

Integrated Audio Intelligent Fire Alarm Control Panels

The latest advancements in digital, audio technology have been combined with the Axis AX Series Intelligent Fire Control Panels to create a new “V” Series line of fully integrated fire detection/voice evacuation control panels. The panels contain all of the same popular features as the standard Axis AX Series panels, but also include the AV-AMP-80, Audio Amplifier Module, which provides 80 Watts of power that is fully controlled by the fire alarm control panel. These panels are highly flexible and ideally suited to meet the needs of virtually any commercial, industrial or institutional application and may operate as standalone systems, or may be networked up to 200 panels in any combination using our Advanced Ad-NeT-PluS networking technology.

The models in the “V” Series include the AX-CTL-1V (single SLC loop), AX-CTL-2V (two SLC loops) and the AX-CTL-4V (four SLC loops). In addition to providing 80 Watts of audio power, each panel comes equipped with an AV-MIC (microphone) for live voice paging. Paging overrides any pre-recorded audio messages that are being generated. By installing one or more optional AX-ASW-16, Switch LED Modules selective zone or area paging can be performed.

Modular construction permits field configuration of a panel(s) to suit specific installation requirements. Additional modules including, the AX-ASW-16, Switch LED Module, and the AX-012, Thermal Strip Printer, may be mounted to the inner door of the panel. A secure outer door with plexiglass permits viewing of these modules as well as the microphone.

The AV-AMP-80, Audio Amplifier Module, provides two Class A or B, 40 Watt Audio Notification Appliance Circuits (ANACs). Sixteen programmable, flash-based, digital messages are freely programmable along with message repeat cycles and selection/activation of either or both output channels. Trouble conditions such as speaker wiring faults and amplifier malfunction are annunciated at the fire control panel per industry codes and standards.

The individual 40 Watt amplifiers can operate as separate independent amplifiers or as one-to-one backups of one another.

Expanding overall system audio wattage is simplified by adding a AV-VB, Audio Booster, (see separate datasheet for more details). The AV-VB is mounted externally in a separate enclosure and contains one AV-AMP-80, Audio Amplifier Module, and one AX-PSU-6, Power Supply Charger Module. Connecting the speaker output channel of an integrated AV-AMP-80, Audio Amplifier Module, inside of an Axis AX “V” Series panel to an input of an external AV-VB, Audio Booster, expands audio wattage by 40 Watts per channel. Resulting audio generated is fully synchronized. AV-VB, Audio Boosters may be cascaded as desired to extend overall wattage per channel, or may be simply added to expand overall system wattage as desired.



Features

- Standalone or Networked Integrated Audio
- Fully Scalable, up to 200 Intelligent Panels
- AV-VB Audio Booster w/Synchronized Audio
- Remote Microphone Channel
- IP Interface – Monitoring/Control/Email Notification
- Powerful yet Simple I/O Relationship Programming
- Mass Notification Programming Options
- AV-VB Boosters expand audio wattage (16 per panel)
- Integrated 80 Watt Digital Audio Features include:
 - 2 Class A or B, 40 Watt, 25 Volt RMS Outputs
 - Programmable 16 Channel Message Generator
 - Automatic one-to-one Backup Capability
- Local internally mounted Microphone and Switches provide:
 - All Call, Alert and Selective Messaging and Paging by Zone or Area
 - Up to 504 Analog Addressable Points
 - Synchronized Audio and Visual Control (Panel or network wide)

Simplifying and reducing initial system set-up, Axis AX "V" Series Intelligent Fire Alarm Control Panels are equipped with an installer-friendly "Auto-Learn/Loop Detection" feature that permits the rapid recognition of all signaling line circuits' devices. This rapid recognition, simplifies the assignment of critical life safety functions immediately. Assignments include: intelligent detector type and operation criteria, addressable input device recognition as an alarm input, and addressable output control on a general alarm basis.

Designed with built-in powerful installation and customization tools, the Axis AX "V" Series Intelligent Fire Alarm Control Panels can adapt to virtually any application requirement. With Dynamix programming, typical time consuming complexities associated with I/O relationship programming such as two-stage multi-pattern NAC control, intelligent detector drift compensation, precision response/ sensitivity mode settings, flexible timing functions, and more, are sharply reduced.

The Axis AX "V" Series Intelligent Fire Alarm Control Panels are fully field programmable via the onboard graphical LCD display and alphanumeric keypad. Front panel programming may encompass defining input to output relationships, configuring output circuit characteristics, entering zone, device, and other text descriptions, and configuring multiple user-access passwords.

To maximize the capability and flexibility of the Axis AX "V" Series Intelligent Fire Alarm Control Panel and expand upon the customization of an installation, the Advanced Windows based PC-Net field configuration tool is available. The PC-Net field configuration tool is a powerful, user-friendly programming tool that allows users to perform virtually any I/O relationship with multiple criteria. Simple drop-down menus with point-and-click operation makes project commissioning and troubleshooting fast and efficient.

Designed with the technician in mind, each module of the Axis AX "V" Series panel is easy to install and service. The integral power supply offers status LEDs, temperature compensated charging, and the ability to operate directly from the batteries when AC supply is not yet available at the installation site. A unique built-in intelligent multi-meter allows technicians to interrogate any input and/or output and diagnose potential time consuming trouble issues with virtually no complications or aggravation. With an Axis AX "V" Series panel, servicing a customer after installation can be as simple as using Advanced Fire Systems Remote Diagnostic Virtual Panel Simulator and/or ipGateway (AX-LAN). The ipGateway (AX-LAN) provides real time text and email alerts of system status.

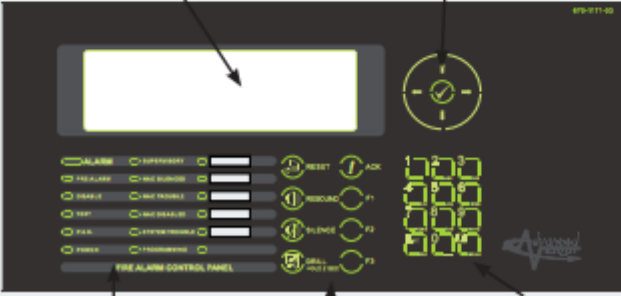
Listings and Approvals

- ETL ANSI/UL 864/1711/1481 Listed: 101564744NYM-001, 100027836NYM-001c
- CSFM Approved: 7165-1713:0101
- NYC FD COA #6105A2

| | |
|--|---|
|  | Reset |
|  | Ack (panel buzzer acknowledge) |
|  | Resound (resound signals) |
|  | Silence (silence signals) |
|  | Fire Drill |
|  | Function Keys (3 - programmable control buttons) |
|  | Navigation Keys (up, down, left, right, and tick [enter]) |
|  | 12 Button Keypad (numbers, letters, esc, and menu) |

| | |
|----------------------|--------|
| Alarm | Red |
| Pre-Alarm | Red |
| Disable | Yellow |
| Test | Yellow |
| P.A.S. | Yellow |
| Power | Green |
| Supervisory | Yellow |
| NAC Silenced | Yellow |
| NAC Trouble | Yellow |
| NAC Disabled | Yellow |
| System Trouble | Yellow |
| Programming | Yellow |
| Programmable LED 1 | Red |
| Programmable LED 2-5 | Yellow |

Graphical Liquid Crystal Display



LED Status Indicators

Control Buttons

12 Button Keypad (Numbers & Letters)

Advanced User Interface w/Graphical LCD:

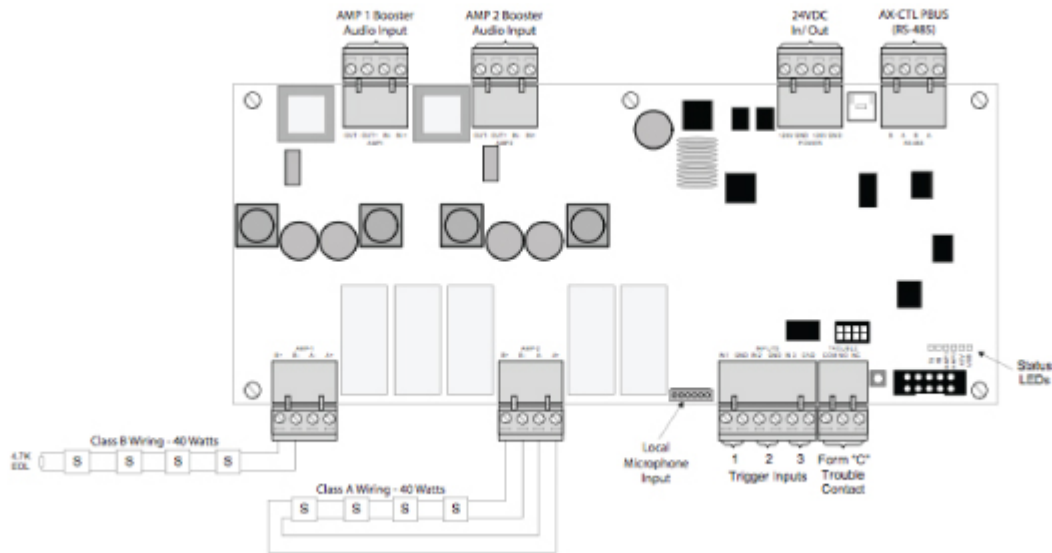
Designed to be user-friendly and easy to operate, the Advanced User Interface w/Graphical LCD (backlit 240 x 64) is the information and control center for the Axis^{AX} "V" Series Intelligent Fire Alarm Control Panel(s).

The unit incorporates a graphical LCD display, LED status indicators, control buttons (including 3 programmable buttons), navigation buttons, and a 12 button keypad for complete system status, interrogation, and control.

Specification

| | | |
|---------------------------------------|---|--------|
| Operating Voltage | 120 VAC (1.4A) - 240 VAC (0.7A), 50/60Hz | |
| System-Brown-Out | 98 VAC nominal | |
| Battery Circuit | | |
| Charging Voltage | 27.4 VDC nominal | |
| Temp. Compensated Charging Current | 2 Amp | |
| Battery Derating Factor | 0.83A | |
| Battery Capacity | 7 Ah (minimum), 48 Ah (maximum) | |
| Battery Fuse | 5A @ 240 VAC, Time Delayed, Ceramic, High Breaking (In-line Wire Link) | |
| Fire, Supervisory, and Trouble Relays | (Power Limited - When utilizing system power) | |
| Type | Form "C" | |
| Rating | 1A @ 30 VDC/VAC | |
| Trouble Relay | Normally Active (Fail-safe operation) | |
| Auxiliary Power Outputs | | |
| Resettable | (Power Limited) | |
| Voltage | 24 VDC | |
| Current | 5A | |
| Reset Time | 10 - 15 Seconds | |
| Non-Resettable | | |
| Voltage | 24 VDC | |
| Current | .5A | |
| Humidity | 85% RH | |
| Temperatures | | |
| Operating | 32 °F - 120 °F (0 °C - 49 °C) | |
| Recommended Room | 60 °F - 86 °F (15 °C - 27 °C) | |
| Enclosure Dimensions | | |
| Back Box | 22.6"H x 14.5"W x 5.5"D | |
| Housing | 24.1"H x 16"W x 6.3"D | |
| SLC Loop | (Power Limited) | |
| Class (Style) | Class A or B (Style 4, 6 or 7) | |
| Voltage | 24 VDC | |
| Minimum Return Voltage | 17 VDC | |
| Current | .5A | |
| NAC Circuits | (Power Limited) | |
| Class (Style) | Class A or B (Class B end-of-line = 10K) | |
| Voltage | 24 VDC (Filtered and regulated) | |
| Minimum Return Voltage | 16 VDC | |
| Current | 2A (Each) | |
| Maximum Voltage Drop | 3 VDC | |
| Maximum Line Impedance | 1.5 Ω | |
| RS232 | Supervised, Optically Isolated | |
| Baud Rate | 9600 | |
| Parity | None | |
| Data Bits | 8 | |
| Stop Bits | 1 | |
| Base Card Operating Current | Quiescent | Alarm |
| AX-CTL-1 | 110 mA | 195 mA |
| AX-CTL-2 | 110 mA | 195 mA |
| AX-CTL-4 | 175 mA | 260 mA |
| AV-AMP-80 | | |
| Input Voltage/Current | 24 VDC (Operating range 15-30 VDC), Quiescent .035A / Alarm .220A plus speaker load | |
| Amplifier #1 Output | 40 Watts @ 25 Vrms, Class A or B (Class B end-of-line = 4.7K) | |
| Amplifier #2 Output | 40 Watts @ 25 Vrms, Class A or B (Class B end-of-line = 4.7K) | |
| Activation | RS-485 (PBus) or Contact Closure | |
| AV-MIC | Supervised Microphone Input | |

Wiring Diagram



Order Codes and Options

| | |
|-----------------------------------|---|
| AX-CTL-1V* | Axis AX "V" Series Intelligent Fire Alarm Control Panel with cabinet, 2 power supplies/chargers, 1 SLC, 2 NACs, two 40 watt speaker circuits and microphone |
| AX-CTL-2V* | Axis AX "V" Series Intelligent Fire Alarm Control Panel with cabinet, 2 power supplies/chargers, 2 SLC, 2 NACs, two 40 watt speaker circuits and microphone |
| AX-CTL-4V* | Axis AX "V" Series Intelligent Fire Alarm Control Panel with cabinet, 2 power supplies/chargers, 4 SLC, 4 NACs, two 40 watt speaker circuits and microphone |
| AX-CTL Base Card Option Modules** | |
| AX-LPD | 2 SLC, 2 NAC Expander Card |
| AX-NAC | 2 NAC Expander Card |
| AX-PSU | 5 Amp Expansion Power Supply Module |
| AX-NET4 | Network Interface Card (Style 4) |
| AX-NET7 | Network Interface Card (Style 7) |
| AX-RL8 | 8-Way Relay Output Card (Programmable) |
| AX-SEB/D9068P | Serial Expansion Board and Serial Digital Alarm Communicator |
| AV-AMP-80 Amplifier Option Module | |
| AV-ZS | Audio Zone Splitter Module |
| AV-V70* | Universal Audio Converter (converts 25Vrms to 70Vrms) |

* For gray enclosure, add the suffix "G" to the part number.

** Refer to individual Axis AX Series module data sheets for peer to peer network and peripheral bus optional modules.

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