplate or using the two mounting holes inside the backplate. To use the holes inside, the PCB must first be removed. To do this, remove the 3 screws holding the PCB and lift it out.

**CAUTION:** When replacing the PCB, do not over-tighten the screws, the PCB could be damaged.

**NOTE:** If the mounting tabs are not being used to mount the device, they can be broken off.

4. Wire the module and configure the EOL supervision jumper as per the instructions below.
5. Replace the cover and insert the cover screw.

Figure 1: AMP-704

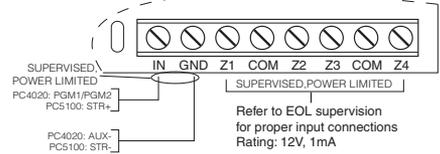


## Wiring

Connect the AMP-704 wiring as indicated below:

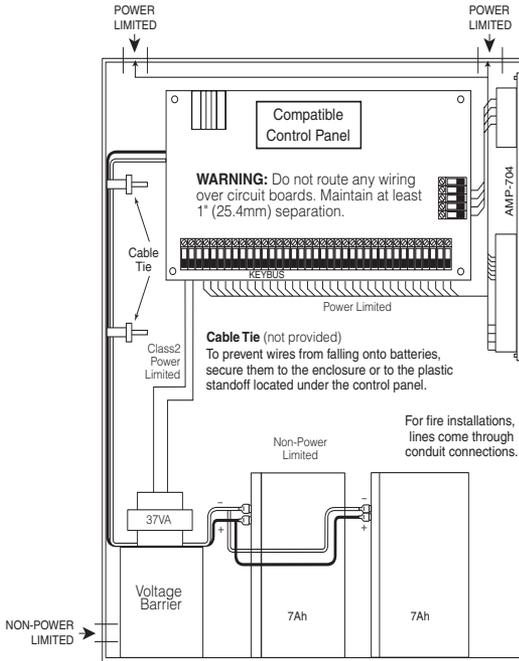
Loop Current vs. Wiring Distance (from PC4020/PC5100)		
Total Loop Current (mA)	22 AWG distance (ft/m)	18 AWG distance (ft/m)
10	2880/878	5143/1568
20	1620/494	3645/1111
30	1010/308	2520/768
40	771/235	1736/529
50	600/183	1250/381
70	400/122	800/244
100	200/61	310/95
120	135/41	155/47
150	100/30	124/37
170	96/28	120/35

Figure 2: AMP-704 Wiring



**CAUTION:** Connect only DSC addressable devices to the addressable loop connections. Connection of any other type of device will impair operation. Any devices other than addressable devices that require power to operate must be powered separately.

Figure 3: Power Limited and Non-Power Limited Wiring (this diagram is representative of all compatible control panels)



### INSTALL BATTERY & AC WIRING AS SHOWN

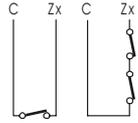
**IMPORTANT:** A minimum 1/4" (6.4mm) separation must be maintained at all points between battery/primary AC wiring and all other wiring connections. The AMP-704 is mounted inside the compatible control unit's enclosure using 3 nylon spacers 3/8" (9.6mm).

## EOL Supervision Jumper (CON1)



### N/C Loops

This configuration allows the use of N/C (normally closed) contacts only. Multiple N/C contacts can be wired in series. **NOTE:** This configuration is not for UL installations (use only with AMP-704 INT model, which is not UL Listed).

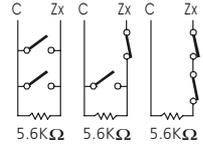


## For Residential Burglary Applications



### Single End-of-Line (SEOL) (default)

This configuration allows the use of N/C (normally closed) and/or N/O (normally open) contacts. Use in conjunction with one 5.6K end-of-line resistor: DSC Model EOLR-2.

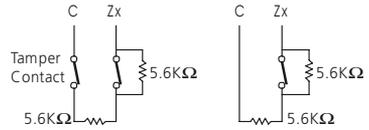


## For Commercial Burglary Applications



### Double End-of-Line (DEOL)

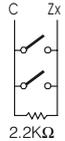
DEOL resistors allow the zone to be monitored for fault, tamper, secure, and violated conditions. Only N/C (normally closed) contacts can be used with this configuration. Use in conjunction with two 5.6K end-of-line resistors: DSC Model EOLR-2.



## For Residential and Commercial Fire Applications (software version 1.0F only)

### Single End-of-Line (SEOL) Loops

This configuration allows the use of N/O (normally open) contacts only. Multiple N/O contacts can be wired in parallel. Use in conjunction with one 2.2K end-of-line resistor: DSC Model EOLR-1.



## Enrolling Inputs

The AMP-704 has a total of 5 serial numbers (SNs), one for the cover tamper and one for each of the four inputs. The serial numbers can be found on the inside of the front cover. Each serial number can be enrolled individually into the control panel via Installer Programming ([\*][8][Installer Code]). This procedure is outlined in the PC4020 Installation Manual and in the PC5100 Installation Manual for PowerSeries panels.

**NOTE:** The AMP-704 serial numbers do not need to be enrolled as consecutive zones in the system. Do not combine burglary and fire devices on the same loop.

The module is shipped with a separate label pack with individual SN stickers that can be easily inserted into the Installation Manual for recording purposes. If required, the serial numbers can be determined from the tamper serial number (ROOT SN) located on the printed circuit board. This 5-digit number begins with the digit 2 and ends with the digits 0 or 5. The 4 input serial numbers are numbered in sequence from the tamper serial number. For example, If the root serial number is 21230 then the serial number for inputs 1 through 4 will be 21231, 21232, 21233 and 21234.

## FCC COMPLIANCE STATEMENT

**CAUTION:** Changes or modifications not expressly approved by Digital Security Controls Ltd. could void your authority to use this equipment.

This equipment generates and uses radio frequency energy and if not installed and used properly, 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 Class B device in accordance with the specifications in Subpart "B" of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in any residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to television or radio 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:

- Re-orient the receiving antenna
- Relocate the alarm control with respect to the receiver
- Move the alarm control away from the receiver
- Connect the alarm control into a different outlet so that alarm control and receiver are on different circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the FCC helpful: "How to Identify and Resolve Radio/Television Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock # 004-000-00345-4.

### Industry Canada

This Class B digital apparatus meets all requirements of the Canadian interference-causing equipment regulations. Cet appareil numérique de la Classe B respecte toutes les exigences de règlement sur le matériel brouilleur du Canada.

### Limited Warranty

DSC warrants that for a period of one year from the date of purchase, the product shall be free of defects in material and workmanship under normal use and that in fulfillment of any breach of such warranty, DSC shall, at its option, repair or replace the defective equipment upon return of the equipment to its repair depot. This warranty applies only to defects in materials and workmanship and not to damage incurred in shipping or handling, or damage due to causes beyond the control of DSC, such as lightning, excessive voltage, mechanical shock, water damage or damage arising out of abuse, alteration or improper application of the product.

The foregoing warranty shall apply only to the original purchaser, and shall be in lieu of any and all other warranties, whether expressed or implied and of all other obligations or liabilities on the part of DSC. This warranty contains the entire warranty. DSC neither assumes responsibility for, nor authorizes any other person purporting to act on its behalf, to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product.

In no event shall DSC be liable for any direct, indirect or consequential damages, loss of anticipated profits, loss of time or any other losses incurred by the buyer in connection with the purchase, installation or operation or failure of this product.

#### **Important!**

**DSC recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to but not limited to criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected**

