Axis AX Integrated Audio Intelligent Fire Alarm Control Panels

The "V" series of Axis AX audio intelligent fire control panels, with fully-integrated fire detection/voice evacuation, contain the same features as standard Axis AX panels, but include the AV-AMP-80 audio amplifier module. This provides 80 Watts of power and is fully controlled by the fire alarm control panel. The panels are highly flexible and ideally suited to meet the needs of virtually any commercial, industrial or institutional application. They can operate as standalone systems, or up to 200 panels can be networked in any combination using our Advanced 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, and selective zone or area paging can be enabled by installing one or more optional AX-ASW-16 switch LED modules.

Modular construction means that panels can be configured to suit specific installation requirements. Additional modules including the AX-ASW-16 switch LED module and the AX-PRN thermal strip printer can be mounted to the inner door of the panel. A secure outer door with plexiglass permits enables users to view 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 confirmed at the fire control panel in accordance with industry codes and standards.

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

It is simple to expand the overall system audio wattage by adding an 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. Audio wattage can be expanded by 40 Watts per channel by connecting the speaker output channel of an integrated AV-AMP-80 audio amplifier module to the input of an external AV-VB audio booster. The resulting audio generated is fully synchronised. AV-VB audio boosters can be cascaded up to 3 times to extend the overall wattage per channel, or simply added to expand the overall system wattage.

Features

- Standalone or networked integrated audio
- Fully scalable - up to 200 intelligent panels
- AV-VB audio booster with synchronised audio
- Remote microphone channel
- Powerful yet simple I/O relationship programming
- 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 analogue-addressable points
  - Synchronised audio and visual control (panel or network-wide)

Simplifying and reducing initial system set-up, Axis AX integrated audio intelligent fire alarm control panels are equipped with an installer-friendly “auto-learn/loop detection” feature that permits the rapid recognition of all signalling line circuits’ devices. This rapid recognition simplifies the immediate assignment of critical life safety functions. 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

- Certified to UL864 10th Edition - File No. S35979
- CSFM Approved: Pending
- NYCFD COA: Pending

Designed with built-in powerful installation and customisation tools, the Axis AX integrated audio 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 significantly reduced.

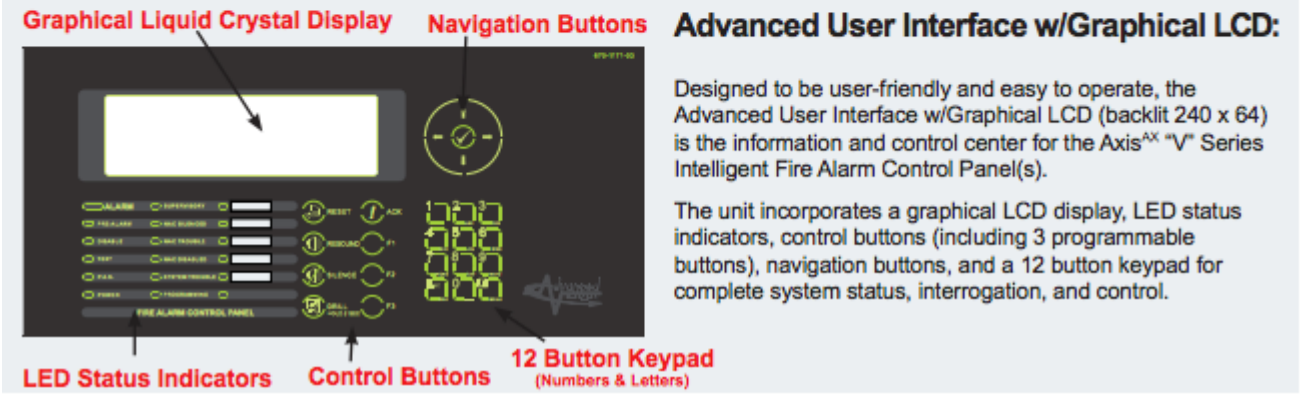
The fire panels are fully field programmable via the onboard graphical LCD display and alphanumeric keypad. Front-panel programming may encompass defining input to output relationships, configuring output circuit characteristics, entering zone, device, and other text descriptions, and configuring multiple user-access passwords.

To maximise the panels' capability and flexibility, and to expand on the customisation options of an installation, the Advanced Windows-based PC-NeT field configuration tool is available. This is a powerful, user-friendly programming tool that allows users to perform virtually any I/O relationship with multiple criteria. Commissioning and troubleshooting is fast and efficient thanks to the simple drop-down menus with point-and-click operation.

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. Servicing a customer after installation can be as simple as using the Advanced fire systems remote diagnostic virtual panel simulator.

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

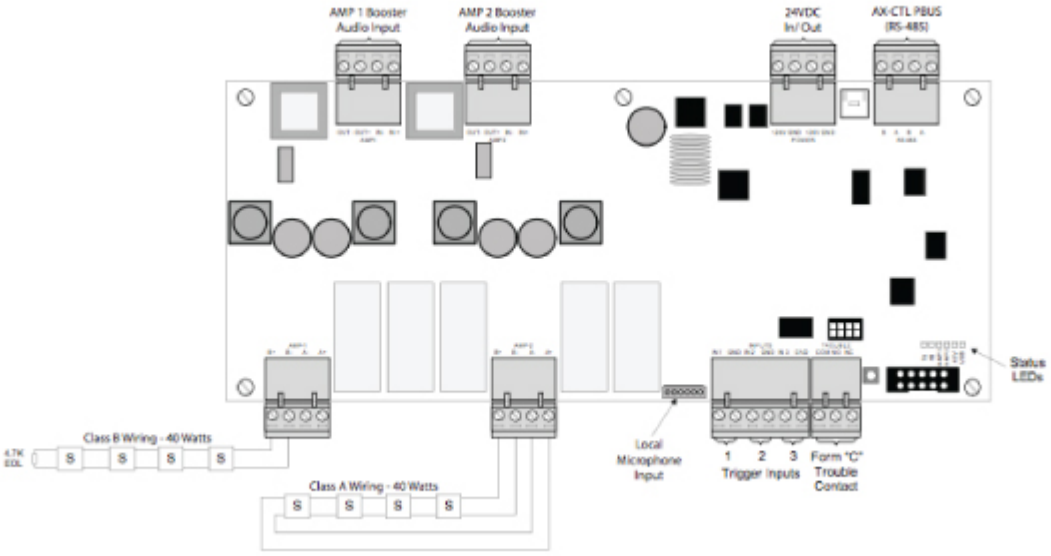
Operating Voltage	120 VAC (1.4A) - 240 VAC (0.7A), 50/60Hz
System-Brown-Out	98 VAC nominal
Battery Circuit	
Charging Voltage	27.4 VDC nominal*
Temp. Compensated Charging Current	2.3 Amp
Battery Derating Factor	0.83A
Battery Capacity	7 Ah (minimum), 75 Ah (maximum)
Battery Fuse	10A @ 250 VAC, Time Delayed, 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	(Power Limited)
Resettable	24 VDC
Voltage	0.5A
Current	10 - 15 Seconds
Reset Time	
Non-Resettable	24 VDC
Voltage	0.5A
Current	
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 X, A or B
Voltage	24 VDC
Minimum Return Voltage	17 VDC
Current	0.5A
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
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 .05A / Alarm .220A plus .051A per Watt of audio (max. 4.3A@80W)
Amplifier #1 Output	40 Watts @ 25 Vrms, Class A or B (Class B end-of-line = 10K)
Amplifier #2 Output	40 Watts @ 25 Vrms, Class A or B (Class B end-of-line = 10K)
Activation	RS-485 (PBus) or Contact Closure
AV-MIC	Supervised Microphone Input

*For use with listed/compatible product

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 Class B
AX-NET7	Network Interface Card Class X(A)
AX-RL8	8-Way Relay Output Card (Programmable)
AX-UCM3	Advanced Contact-ID and SSIA Digital dialler, requires AX-SEB2
AX-SEB2	Serial Expansion Board for use with AX-UCM3

* For the grey 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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