Axis AX Single Loop Fire Alarm Control Panel

The AX-CTL-1C is a small, compact single-loop fire alarm control panel for use in cost-sensitive fire alarm installations, where fewer than 126 addressable points are required. The panel contains the same features as the Advanced AX-CTL-1L, AX-CTL-2 and AX-CTL-4 intelligent fire alarm control panels but in a smaller, compact enclosure.

As part of the Axis AX range, the AX-CTL-1C can be easily used in larger applications due to its optional peer-to-peer networking capabilities.

Designed with installation and service engineers in mind, the AX-CTL-1C is modularly packaged, using surface mount and dual flash microprocessor technology, with onboard real-time clocks for ease of installation, troubleshooting, programming and maintenance.

The AX-CTL-1C provides a single Class X, A or B signalling line circuit (SLC). Communication to the field devices attached to the SLC is via an advanced, 100% digital protocol which has the advantages of being highly immune to noisy environments. The SLC supports up to 126 analogue-addressable devices (any combination of intelligent detectors, input and/or output devices, including loop-powered technology devices). In addition, unique sub-addressing of various input and/or output devices is permitted to expand on the overall AX-CTL-1C system capacity.

The AX-CTL-1C comes with two filtered, voltage-regulated notification appliance circuits (NACs), Class A or B, each rated 2 Amp @ 24 VDC. Due to exceptional regulation and high rating, the onboard NAC outputs provide compatibility with most listed notification appliance devices.

The AX-CTL-1C has resettable and non-resettable power outputs; each rated 0.5 Amp @ 24 VDC for connection to four-wire conventional smoke detectors and/or ancillary devices. Each AX-CTL-1C contains three field-programmable, Form “C” relay contacts rated 1 Amp @ 30 VDC, defaulted as a fail-safe trouble relay, alarm relay and supervisory relay.

Simplifying and reducing initial system set-up, each AX- CTL-1C panel is equipped with an installer-friendly “auto-learn/loop detection” feature that permits the rapid recognition of all signalling line circuit 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.



Features

- 126 analogue-addressable points
- Advanced user interface w/graphical LCD
- “DynamiX” I/O relationship programming
- Synchronised audible and visual NAC circuits
- Superior service & maintenance diagnostics
- Peer-to-peer networking
- Automatic drift compensation per detector
- Automatic detector testing with maintenance alert
- Alarm verification and PAS.
- Class X, A or B SLC operation (supports loop-powered technology)
- Class A or B NAC circuits
- Voltage-regulated NACs (compatible with most listed NAC devices)
- Multi-pattern and two-stage NAC control

Designed with built-in powerful installation and customisation tools, the AX-CTL-1C can adapt to virtually any application requirement. With Dynamix programming, 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 AX-CTL-1C is 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 level passwords.

To maximise the capability and flexibility of the single loop fire alarm control panel, the standard Advanced Windows-based PC-NeT field configuration tool is compatible with the AX-CTL-1C. 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 make project commissioning and troubleshooting fast and efficient.

The AX-CTL-1C can accommodate remote graphical LCD annunciators (with or without system control capabilities) on the Ad-NeT- PluS peer-to-peer network. Multiple annunciator locations can be created based on installation demands. These locations can have either: no system control, partial system control, or full system control. When installations exceed a single panel's capacity, the Advanced Ad- NeT-PluS peer-to-peer network can be implemented, providing up to 200 network nodes. The Ad-NeT-PluS is completely field programmable for inter-panel functionality or segregation of information and control based on installation requirements.

Features (continued)

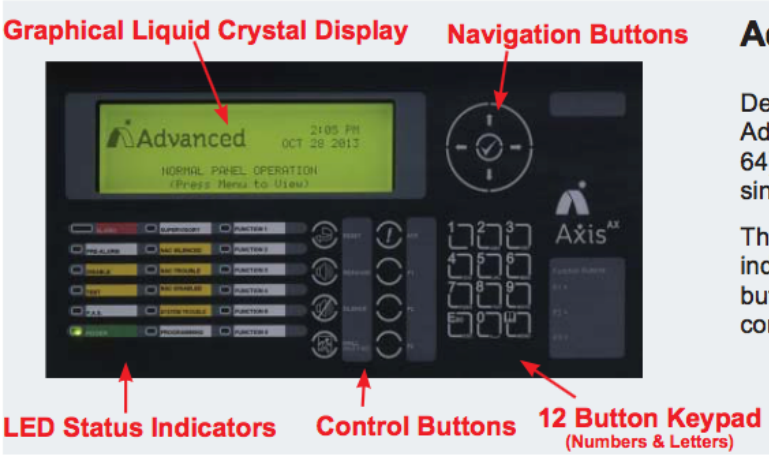
- Network-wide audible and visual synchronisation
- "Auto-learn/loop detection" programming
- Built-in intelligent multi-meter

Listings and Approvals

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

Designed with the technician in mind, each module of the AX-CTL-1C single loop fire alarm control 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.



Advanced User Interface w/Graphical LCD:

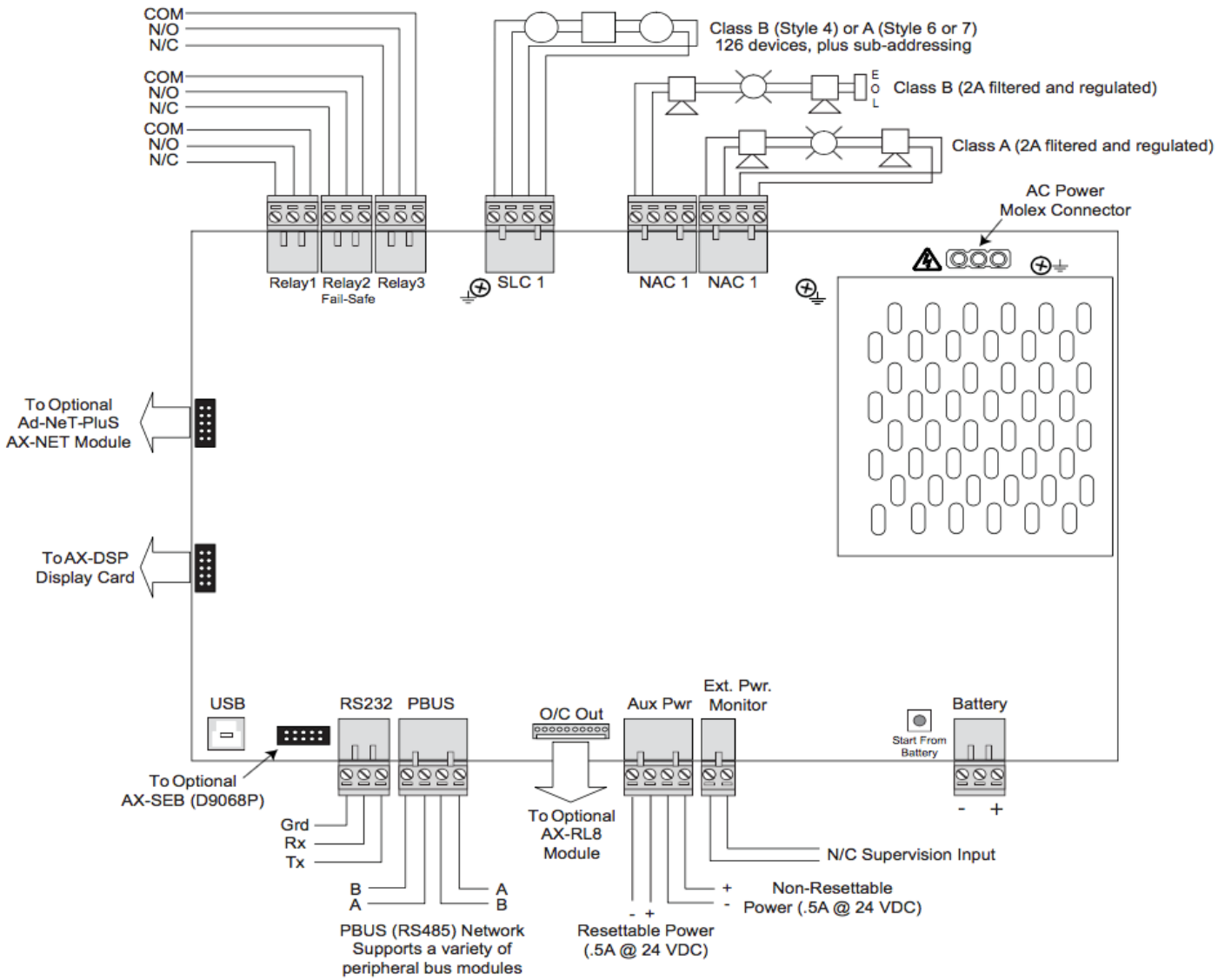
Designed to be user-friendly and easy to operate, the Advanced User Interface w/Graphical LCD (backlit 240 x 64) is the information and control center for the AX-CTL-1C single loop fire alarm control panel.

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.

Button (Keys)	
	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)

LED Indicators	
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 LEDs 2-5	Yellow

Wiring Diagram



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	5A @ 240 VAC, time delayed, ceramic, high breaking (in-line wire link)
Fire, Supervisory, and Trouble Relays	(Power limited - when using system power)
Type	Form "C"
Rating	1A @ 30 VDC/VAC
Trouble Relay	Normally active (fail-safe operation)
Auxiliary Power Outputs	(Power limited)
Resettable	
Voltage	24 VDC
Current	0.5A
Reset Time	10-15 seconds
Non-Resettable	
Voltage	24 VDC
Current	0.5A
Humidity	85% RH
Temperatures	
Operating	32ºF - 120ºF (0ºC - 49ºC)
Recommended Room	60ºF - 86ºF (15ºC - 27ºC)
Enclosure Dimensions	17 7/8"H x 14 3/4"W x 5 5/8"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
Voltage	24 VDC (filtered and regulated)
Minimum Return Voltage	16 VDC
Current	2A (each)
Maximum Voltage Drop	3 VDC
Maximum Line Impedance	1.5Ω
RS232	Supervised, optically isolated
Baud Rate	9600
Parity	None
Data Bits	8
Stop Bits	1
Base Card Operating Current	Quiescent Alarm
AX-CTL-1PCB	110 mA 195 mA

Refer to individual Axis AX Series module data sheets for specific specifications regarding optional modules.

*For use with listed/compatible product

Order Codes and Options

AX-CTL-1C*	Single-Loop Fire Alarm Control Panel with power supply/charger, 1 SLC, 2 NACs, 3 auxiliary relays (enclosure supports batteries 7Ah - 18Ah)
AX-1C-BP*	Optional Battery Cover (Dress) Plate
AX CTL *Base Card Option Modules***:	
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 grey enclosure, add the suffix "G" to the part number.
** Refer to individual Axis AX module data sheets for peer to peer network and peripheral bus optional modules.

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As our policy is one of constant product improvement the right is therefore reserved to modify product specifications without prior notice.

Axis AX Intelligent 1, 2 & 4 Loop Fire Alarm Control Panels

The Axis AX multi-loop panel is available in three standard models: the AX-CTL-1L (1 loop), AX-CTL-2 (2 loop) and AX-CTL-4 (4 loop). Designed with installation and service engineers in mind, these intelligent panels are modularly packaged, using surface mount and dual flash microprocessor technology, with onboard real-time clocks for ease of installation, troubleshooting, programming and maintenance.

The AX-CTL-1L provides one Style 4 or Style 6/7 signalling line circuit, whilst the AX-CTL-2 provides two Class X, A or B signalling line circuits (SLCs) and the AX-CTL-4 provides four Class X, A or B signalling line circuits (SLCs). Communication to field devices attached to the SLCs is via an advanced, 100% digital protocol which has the advantages of being highly immune to noisy environments and the ability to operate over non-shielded cable without causing interference problems with sensitive electronic equipment.

Each SLC supports up to 126 analogue-addressable devices (any combination of intelligent detectors, input and/or output devices, including loop-powered technology devices). In addition, our unique sub-addressing of various input and/or output devices permits further system expansion.

The AX-CTL-1L and AX-CTL-2 come with two filtered, voltage-regulated notification appliance circuits (NACs), Class A or B, each rated 2 Amp @ 24 VDC. The onboard NAC outputs provide compatibility with most listed notification appliances.

The AX-CTL-4 fire panel provides four signalling line circuits (SLCs) and four fully filtered, voltage-regulated notification appliance circuits (NACs), each rated 2 Amp @ 24 VDC. In this configuration, the Axis AX panel can accommodate a total system capacity of 504 analogue addressable points as standard, not counting sub-addressing capacity.

The AX-CTL-1L, AX-CTL-2 and AX-CTL-4 panels have resettable and non-resettable power outputs, each rated 0.5 Amp @ 24 VDC, for connection to four-wire conventional smoke detectors and/or ancillary devices. Each AX-CTL-2 and AX-CTL-4 contains three field-programmable Form “C” relays, each rated 1 Amp @ 30 VDC, defaulted as a fail-safe trouble relay, alarm relay and supervisory relay.



Features

- Advanced user interface with graphical LCD
- Multi-pattern & two-stage NAC control
- Remote diagnostic capabilities
- Advanced networking - up to 200 FACP
- Built-in intelligent multi-meter
- Up to 504 analogue-addressable points
- Automatic drift compensation per detector
- Automatic detector testing with maintenance alert
- Alarm verification and PAS
- Class X, A or B SLC operation (supports loop-powered technology)
- Synchronisation of audibles and visuals (panel or network wide)
- User-friendly PC-NeT field configuration program
- 5 to 10 Amps of system power

Simplifying and reducing initial system set-up, each Axis AX intelligent fire alarm control panel is 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.

Designed with powerful built-in installation and customisation tools, Axis AX fire panels can adapt to virtually any application requirement. With Dynamix I/O 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 and flexible timing functions are significantly reduced.

Features (continued)

- “Auto-learn/loop detection” programming
- Class A or B NAC circuits
- Voltage-regulated NACs (compatible with most listed NAC devices)

Listings and Approvals

- Certified to UL 864 10th Edition - File No. S35979
- CSFM Approved: Pending
- NYCFC COA: Pending

Axis AX fire 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 maximise capability and flexibility, the Advanced Windows-based 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. Project commissioning and troubleshooting is fast and efficient thanks to simple dropdown menus with point-and-click operation.

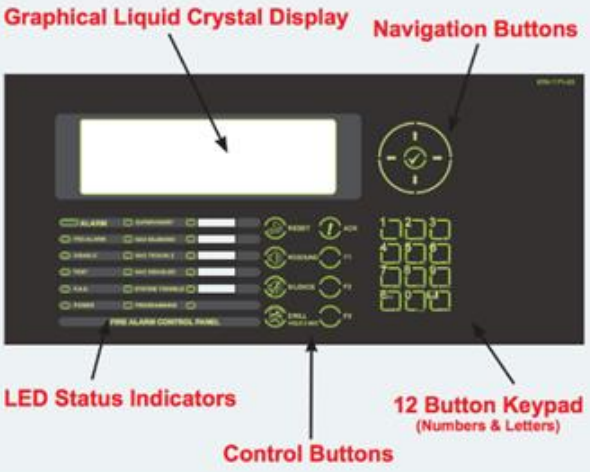
The Axis AX system accommodates remote graphical LCD annunciators (with or without system control capabilities) on the Advanced network. Multiple annunciator locations can be created based on installation demands. These locations can have either: no system control, partial system control or full system control. Information on system status changes can be vectored, allowing displays to receive information on specific events only.

Axis AX panels can accommodate large, sophisticated applications with relative ease. When installations exceed a single panel’s capacity, the Advanced peer-to-peer network may be implemented, providing up to 200 network nodes. The network is completely field programmable for inter-panel functionality or segregation of information and control, based on the overall installation requirements.

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 AX 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.



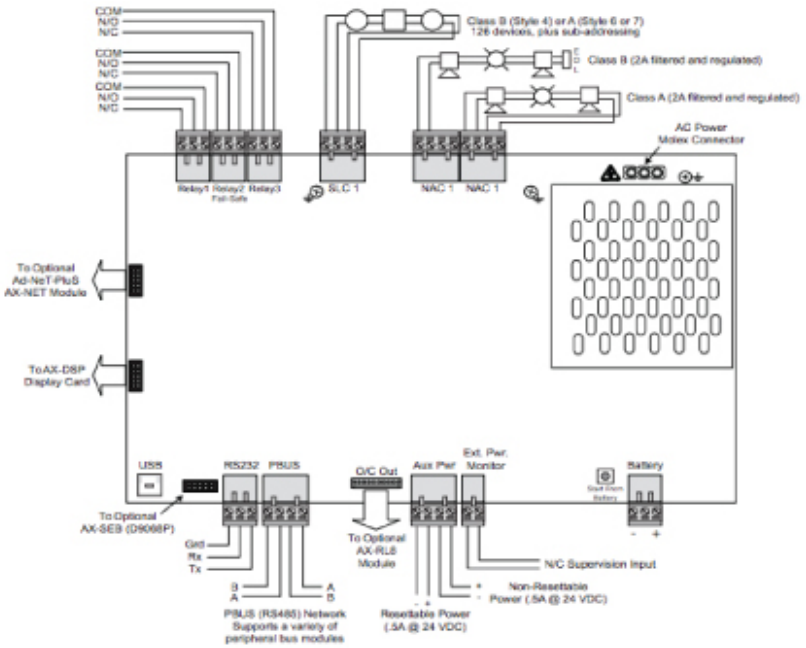
Button (Keys)	
	Reset
	Ack (panel buzzer acknowledge)
	Resound (resound signals)
	Silence (silence signals)
	Fire Drill
	Function Keys (3 - programmable control buttons)
	Navigation Keys (up, down, left, right, and tick [enter])
	12 Button Keypad (numbers, letters, esc, and menu)

LED Indicators	
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 LEDs 2-5	Yellow

Designed with the technician in mind, each module of an Axis AX 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 potentially time-consuming issues. Servicing after installation can be as simple as using the Advanced remote diagnostic virtual panel simulator. The simulator can be activated from any Windows-based PC and connected to the installation site via a dedicated modem. It emulates the on-site control panel LCD and keypad in real time from an off-site location, and is an incredibly powerful tool for diagnosing and troubleshooting site applications.

Wiring Diagram



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	7Ah (Minimum), 75Ah (Maximum)
Battery Fuse	10A @ 240 VAC, Time Delayed, Ceramic, High Breaking (In-line WireLink)
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	
Voltage	24 VDC
Current	0.5A
Reset Time	10-15 Seconds
Non-Resettable	
Voltage	24 VDC
Current	0.5A
Humidity	85% Relative Humidity
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
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	
Baud Rate	9600
Parity	None
Data Bits	8
Stop Bits	1
Base Card Operating Current	Quiescent Alarm
AX-CTL-2	110mA 195mA
AX-CTL- 4	175mA 260mA

Refer to individual Axis AX series module data sheets for specific specifications regarding option modules

*For use with listed/compatible product

Order Codes and Options

AX-CTL-1L*	Intelligent Fire Alarm Control Panel with cabinet, power supply/charger, 1 SLC, 2 NACs, 3 auxiliary relays (Cabinet supports batteries 7Ah - 18Ah) (126 Addressable Points)
AX-CTL-2*	Intelligent Fire Alarm Control Panel with cabinet, power supply/charger, 2 SLCs, 2 NACs, 3 auxiliary relays (Cabinet supports batteries 7Ah - 18Ah) (254 Addressable Points)
AX-CTL-4*	Intelligent Fire Alarm Control Panel with cabinet, power supply/charger, 4 SLCs, 4 NACs, 3 auxiliary relays (Cabinet supports batteries 7Ah - 18Ah) (504 Addressable Points)
	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-PRN	Thermal Strip Printer
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 option modules.

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W: www.advancedco.com
As our policy is one of constant product improvement the right is therefore reserved to modify product specifications without prior notice.

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.

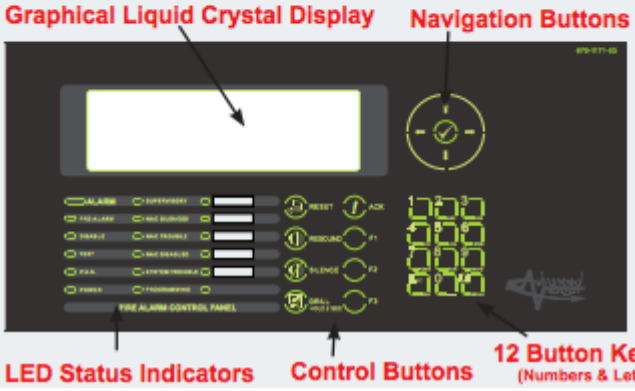
The fire panels are fully field programmable via the onboard graphical LCD display and alphanumeric keypad. Front-panel programming may encompass defining input to output relationships, configuring output circuit characteristics, entering zone, device, and other text descriptions, and configuring multiple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

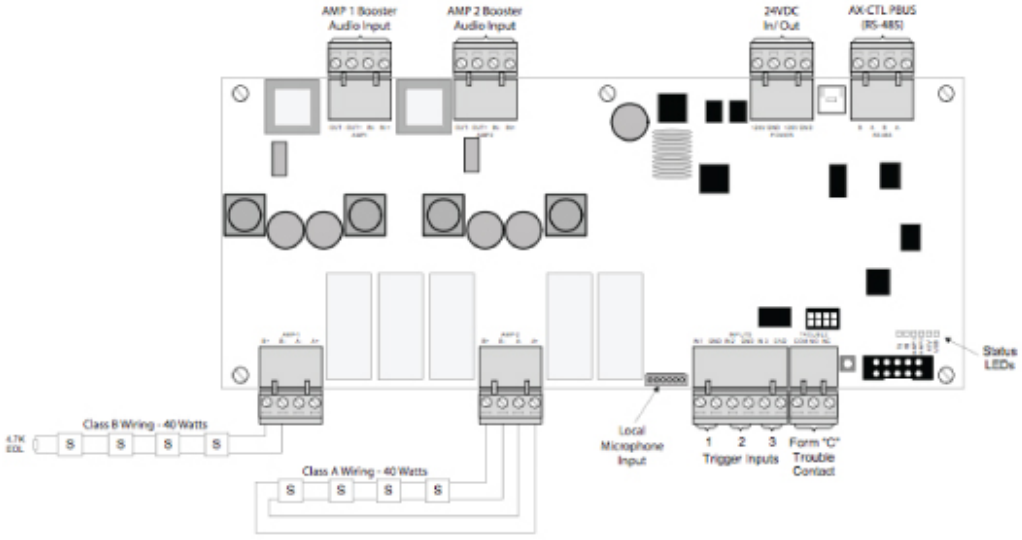
The unit incorporates a graphical LCD display, LED status indicators, control buttons (including 3 programmable buttons), navigation buttons, and a 12 button keypad for complete system status, interrogation, and control.

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	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 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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As our policy is one of constant product improvement the right is therefore reserved to modify product specifications without prior notice.

Axis AX Configured Command Centres

Axis AX configured command centres have been designed to support a wide variety of applications. They are fully compatible with both Axis AX intelligent fire alarm control panels and Axis AX intelligent fire alarm control panels with integrated audio.

The command centres come in three variations: AX-CC1-16 (single loop), AX-CC2-16 (two loops) and AX-CC4-16 (four loops). Each command centre comes in a 22.6”H x 20.3”W x 5.5”D cabinet and includes: one AX-DSP keyboard display, one main base card (configured for 1,2 or 4 SLC loops), one AX-ACB AC input board, an AV-AMP-80 audio amplifier (two 40 Watt speaker outputs), one AX-PSU-6 amplifier power supply and one AX-ASW-16 switch LED module.

The command centre cabinet has been designed to support a broad range of additional optional modules to suit specific application requirements. The optional modules provide the following capabilities: DACT, city tie, networking, modem, I/O drivers, switch and relay modules and many others.

To simplify installation, programming, troubleshooting, training and support, all Axis AX fire panels and command centres can be programmed using the same Windows-based programming tools. In addition, all Axis AX main PCBs, option modules, peripherals and intelligent devices are fully compatible across the full range of Axis AX fire panel & command centre products.

For control and operation of a large, networked, wide area or high rise system, each command centre will support up to 252 individually assignable switches through the use of up to sixteen AX-ASW-16 switch LED modules. These modules mount to the inner doors of the command centres. The switch action can be either toggle, on/off or push button. Each switch is associated with 3 LEDs that are red, yellow and green. These LEDs are fully programmable and can be set to turn on as either a steady light and/or to blink. A large area is made available per switch and LED for user-defined text to clearly identify the intended function. This versatility means that operation and control is simplified, and status is readily available and quickly identified.

Examples of switch operations include fan and HVAC control, paging area select, message select, telephone control, purging and zone/area/point bypass. The total number of switches supported across a maximum configured network is 51,200. A key feature is that individual switch and LED response time is not affected by the size of the network and each switch and LED can be assigned to network functions as well as individual panel functions.



Each command centre is supplied with a single AV-AMP-80 amplifier module, with associated AX-PSU-6 power supply charger and AV-MIC microphone module and can expand the audio wattage with the addition of an Advanced AV-VB audio booster. Each AV-AMP-80 and AV-VB has two 40 Watt speaker circuits (which can be programmed as 1:1 backup). Live or recorded audio messages can be sent to any location in a facility through either manual or automatic controls.

Control functions can include: All Call, All Evac, All Alert, Message Select and Area Select. For immediate control of paging to all areas, press the All Call button. To generate and play an evacuation message or an alert message throughout a facility push the All Evac or All Alert button. To play a particular message (up to 16 messages) in specific areas, use the individual message selection buttons followed by the individual area selection buttons.

A typical high-rise application may be configured with an AV-VB audio booster per floor. The boosters are controlled by the control-by-event logic at the command centre to generate specific messages for specific conditions. It is easy to program, for example, a typical fire floor, floor above and floor below evacuation message that is simultaneous with adjacent alert floor messages, while simultaneously providing the capability to override automatic messages at any time with manual paging to all or selective areas.

To simplify and reduce initial system set-up, Axis AX command centres 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 immediately simplifies the 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.

Features

- 1, 2 and 4 SLC loop options
- Integral 80 Watt amplifier
- Built-in paging microphone
- Configured with One AX-ASW-16 switch LED module
- Networkable – up to 200 intelligent panels
- Integrated 80 Watt digital audio features include:
  - 2 Class A or B, 40 Watt, 25 Vrms 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
- Multiple command centres w/control options
- Synchronised audio and visual control (panel or network wide)
- AV-VB boosters expand audio Wattage (16 per panel/AX-PENN)

Axis AX command centres are designed with powerful built-in installation and customisation tools to 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.

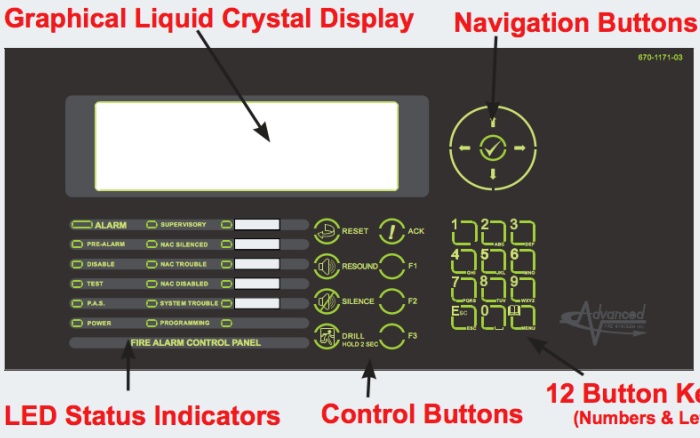
Axis AX configured command centres are fully field programmable via the onboard graphical LCD display and alphanumeric keypad (AX-DSP). Front-panel programming may encompass defining the input to output relationships, configuring output circuit characteristics, entering zone, device and other text descriptions, and configuring multiple user-access passwords.

To maximise the capability and flexibility of the command centres and expand upon the customisation of an installation, the Advanced-Windows based PC-NeT field configuration tool is available. This 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 make project commissioning and troubleshooting fast and efficient.

Designed with the technician in mind, each module of the command centre 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 remote diagnostic virtual panel simulator.

Listings and approvals

- Certified to UL 864 10th Edition - File No. S35979
- CSFM Approved: Pending
- NYCFD COA: Pending



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} 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.

Button (Keys)	
	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)

LED Indicators	
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 LEDs 2-5	Yellow

Specification

Operating Voltage	120V (1.4A (1 or 2 loop)/2.8A (4 loop)) 240V (0.7A (1 or 2 loop)/1.4A (4 loop)) 50/60Hz
System-Brown-Out	98 VAC nominal
Battery Circuit Charging Voltage Temp. Compensated Charging Current Battery Derating Factor Battery Capacity Battery Fuse	 27.4 VDC nominal* 2.3 Amp 0.83A 7 Ah (minimum), 75 Ah (maximum) 10A @ 250 VAC, Time Delayed, Ceramic, High Breaking (Inline Wire Link)
Fire Supervisory, and Trouble Relays Type Rating Trouble Relay	(Power Limited - When utilizing system power) Form "C" 1A @ 30 VDC/VAC Normally Active (fail-safe operation)
Auxiliary Power Outputs Resettable Voltage Current Reset Time Non-Resettable Voltage Current	(Power Limited) 24 VDC 0.5A 10-15 Seconds 24 VDC 0.5A
Humidity	85% RH
Temperatures	Operating: 32°F - 120°F (0°C - 49°C) Recommended Room: 60°F - 86°F (15°C - 27°C)
3x3 Enclosure Dimensions Back Box Housing	 22.6"H X 20.25"W X 5.5"D 24.1"H X 21.7"W X 6.0"D
3x5 Large Enclosure Dimensions Back Box Housing	35.9"H X 20.25"W X 5.5"D 37.3"H X 21.7"W X 6.0"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
Voltage	24 VDC (filtered and regulated)
Minimum Return Voltage	16 VDC
Current	2A (each)
Maximum Voltage Drop	3 VDC
Maximum Line Impedance	1.5Ω
RS232	Supervised, Optically Isolated
Baud Rate	9600
Parity	None
Data Bits	8
Stop Bits	1
Base Card Operating Current	Quiescent Alarm
AX-CTL-1PCB	110 mA 195 mA
AX-CTL-2PCB	110 mA 195 mA
AX-CTL-4PCB	175 mA 260 mA
AV-AMP-80	
Input Voltage (DC)	24 VDC (operating range 15-30 VDC)
Amplifier #1 Output	40 Watts @ 25 Vrms, Class A or B Wiring
Amplifier #2 Output	40 Watts @ 25 Vrms, Class A or B Wiring
Activation	RS-485 (PBus) or Contact Closure
AV-MIC	Supervised Microphone Input

*For use with listed/compatible product

Order Codes and Options

AX-CC1-16*	Axis AX Series Command Centre with Cabinet, 2 power supply's/chargers, 1 SLC, 2 NACs, two 40 watt speaker circuits, 1 AXASW-16 switch LED module and microphone (126 addressable points)
AX-CC2-16*	Axis AX Series Command Centre with Cabinet, 2 power supply's/chargers, 2 SLC, 2 NACs, two 40 watt speaker circuits, 1 AXASW-16 switch LED module and microphone (252 addressable points)
AX-CC4-16*	Axis AX Series Command Centre with Cabinet, 2 power Supply's/Chargers, 4 SLC, 4 NACs, two 40 watt speaker circuits, 1 AXASW-16 switch LED module and microphone (504 addressable points)
AX-CC1-16P*	Axis AX Series Command Centre with Cabinet, 2 power supply's/chargers, 1 SLC, 2 NACs, two 40 watt speaker circuits, 1 AXASW-16 switch LED module, microphone and firefighter telephone (126 addressable points)
AX-CC2-16P*	Axis AX Series Command Centre with Cabinet, 2 power supply's/chargers, 2 SLC, 2 NACs, two 40 watt speaker circuits, 1 AXASW-16 switch LED module, microphone and firefighter telephone (252 addressable points)
AX-CC4-16P*	Axis AX Series Command Centre with Cabinet, 2 power Supply's/Chargers, 4 SLC, 4 NACs, two 40 watt speaker circuits, 1 AXASW-16 switch LED module, microphone and firefighter telephone (504 addressable points)
AX-LCC1-16*	Axis AX Series Large Enclosure Command Centre with Cabinet, 2 power supply's/chargers, 1 SLC, 2 NACs, two 40 watt speaker circuits, 1 AXASW-16 switch LED module and microphone (126 addressable points)
AX-LCC2-16*	Axis AX Series Large Enclosure Command Centre with Cabinet, 2 power supply's/chargers, 2 SLC, 2 NACs, two 40 watt speaker circuits, 1 AXASW-16 switch LED module and microphone (252 addressable points)
AX-LCC4-16*	Axis AX Series Large Enclosure Command Centre with Cabinet, 2 power Supply's/Chargers, 4 SLC, 4 NACs, two 40 watt speaker circuits, 1 AXASW-16 switch LED module and microphone (504 addressable points)
AX-LCC1-16P*	Axis AX Series Large Enclosure Command Centre with Cabinet, 2 power supply's/chargers, 1 SLC, 2 NACs, two 40 watt speaker circuits, 1 AXASW-16 switch LED module, microphone and firefighter telephone (126 addressable points)
AX-LCC2-16P*	Axis AX Series Large Enclosure Command Centre with Cabinet, 2 power supply's/chargers, 2 SLC, 2 NACs, two 40 watt speaker circuits, 1 AXASW-16 switch LED module, microphone and firefighter telephone (252 addressable points)

AX-LCC4-16P*	Axis AX Series Large Enclosure Command Centre with Cabinet, 2 power Supply's/Chargers, 4 SLC, 4 NACs, two 40 watt speaker circuits, 1 AXASW-16 switch LED module, microphone and firefighter telephone (504 addressable points)
	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-PRN	Thermal strip printer
AX-UCM3	Advanced Contact-ID and SSIA Digital dialler, requires AX-SEB2
AX-SEB2	Serial Expansion Board for use with AX-UCM3

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

** Refer to Axis AX data sheets for peer to peer network and peripheral bus modules.

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As our policy is one of constant product improvement the right is therefore reserved to modify product specifications without prior notice.

Axis AX Modular Command Centres

Axis AX modular command centres are built on the backbone of our Axis AX intelligent fire panels to support a wide variety of configurations and applications. The CCM-01 and CCM-02 command centres are supplied in modular format for easy expansion and customisation. They have been designed to support a wide variety of applications and are fully compatible with the full range of Axis AX fire alarm control panels.

Our command centres are also fully compatible with Axis AXaudio and telephone options and can be configured for master control or peer-to-peer. Master control mode allows only one command centre to manually operate audio and main system control functions. Advanced's telephone Riser module can be mounted inside the command centre or remotely for added security.

To simplify installation, programming, troubleshooting, training and support, all command centres can be programmed using the same Windows-based programming tools. In addition, they are fully compatible with a range of Axis AX main PCBs, option modules, peripherals and intelligent devices.

To simplify control and operation of a large, networked, wide area or high rise system, each modular command centre will support up to 252 individually assignable switches through the use of up to sixteen AX-ASW-16 Switch LED Modules. These modules mount to the inner doors. The switch action can be either toggle, on/off or hold for 2 seconds. Each switch is associated with 3 LEDs that are red, yellow and green. These LEDs are fully programmable and can be set to turn on with a steady light and/or to flash. There is also space for user-defined text to clearly identify the function of each switch LED. This versatility simplifies operation and control and means that status is readily available and quickly identified.

Examples of switch operations include an and HVAC control, paging area select, message select, telephone control, purging and zone/area/point bypass. The total number of switches supported across a maximum configured network is 51,200. A key feature is that individual switch and LED response time is not affected by the size of the network and each switch and LED can be assigned to network functions as well as individual panel functions.



Features

- 1, 2 and 4 loop modular command centres
- Audio/visual synchronisation (panel & network wide)
- Two standard sizes (3x3 and 3x5)
- Up to 200 networked panels
- Multiple control options

Listings and Approvals

- Certified to UL 864 10th Edition - File No. S35979
- CSFM Approved: Pending
- NYCFD COA: Pending

Modular command centres can be configured to support firefighter telephone systems. The AV-TEL2 system range contains a command centre telephone and a single telephone riser control module with associated devices such as switch cards and dedicated telephone display LCD. It may be easily installed to the inner door. Up to 250 addressable firefighter phones can be wired/monitored per telephone riser. Risers are supervised for open circuits, short circuits and grounds, and will continue to operate should these conditions occur. Firefighter telephones themselves are fully supervised as well. When a field telephone is taken off the hook, a buzzer sounds at the command centre and a corresponding LED blinks. When the command centre operator presses the individual phone select button, the field telephone is then connected. At that time, the LED at the field telephone station is illuminated indicating successful connection.

Up to 5 field telephones, per riser, may be connected to the command centre phone at one time on a “party line” (30 for six risers). In addition to a broad range of firefighter telephones, the AV-CJACK is an addressable firefighter phone jack that includes a red “phone active” LED that turns on when the command centre telephone connection is made. Wiring to each AV-JACK is fully supervised. Firefighter phones and jacks are available as addressable or conventional, meeting both new and retrofit installation requirements.

An AV-AMP-80 audio amplifier module, with associated AX-PSU-6 power supply/charger and AV-MIC microphone assembly installed in a modular command centre adds audio capability at the head end of a fire system. Each AV-AMP-80 has two 40 Watt speaker circuits (these can be programmed as 1:1 backup) and can play up to 16 different messages. Live or recorded audio messages can be sent to any location in a facility through either manual or automatic controls.

Control functions include: All Call, All Evac, All Alert, Message Select and Area Select. For immediate control of paging to all areas, press the All Call button. To generate and play an evacuation, alert or mass notification message throughout a facility, push the All Evac, All Alert or Mass Notification Message button. To play a particular message in specific areas, use individual message selection buttons followed by the individual area selection buttons.

A typical high-rise application can be configured with Advanced AV-VB audio boosters on a per floor (area) basis. The boosters are controlled by the Control-by-Event logic at the command centre to generate specific messages upon specific conditions. For example, it is easy to program a typical fire floor, floor above and floor below evacuate message that is simultaneous with adjacent floor alert messages, while simultaneously providing the capability to override automatic messages at any time with manual paging to all or selective areas. While offering all of this power and flexibility, the audio and visual signals maintain full synchronisation when required.

The modular command centres are available in two basic enclosure sizes. The smaller of the two enclosures (also referred to as the 3x3 modular command centre) measures 22.6”H x 20.25”W x 5.5”D. The larger of the two enclosures (also referred to as the 3x5 modular command centre) measures 35.9”H x 20.3”W x 5.5”D.

Selecting the right components to create a customised modular command centre is straightforward. Follow steps 1-6 below.

Step One: Enclosure Selection - Small Enclosure

Backbox – CCM-01-BB. Dimensions: 22.6”H x 20.25”W x 5.5”D

Provides 3x3 module support. Supports one Axis AX Series main PCB (base card), one expandable AX-PSU power supply, one AV-AMP-80 Amplifier, one AX-PSU-6 Power Supply Charger, or one of either AX-RL4 or AXRL8 Relay Module.

Inner Door Options – CCM-01-ID1, CCM-01-ID2, CCM-01-ID3

CCM-01-ID1: 1 double aperture and 7 single aperture openings. Attaches to CCM-01-BB back box. Has 1 double aperture, which supports mounting of AX-DSP Display/Keyboard Module or AXDAP blank plate, and 7 single aperture openings. Single aperture openings support AX-SAP, AX-I/O-48, AX-ASW-16, AX-LED16RY, AX-LED32R, AX-LED32Y, AX-PRN, AX-ACM6 and AV-MIC modules. Metalwork and mounting hardware only.

CCM-01-ID2: 2 double apertures and 5 single aperture openings. Attaches to CCM-01-BB back box. Has 2 double apertures, which support mounting of AX-DSP Display/Keyboard Module, AX-DAP blank plate and AV-TEL2-MCCS Telephone Module, and 5 single aperture openings. Single aperture openings support AX-SAP, AX-I/O-48, AX-ASW-16, AX-LED16RY, AX-LED32R, AX-LED32Y, AX-PRN, AX-ACM6 and AV-MIC modules. Metalwork and mounting hardware only.

CCM-01-ID3: 9 Single aperture openings. Attaches to CCM-01- BB back box. Has 9 single aperture openings. Single aperture openings support AX-SAP, AX-I/O-48, AX-ASW-16, AX-LED16RY, AX-LED32R, AX-LED32Y, AX-PRN, AX-ACM6 and AV-MIC modules. Metalwork and mounting hardware only.

Outer Door – CCM-01-OD: Attaches to CCM-01-BB back box. Metalwork, plexiglass, key lock and mounting hardware only.



CCM-01-ID1 CCM-01-ID2 CCM-01-ID3

Step One: Enclosure Selection - Large Enclosure

Backbox – CCM-02-BB. Dimensions: 35.9”H X 20.25”W X 5.5”D

Provides 3x5 module support. Supports one Axis AX series main PCB (base card), one expandable AX-PSU power supply, two AV-AMP-80 amplifiers, two AXPSU-6 power supply chargers, and one of either AX-RL4 or AX-RL8 relay modules.

Inner Door Options – CCM-02-ID1, CCM-02-ID3, CCM-02-ID4

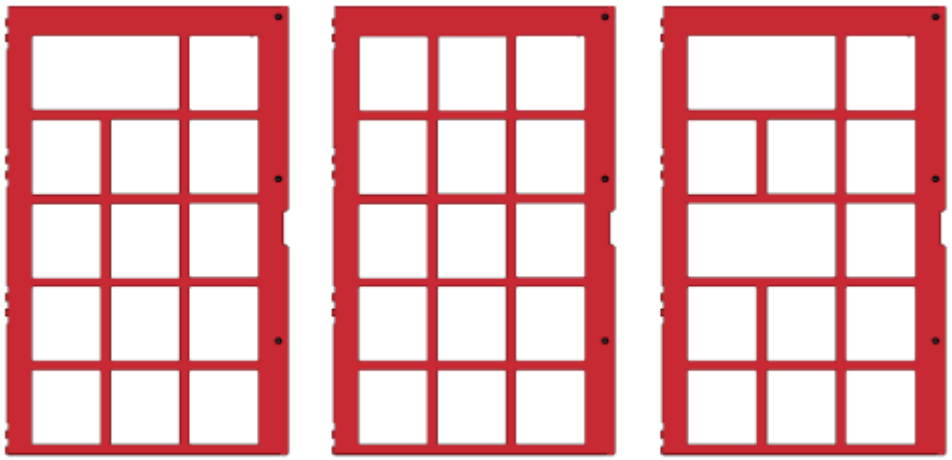
CCM-02-ID1:1 double aperture and 13 single aperture openings. Attaches to CCM-02-BB back box. Has 1 double aperture opening, which supports mounting of AX-DSP display/keyboard module or AX-DAP blank plate, and 13 single aperture openings. Single aperture openings support AX-SAP, AX-I/O-48, AX-ASW-16, AX-LED16RY, AX-LED32R, AX-LED32Y, AX-PRN, AX-ACM6 and AV-MIC modules. Metalwork and mounting hardware only.

CCM-02-ID3:15 Single aperture openings. Attaches to CCM-02- BB back box. Has 15 single aperture openings. Single aperture openings support AX-SAP, AX-I/O-48, AX-ASW-16, AX-LED16RY, AX-LED32R, AX-LED32Y, AX-PRN, AX-ACM6 and AV-MIC modules. Metalwork and mounting hardware only.

CCM-02-ID4:2 double apertures and 11 single aperture openings. Attaches to CCM-02-BB back box. Has two double aperture openings, which support mounting of AX-DSP display/keyboard module, AX-DAP blank plate and AV-TEL2-MCCS telephone module, and 11 single aperture openings. Single aperture openings support AX-SAP, AX-I/O-48, AX-ASW-16, AX-LED16RY, AX-LED32R, AX-LED32Y, AX-PRN, AX-ACM6 and AV-MIC modules. Metalwork and mounting hardware only.

Outer Door – CCM-02-OD

Attaches to CCM-02-BB back box. Metalwork, plexiglass, key lock and mounting hardware only.



CCM-02-ID1 CCM-02-ID3 CCM-02-ID4

Step 2: Main PCB's

Standard System Modules - select one each:

- AX-ACB: AC input power interface PCB. Required for AX-CTL-1PCB and AX-CTL-2PCB
- AX-DSP: AX series display/keyboard PCB. Comes with mounting plate, membrane switch, cables and mounting hardware.

System Base Card - select one of the following:

- AX-CTL-1PCB (Base Card): Single-loop control board with internal PSU. Cannot expand system power with AX-PSU.
- AX-CTL-2PCB (Base Card): Two-loop control board with internal PSU.
- Optional expansion power supply for AX-CTL-2PCB: Add AX-PSU expansion power supply module, 5.0A @ 24VDC, filtered and regulated, if required.

SLC and/or NAC Expansion for AX-CTL-2PCB (Base Card) ONLY, select one of the following:

- AX-LPD: Includes 2 SLCs and 2 NACs
- AX-NAC: Includes 2 NACS

Optional Network Module - select one if networking remote annunciators, command centres, Axis AX intelligent fire alarm panels and/or Axis AX"V" series intelligent integrated audio panels. (For fiber optic networking refer to AX-MOXA datasheet):

- AX-NET4: Ad-NeT-PluS network interface module Class B. Maximum 64 nodes; panels and/or remote annunciators.
- AX-NET7: Ad-NeT-PluS network interface module Class X(A). Maximum 200 nodes; panels and/or remote annunciators.

Optional Digital Communicator - select both items below if required:

- D9068P: digital alarm communicator (FACP powered), PCB only, serial port compatible, w/cables. Requires AX-SEB board to interface to the main PCB (Base Card).
- AX-SEB: Axis AX series RS-232 serial expansion board. Use with D9068P communicator.





Step 3: Audio Support

For systems requiring audio support, the following modules are required:

AV-AMP-80: Audio amplifier module includes built-in 16 message generator, dual booster inputs and two 40 watt, 25 Vrms speaker outputs. Includes mounting plate and mounting hardware. The smaller modular command centre will support one amplifier; the larger modular command centre will support two amplifier modules.

AX-PSU-6: Power Supply Charger Module, 5.0A @ 24VDC, filtered & regulated, for use with AV-AMP-80 Amplifier. The smaller modular command centre will support one AX-PSU-6; the larger modular command centre will support two AX-PSU-6 modules.

AV-MIC: Microphone with enclosure. Mounts to all modular command centre inner doors, in a single aperture location.





Step 4: Firefighter Telephone Support

The AV-TEL2-MCCS module is required for firefighter telephone support. This mounts in a double aperture location on the inner door.

AV-TEL2-MCCS: Is a firefighter phone for use with the AV-TEL2-RISER. The AV-TEL2-RISER provides a single riser supporting 250 addressable or conventional firefighter telephones/jacks.

Step 5: Options Modules Mounted to Back Box

AX-RL4: Four Relay Output Card, Form C relays rated 1.0A @ 30 VDC/VAC, freely programmable. Cannot be installed if AV-AMP-80 is installed, however, can be installed in a remote enclosure.

AX-RL8: Eight Relay Output Card with two (2) Form C and six (6) - Form A relays rated 1.0A @ 30 VDC/VAC, freely programmable. Cannot be installed if AV-AMP-80 is installed.

Step 6: Option Modules that Mount to Inner Doors

Each of the modules below mounts in a single aperture location on the inner door. Mounting hardware and cabling included.

AX-SAP: Single aperture blank metal plate. Comes with mounting hardware.

AX-ASW-16: 16 switches, with three integrated, programmable LEDs per switch (red, yellow, green).

AX-I/O-48: 16 switch inputs and 48 LED driver outputs. Supports up to 5 optional AX-RL10 relay output modules, for a total of 50 relay outputs. Each AX-RL10 module provides 10 Form C A relays rated 1.0A @ 30 VDC/VAC. Comes with a 1-foot long ribbon cable.

AX-LED16RY: LED annunciator module, 16 red and 16 yellow LEDs.

AX-LED32R: LED annunciator module, 32 red LEDs.

AX-LED32Y: LED annunciator module, 32 tellow LEDs.

AX-PRN: Axis AX thermal printer with mounting hardware.

AX-ACM6: Fan/damper module

AV-MIC: microphone assembly

Each of the modules below mounts in a double aperture location on the inner door. Mounting hardware and cabling included.

AX-DSP: Keyboard display.

AV-TEL2-MCCS: Firefighter telephone assembly with standard telephone.

AX-DAP: Double aperture blank metal plate. Comes with mounting hardware.

Order Codes and Options

CCM-01-BB	22.6"H X 20.25"W X 5.5"D, 3X3 Back Box
CCM-01-ID1	Inner Door 1 Double and 7 Single Apertures
CCM-01-ID2	Inner Door 2 Double and 5 Single Apertures
CCM-01-ID3	Inner Door 9 Single Apertures
CCM-01-OD	Outer Door
CCM-02-BB	35.9"H X 20.25"W X 5.5"D, 3X5 Back Box
CCM-02-ID1	Inner Door 1 Double and 13 Single Apertures
CCM-02-ID3	Inner Door 15 Single Apertures
CCM-02-ID4	Inner Door 2 Double and 11 Single Apertures
CCM-02-OD	Outer Door

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Axis AX Remote Graphical LCD Annunciators

Axis AX remote graphical LCD annunciators are available in two (2) models: The AX-ANN-C and AX-ANN-D. The AX-ANN-C provides annunciation and programmable peer-to-peer system controls, while the AX-ANN-D provides annunciation only.

To prevent unauthorised access to the AXANN-C, the unit can be set to password-required access for all controls. Alternatively, an optional access-enable key switch (AX-KSW) can be installed, thereby restricting access to the Reset, Silence, Resound and Drill functions without first activating the key switch. The graphical annunciators are designed to adapt to any installation and are compact and attractive.

Both units incorporate the unique Advanced backlit 240 x 64 graphical LCD display. This can be adapted to virtually any language and character set. In addition to the programmable language capabilities, the graphical LCD display can be customised with installation/company logo and details - these will be displayed during normal system mode.

The level of information displayed and the control capabilities of each AX-ANN-C and AX-ANN-D remote annunciator is fully field programmable. Individual units can be configured to vector information and control, allowing remote annunciators to be dedicated to alarms, troubles, supervisory or other status events.

The AX-ANN-C and AX-ANN-D communicate over the Advanced AD-NeT-PluS, Class B or Class X(A) fault tolerant, peer-to-peer network. This is a true peer-to-peer network with full cross node reporting. The AX-ANN-C and AX-ANN-D are comprised of three (3) parts; the back box, cover, chassis assembly. They can be mounted surface or semi-flush (With optional trimming).



Features

- Advanced user interface with graphical LCD
- Vector reporting of events
- Full system control or annunciation only
- Dedicated system & navigation keys
- Peer-to-peer network compatible
- Compact, attractive appearance
- Backlit 240 x 64 graphical LCD display
- Class X (A) or B network communications
- Optional access-enable key switch
- 5000ft maximum cable length
- Supervised external trouble input

Listings and Approvals

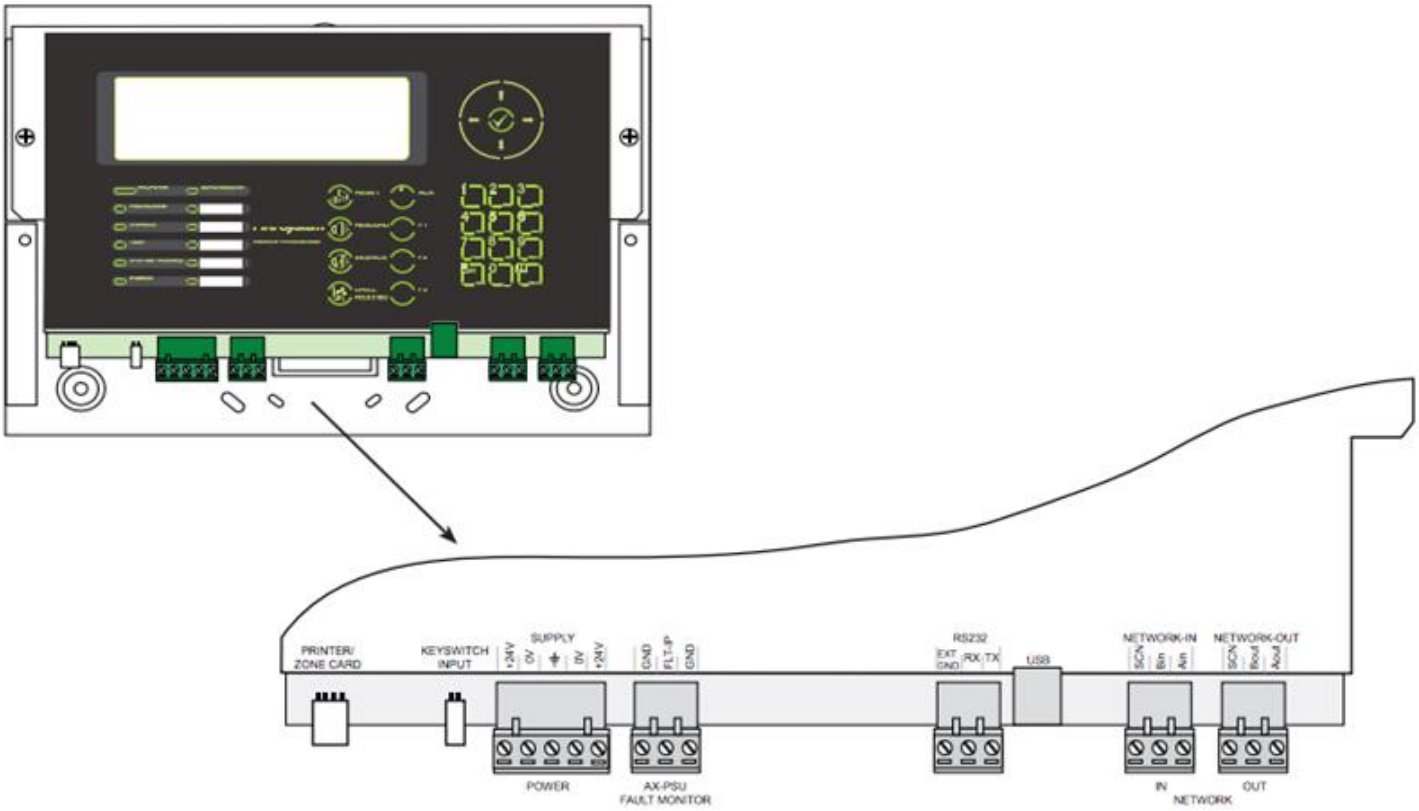
CERTIFIED
S35979

7120-1713:0100

NYC FIRE DEPT
2025-TMCOAP-002366-AMND

- Certified to UL 864 10th Edition - File No. S35979
- CSFM Approved: 7120-1713:0100
- NYCFD COA: 2025-TMCOAP-002366-AMND

Wiring Diagram



Specification

Display	Backlit, 240 x 64 Graphical LCD
Input Voltage (DC)	24 VDC (Operating range 15-30 VDC)
Standby Current	78 mA (Backlight off)
Operating Current	140 mA (In alarm)
LED Indicators	Red - Alarm, Green - Power, 10 Yellow - Trouble, Supervisory & System Status Indicators
Keypad	Alphanumeric Keypad, Navigation Keys & On-Board Buzzer
Controls (AX-ANN-C Only)	Acknowledge, Reset, Silence, Resound & Drill
External Monitoring Input	Supervised Closed Contact
Serial Port	RS232
Enclosure	Steel, Four ½“ Knockouts, Rear Entry Double Gang Electrical Box Mount
Color	Red or Gray
Dimensions	8½“ H x 11¾“ W x 1¾“ D

Order Codes and Options

AX-ANN-C*	Remote Graphical LCD Annunciator with Control Class B
AX-ANN-C/ST7*	Remote Graphical LCD Annunciator with Control Class X(A)
AX-ANN-D*	Remote Graphical LCD Annunciator without Control Class B
AX-ANN-D/ST7*	Remote Graphical LCD Annunciator without Control Class X(A)
AX-ANN Options:	
AX-KSW	Optional Access Enable Keyswitch
AXM-006	AX-ANN Back Box
AXM-007	AX-ANN Cover
AXM-008	Trim-Ring for Semi-Flush Mounting (Not UL Listed)

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

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Axis AX Local Operating Consoles

The local operating consoles (AX-LOC) are Advanced Axis AX peer-to-peer network nodes that allow for the field configuration of remote operator monitoring and control stations on a network. Each local operating console is available as either a Class x(A) or Class B network node, comprised of a peripheral expansion network node module (Class X(A) [AX-PENN/ST7] or Class B [AX-PENN]) and an alphanumeric keyboard display (AX-DSP).

The peripheral expansion network node module (AX-PENN [/ST7]) is the main component of the local operating consoles. The AX-PENN (/ST7) offers both the interface port for the Axis AX keyboard display and an integral Axis AX peripheral bus (PBUS). As with Advanced Axis AX fire alarm systems, the peripheral bus can support 16 of any specific PBUS modules up to a maximum of 32 PBUS modules. With the PBUS being a feature of the AX-LOC, audio amplifier modules, switch/LED modules, switch/LED driver modules, fan/damper modules, LED modules, conventional zone modules and four-point relay modules can easily be added and configured locally at the AX-LOC.

AX-LOCs are extremely easy to program as all programming is done using the standard Advanced PC-NeT field configuration tool, used for all other Axis AX products. Besides the powerful Advanced I/O relationship programming, AX-LOCs can be configured for full or partial (building sectored) installation annunciation and control. AX-LOCs can also support a supervised strip printer and/or 80 column wide carriage printer.

In addition to being either a Class X(A) or Class B network node, AX-LOCs are available as either annunciator and control, or emergency communications, annunciation and control. Emergency communications annunciation and control AX-LOCs include an audio paging amplifier (AV-AMP-80), power supply charger (AX-PSU-6), microphone assembly (AV-MIC) and single switch LED module (AX-ASW-16). As the annunciator and control AX-LOC does not include the audio options, its backbox is 3.5" deep. The backbox for the emergency communications annunciation and control AX-LOC is 5.5".

Each AX-LOC includes an inner and outer door, keyed to match other installed Advanced products. Two inner and outer door options are available. One is a 2x2 aperture inner door with a half plexiglass outer door and the other is a 2x3 aperture inner door with a full plexiglass outer door. AX-LOCs enclosures are available in either Advanced standard red or optional gray.



Features

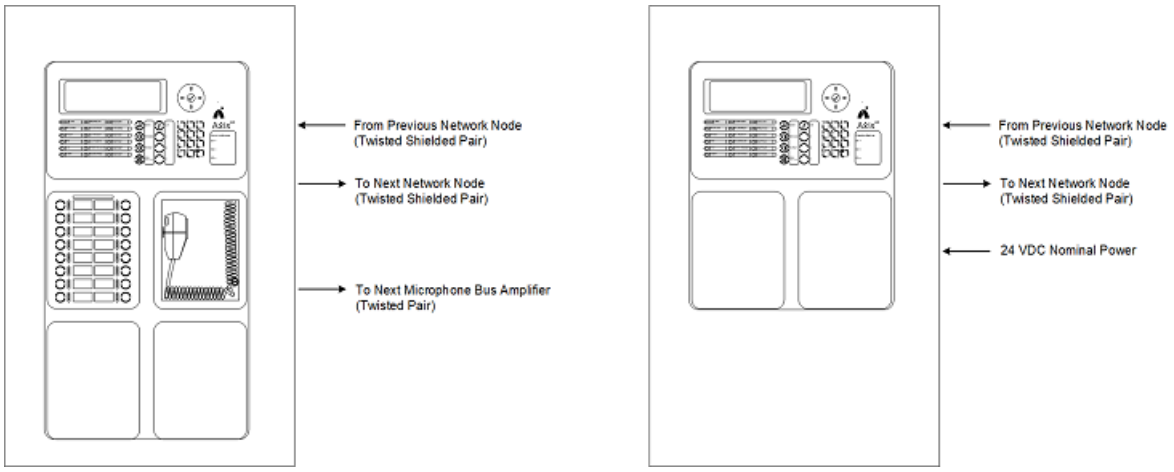
- User-friendly annunciation and control, identical to FACP
- Installation configurable operations and controls
- Class X(A) or B network compatible
- Programs with standard Advanced PC-NeT software
- Supports up to 32 peripheral bus modules
- Multi-channel audio configurations
- Optional printer support

Listings and Approvals

- Certified to UL 864 10th Edition - File No. S35979
- CSFM Approved: 6912-1713:0117
- NYCFD COA: 2025-TMCOAP-002366-AMND

S35979 6912-1713:0117 2025-TMCOAP-002366-AMND

Diagrams



Specifications

Operating Voltage	LOC1 & LOC3 120 VAC 50/60Hz, 24 VDC (nominal)		LOC2 & LOC4 24 VDC (nominal)	
Operating Current Quiescent Alarm	LOC1, 3 (Class B) 201 mA 515 mA	LOC1, 3/ST7 (Class X[A]) 226 mA 540 mA	LOC2, 4 (Class B) 155 mA 155 mA	LOC2, 4/ST7 (Class X[A]) 180 mA 180 mA
Operating Temp.	32^0F - 120^0F (0^0C - 49^0C)			
Humidity	95% (Non-Condensing)			
Dimensions LOC1, LOC3 LOC2, LOC4	 Backbox: 22 5/8"(H) x 14 1/2"(W) x 5 3/8"(D) Enclosure: 24 1/8"(H) x 16"(W) x 6 3/8"(D) Backbox: 22 5/8"(H) x 14 1/2"(W) x 3 3/8"(D) Enclosure: 24 1/8"(H) x 16"(W) x 3 3/8"(D)			
Serial Interface	RS232 Supervised, Optically Isolated			
AX-DSP Display	Backlit 240 x 64 Graphical LCD Display			
Axis AX PBUS	Supports 32 PBUS Modules, 16 Max of a Single Type			

Ordering Information

AX-LOC1	Audio Local Operating Console (Class B), 2x2 Inner Door with Half Plexiglass Outer Door
AX/LOC1/ST7	Audio Local Operating Console (Class X[A]), 2x2 Inner Door with Half Plexiglass Outer Door
AX-LOC2	Annunciator Local Operating Console (Class B), 2x2 Inner Door with Half Plexiglass Outer Door
AX-LOC2/ST7	Annunciator Local Operating Console (Class X[A]), 2x2 Inner Door with Half Plexiglass Outer Door
AX-LOC3	Audio Local Operating Console (Class B), 2x3 Inner Door with Full Plexiglass Outer Door
AX-LOC3/ST7	Audio Local Operating Console (Class X[A]), 2x3 Inner Door with Full Plexiglass Outer Door
AX-LOC4	Annunciator Local Operating Console (Class B), 2x3 Inner Door with Full Plexiglass Outer Door
AX-LOC4/ST7	Annunciator Local Operating Console Class X[A]), 2x3 Inner Door with Full Plexiglass Outer Door

* For optional gray enclosure add suffix **-G** to the part number

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