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 CAV-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 CAX-CTL-1V (single SLC loop), CAX-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 CAV-MIC (microphone) for live voice paging. Paging overrides any pre-recorded audio messages that are being generated. By installing one or more optional CAX-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 CAX-ASW-16, Switch LED Module, and the CAX-012, Thermal Strip Printer, may by 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 CAV-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 CAV-VB, Audio Booster, (see separate datasheet for more details). The CAV-VB is mounted externally in a separate enclosure and contains one CAV-AMP-80, Audio Amplifier Module, and one CAX-PSU-6, Power Supply Charger Module. Connecting the speaker output channel of an integrated CAV-AMP-80, Audio Amplifier Module, inside of an Axis AX “V” Series panel to an input of an external CAV-VB, Audio Booster, expands audio wattage by 40 Watts per channel. Resulting audio generated is fully synchronized. CAV-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
- CAV-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
- CAV-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.

Listings and Approvals

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

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.

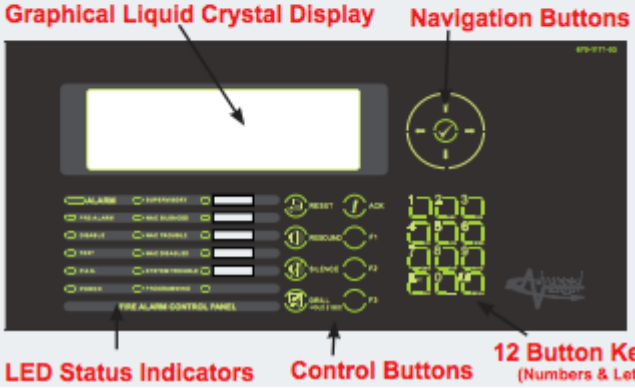
The Axis AX ”V” Series Intelligent Fire Alarm Control Panels are fully field programmable via the onboard graphical LCD display and alphanumeric keypad. Front panel programming may encompass defining input to output relationships, configuring output circuit characteristics, entering zone, device, and 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 (CAX-LAN). The ipGateway (CAX-LAN) provides real time text and email alerts of system status.

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



Advanced User Interface w/Graphical LCD:

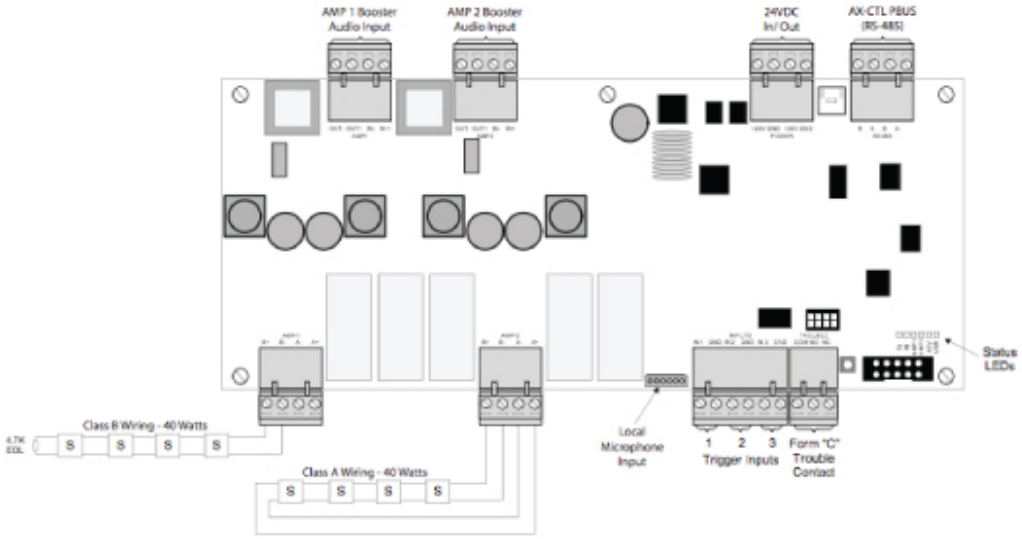
Designed to be user-friendly and easy to operate, the Advanced User Interface w/Graphical LCD (backlit 240 x 64) is the information and control center for the Axis^{AX} “V” Series Intelligent Fire Alarm Control Panel(s).

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	32ºF - 120ºF (0ºC - 49ºC)
Recommended Room	60ºF - 86ºF (15ºC - 27ºC)
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
CAX-CTL-1	110 mA 195 mA
CAX-CTL-2	110 mA 195 mA
CAX-CTL-4	175 mA 260 mA
AV-AMP-80	
Input Voltage/Current	24 VDC (Operating range 15-30 VDC), Quiescent .035A / Alarm .220A plus
Amplifier #1 Output	speaker load
Amplifier #2 Output	40 Watts @ 25 Vrms, Class A or B (Class B end-of-line = 4.7K)
Activation	40 Watts @ 25 Vrms, Class A or B (Class B end-of-line = 4.7K)
AV-MIC	RS-485 (PBus) or Contact Closure
	Supervised Microphone Input

Wiring Diagram



Order Codes and Options

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

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

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