Axis AX

Network Modules

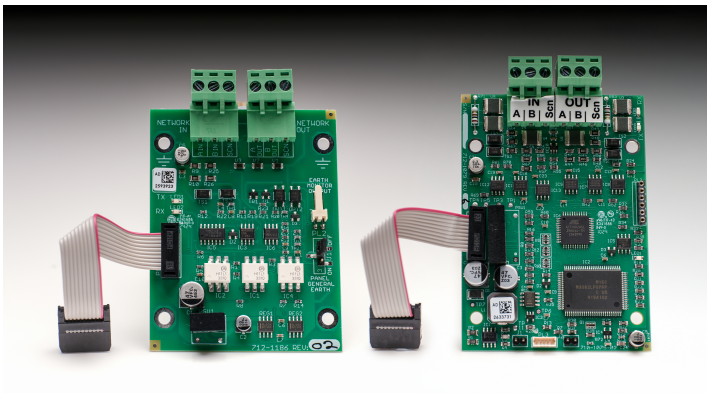
The AX-NET4 and AX-NET7 network modules meet the demands of both small and large networks, and provide the benefits of distributed intelligence and reduced installation costs.

The network can be fully fault tolerant to single opens or short circuits by using the Advanced AX-NET7 module. In addition, ground fault monitoring is standard with either style network.

The Advanced network operates as a true peer-to-peer network with full cross-node reporting. The network allows information from any input or output device to be passed over the network and displayed on any Axis AX fire alarm control panel or remote graphical LCD annunciator. Details include alarm, supervisory, warning, trouble, control events and disabled zone/points as well as analogue values, test instructions and status information.

For more complex networked systems, the Advanced Windows-based PC-NeT configuration software allows sector based programming for such functions as drill, acknowledge, silence, resound and reset control keys. All panels within the same sector can share common controls, and each fire alarm panel or remote annunciator can also be programmed to show specific network information on a zone/point basis.

The level of information displayed and the control capabilities of each network node is fully field programmable. Individual nodes can be configured to vectors information and control, allowing specific nodes to be dedicated to alarms, mass notifications, troubles, supervisory or other status events.



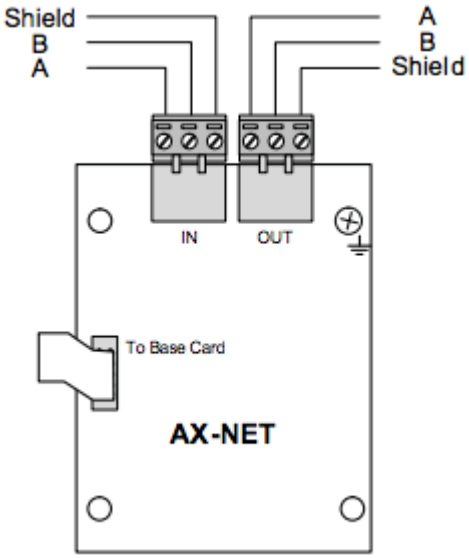
Features

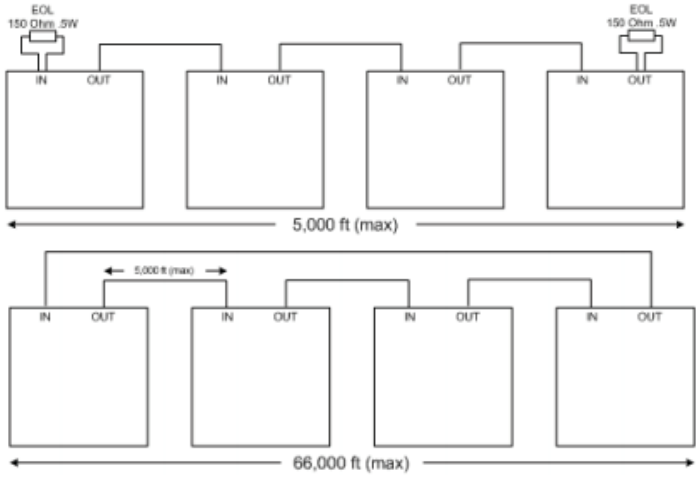
- Class B or Class X(A) Network Communicators
- Peer-to-Peer Network
- Fully Fault-Tolerant Network
- Up to 5000ft Between Nodes
- In-built Network Diagnostics displaying Real-time Information
- 200 Nodes Per Network without Audio
- 150 Nodes Per Network with Audio
- Up to 1000 Shared Network Zones
- Uncomplicated and Easy Installation

Listings and Approvals

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

Wiring Diagrams





Specification

Operating Current (AX-NET4 & 7) Quiescent Alarm	 62 mA 62 mA
Environment	Indoor, Dry
Operating Temperature	32ºF-120° F (0ºC-48° C)
Humidity	10-95% (Non-condensing)
Dimensions AX-NET4 & AX-NET7	 3½“ H x x 2½“ W x ½” D
Weight AX-NET4 & AX-NET7	 1.7 oz
Nodes/Distances AX-NET4 AX-NET7	 32 Nodes, 5000ft Maximum (EOL 150 Ohm [both ends]) 200 Nodes, 5000ft Between Nodes, 66000ft maximum overall cable length
Wiring	Twisted pair 18 - 20 AWG Minimum Recommended Twisted Shielded (Belden 8760, 8762)

Ordering Codes and Options

AX-NET4	Class B Network Module
AX-NET7	Class X(A) Network Module

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Advanced

Axis AX

Peripheral Expansion Network Node Module

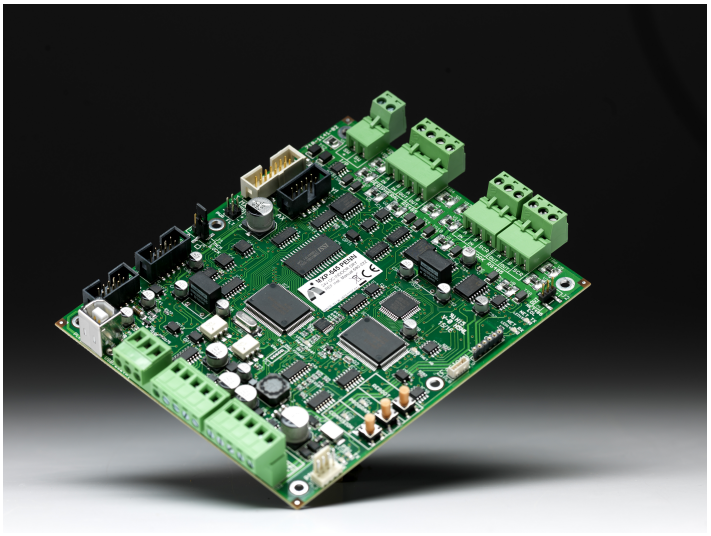
The Peripheral Expansion Network Node Module provides an Advanced network interface for remote monitoring and control of an integral Axis AX peripheral bus (PBUS). Two (2) versions of the peripheral expansion network node module are available; one for a Class B, Ad-NeT-PluS peer-to-peer network (AX-PENN) and one for Class X(A), Ad-NeT-PluS peer-to-peer network (AX-PENN/ST7).

Like the AX-CTL base card peripheral bus, the peripheral expansion network node module's (AX-PENN or AX-PENN/ST7) peripheral bus (PBUS) can support 16 of any specific Advanced PBUS module to a maximum of 32 PBUS modules. Peripheral bus modules include; audio amplifiers, switch/LED modules, switch/LED driver modules, fan/damper control modules, LED modules, conventional zone modules and four point relay modules.

In addition to providing a remote network interfaced peripheral bus, the peripheral expansion network node module can also support a standard Axis AX keyboard display (AX-DSP). An example of a product utilizing this feature would be the Advanced AX-LOC local operating control panel.

Besides supporting an optional AX-DSP keyboard display, each peripheral expansion network node module (AX-PENN or AX-PENN/ST7) can support a supervised panel strip printer and/or external 80 column wide carriage printer.

Normally installed in an enclosure like the AX-LOCs, an optional single aperture plate is available for AX-PENN (/ST7) mounting. This optional plate allows the AX-PENN (/ST7) to be installed in any Advanced enclosure. It is used for applications such as custom bespoke rotary switch, LED indication display panels, data gathering or simply expanding an array of interfaces.



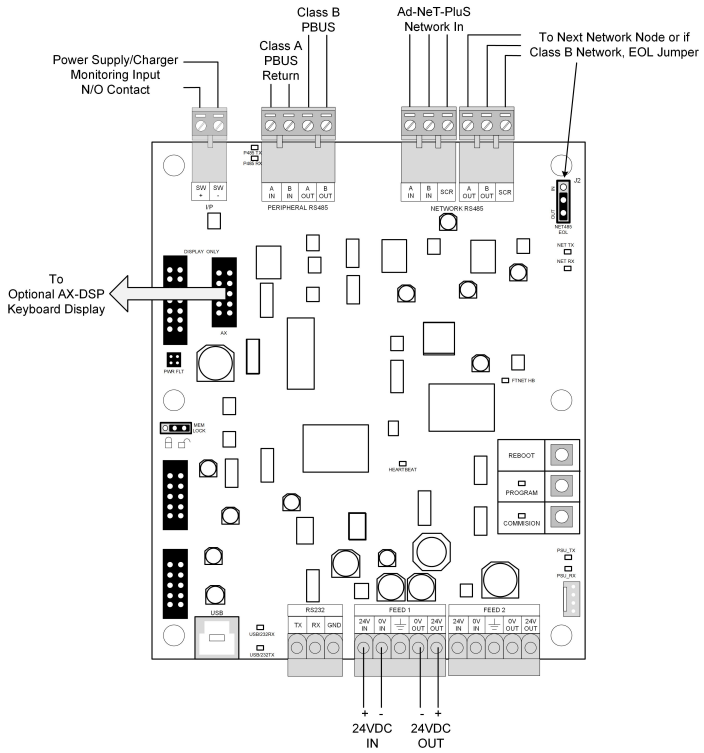
Features

- Remotely Located PBUS Module Support
- Available as Class X(A) or B Ad-NeT-PluS Network Node
- Supports up to 32 Advanced PBUS Modules
- Supports up to 16 of any PBUS Module Type
- Serial Port for Connection of Optional AX-DSP
- Integral RS232 Interface for External Printer/CRT
- Strip Printer Interface Port
- Power Supply/Charge Monitoring Input
- Fifteen On-Board Status LEDs
- USB Port for Programming

Listings and Approvals

- Certified to UL864 10thEdition – File No. S35979

Wiring Diagram

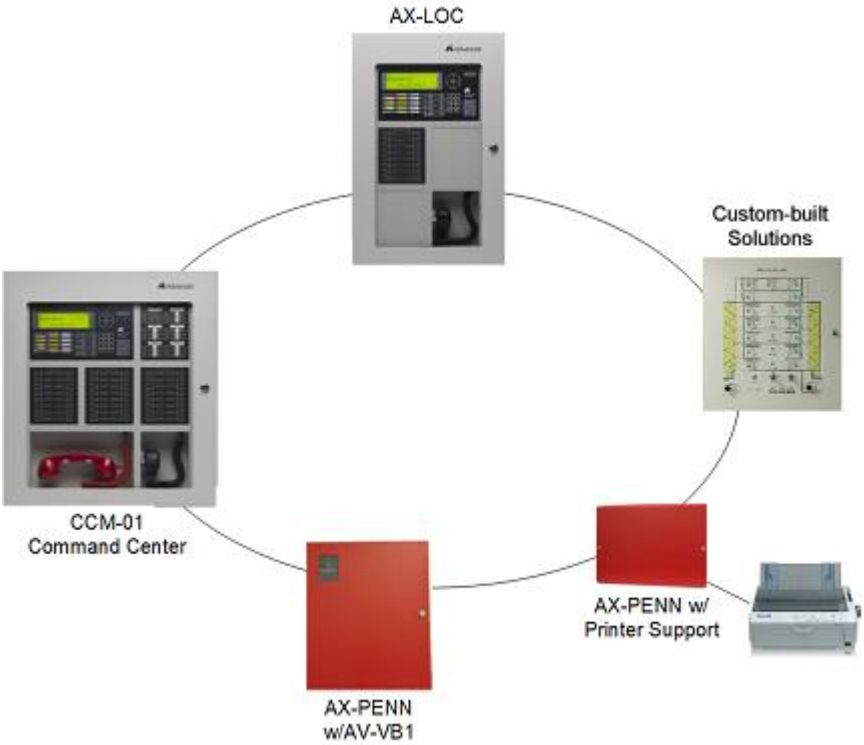


Specifications

Operating Voltage	24VDC
Operating Current	AX-PENN: 65 mA, AX-PENN/ST7: 90 mA
Operating Temperature	32^0F - 120^0F (0^0C - 49^0C)
Humidity	95% (Non-Condensing)
Dimension	6" (H) x 5" (W) x 1" (D)
Supervised Input	3.3K EOL
Programming Buttons	Reboot, Program, Commision
10-Pin Serial Port	Optional AX-DSP Port
Serial Interfaces	USB, RS232 (Isolated)
PBUS	32 Maximum Modules

Ordering Information

AX-PENN	Peripheral Expansion Network Node, Class B
AX-PENN/ST7	Peripheral Expansion Network Node, Class X(A)
590-398	Metal Mounting Plate with Screws



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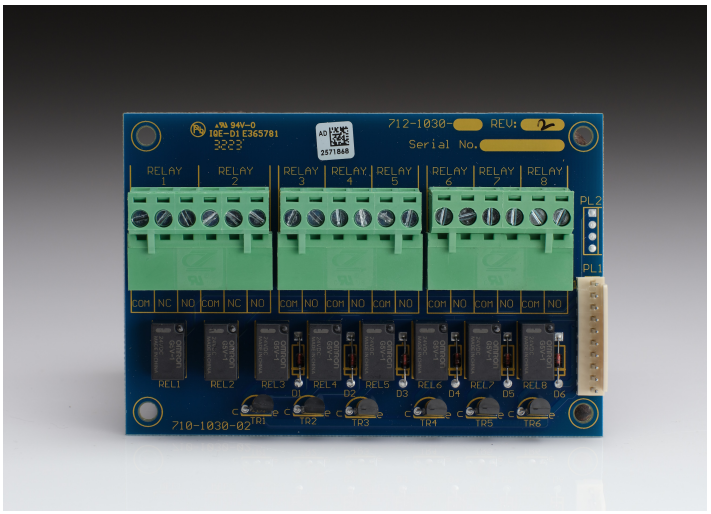
Axis AX

8-Way Relay Output Card

The AX-RL8 8-Way Relay Output Card is an internal peripheral card for use with Advanced Axis AX fire alarm control panels. The AX-RL8 card provides 2 Form-C and 6 Form-A (normally open) freely programmable relay contacts. Communications of the card and relays are done via a flat ribbon cable connection to the AX-CTL base card.

Compatible with the Axis AX Series Dynamix I/O relationship programming, the relays of the AX-RL8 can be individually assigned to any input or output relationship, output group, timing function, gated function, invert operation etc to perform project-specific control operations. To simplify installation, each AX-RL8 relay output is pre-configured to activate on a common alarm.

Ideally suitable for elevator control, HVAC shutdown, door holder release, or similar ancillary functions, each AX-RL8 relay is rated 30 VDC/VAC @ 1 Amp with a PF rating of 1 (resistive).



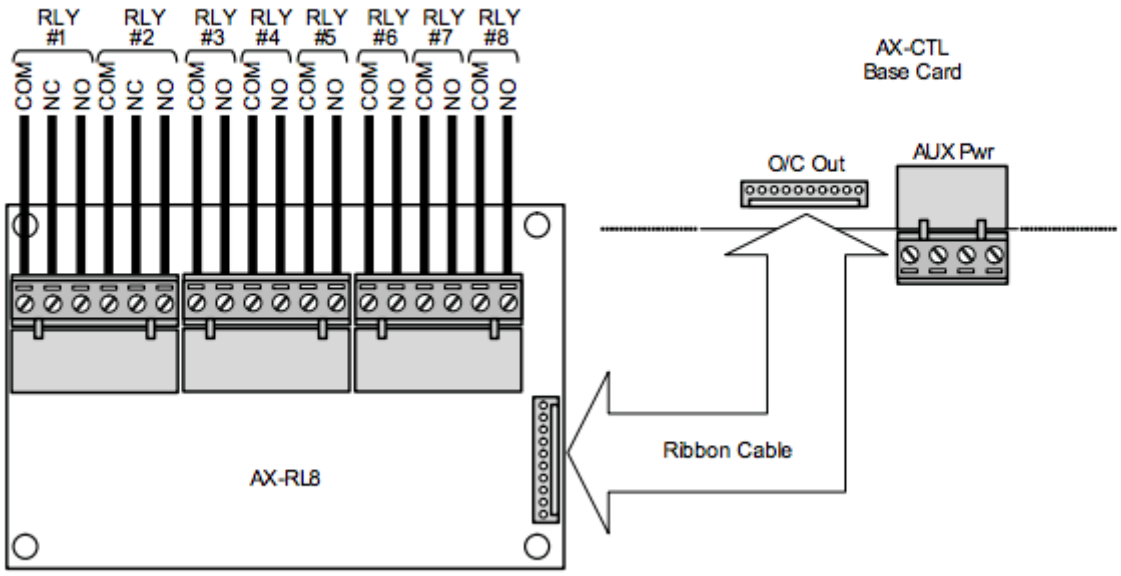
Features

- Eight (8) Individually Programmable Relays
- Contacts Rated 30 VDC/VAC, 1 Amp (Resistive)
- 2 Form-C and 6 Form-A Relays
- Fail-Safe Programmable
- Programmable Silenceable or Non-Silenceable
- Cost-Effective Ancillary Output
- Programmable Timing Functions
- Supports DynamiX I/O Relationship Programming
- Removable Field Wiring Terminal Blocks
- Rapid Activation Response

Listings and Approvals

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

Wiring Diagram



Specification

Relay Outputs	2 Form-C and 6 Form-A (Normally Open)
Relay Output Ratings	30 VDC/VAC @ 1 Amp, PF-1 (Resistive)
Operating Voltage	18-28 VDC (From Axis AXSeries Base Card)
Operating Current Quiescent Alarm	 0 mA 65 mA (All Relays On)
Environment	Indoor, Dry
Operating Temperature	32ºF-120ºF (0ºC-48ºC)
Humidity	10%-95% (Non Condensing)
Dimensions	2.76" X 4.13" X 0.71"
Weight	2.5 oz

Order Codes and Options

AX-RL8	8-Way Relay Output Card
521-194	10-Pin Flat Ribbon Cable, Replacement

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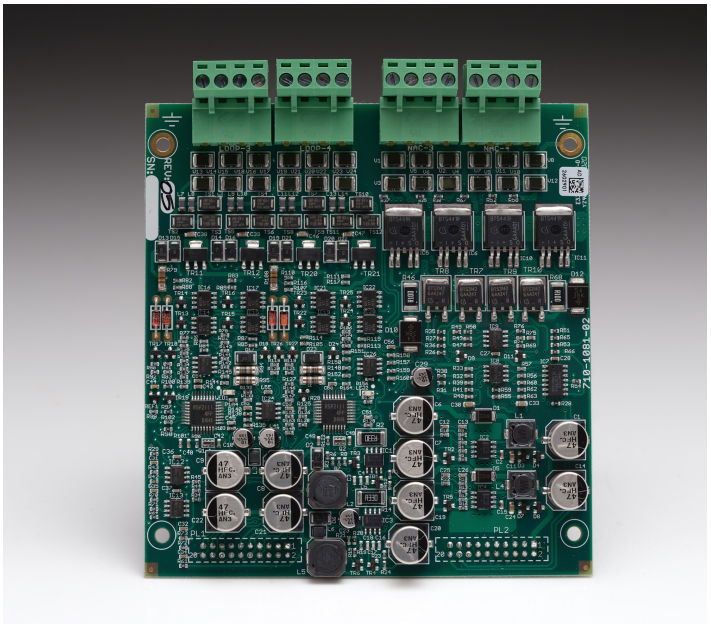
Axis AX

AX-LPD and AX-NAC Module

The Advanced AX-LPD module provides SLC and NAC circuit expansion of an existing AX-CTL-2 fire alarm control panel. The module provides two Class X, A or B signalling line circuits (SLCs) and two notification appliance circuits (NACs). 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 circuit supports up to 126 analogue addressable devices (any combination of intelligent detectors, input and/or output devices, including loop-powered technology devices), for a total expansion capacity of 252 points. In addition, the SLC circuits support the Advanced unique sub-addressing of various input and/or output devices, expanding system capacities further.

The AX-NAC module provides NAC circuit expansion of an existing AX-CTL-2 fire alarm control panel. The module provides two notification appliance circuits (NACs). The NAC circuits are filtered and regulated, capable of being wired Class A or B, each rated 2 Amp @ 24 VDC. Due to their exceptional regulation and high rating, the NAC outputs provide compatibility with virtually any listed notification appliance.



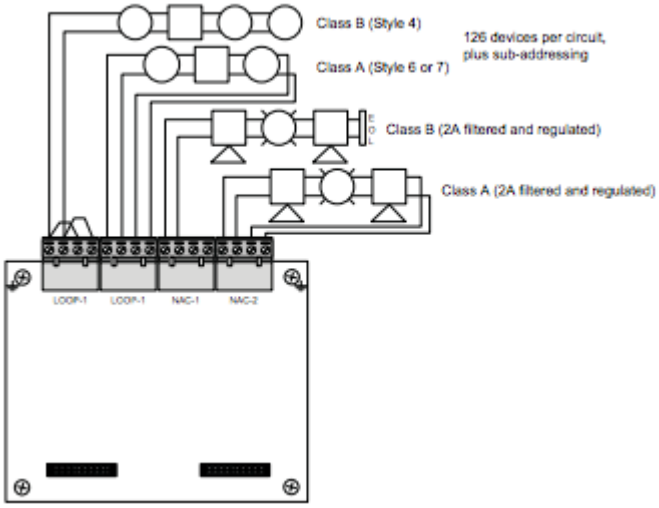
Features

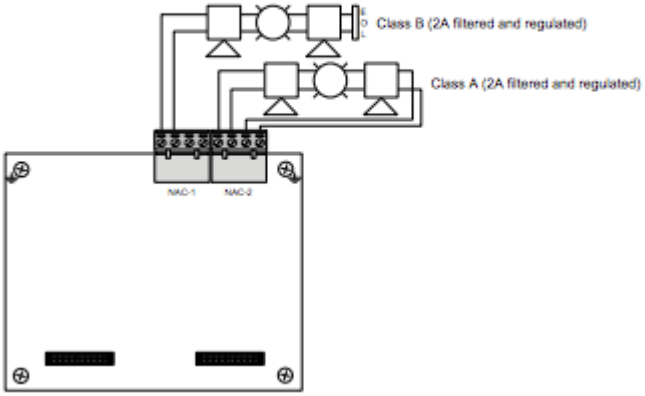
- 2 SLC/NAC or 2 NAC Expansion
- “DynamiX” I/O Relationship Programming
- Multi-Pattern & Two-Stage NAC Control
- 252 Analogue Addressable Point Expansion
- Automatic Detector Testing with Maintenance Alert
- Automatic Drift Compensation per Detector
- Alarm Verification and PAS
- Class X, A or B SLC Operation (126 devices per SLC)
- SLC’s Support Loop-Powered Technology
- 2A rated Class A or B NAC Circuits
- Multi-Pattern and Two-Stage NAC Circuit Control
- Synchronised Audibles and Visuals (Panel or Network Wide)
- Programmable Silenceable & Non-Silenceable NACs
- Voltage-Regulated NACs (Compatible with many Listed NAC devices)
- “Auto-Learn/Loop Detection” Programming

Listings and Approvals

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

Wiring Diagrams





Specification

SLC Loop	
Class (Style)	Class X, A or B
Voltage	24 VDC
Minimum Return Voltage	17 VDC
Current	0.5A
NAC Circuits	
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
End of Line Resistor	10K
Environment	Indoor. Dry
Operating Temperature	32ºF-120ºF (0ºC-48ºC)
Humidity	10-95% (Non-condensing)
Dimensions	47 / 8 ” W x 51 / 2 “ L x 11 / 2 ” D
Weight	4.5 oz

Order Codes and Options

AX-LPD	2-Way SLC/NAC
AX-NAC	2-Way NAC

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Advanced

Axis AX

Conventional Zone Module

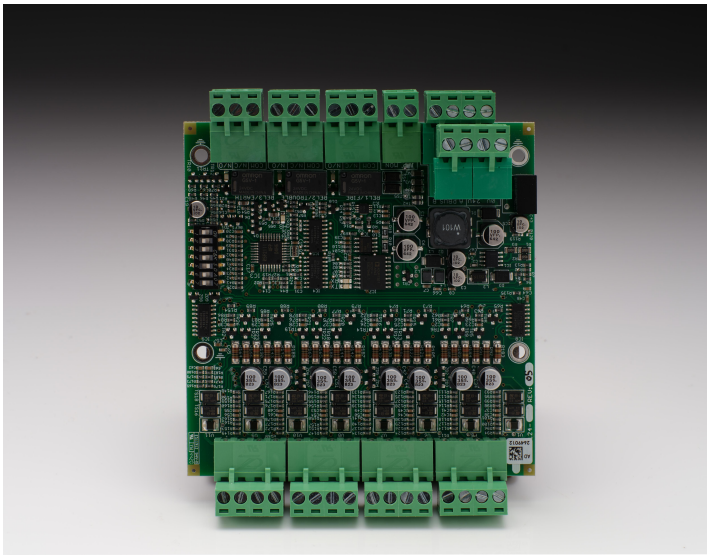
The AX-CZM Conventional Zone Module can be monitored and controlled by an Axis AX fire alarm control panel (P-BUS, “Peripheral Bus” operating mode), or by any UL864 listed fire alarm control panel (“Standalone” operating mode).

The AX-CZM module provides monitoring of up to eight (8) Class B conventional zone circuits with a programmable end-of-line resistor (6.8K, 4.7K, or 3.9K), or four (4) Class A conventional zone circuits. In addition, each AX-CZM module has three (3) Form C relay contacts defaulted in “Standalone” operating mode as an alarm, trouble and if required, earth/ground fault condition on a per module basis. If used in the “Peripheral Bus” mode of operation, these three (3) Form C relay contacts are freely programmable for any system functionality.

When connecting the AX-CZM module(s) to an Axis AX panel (“Peripheral Bus” operating mode), up to sixteen (16) AX-CZM modules can be supported. By supporting sixteen (16) AX-CZM modules, an Axis AX panel can accommodate up to 128 Class B (64 Class A) conventional zones and 48 (Form C) relay contacts. When used in the “Peripheral Bus” mode of operation, all zone and relay functionality is fully field programmable using the powerful cause and effect rules of Advanced's PC-NeT field configuration program.

In the “Peripheral Bus” or “Standalone” operating modes, the AX-CZM module must be powered by a UL-Listed 24 VDC nominal power supply and mounted inside an Advanced AXM-009 peripheral bus enclosure. In the “Standalone” mode of operation, the host (ANSI/UL 864 Listed) fire alarm control panel would monitor the single alarm, trouble (alarm and trouble contacts are common for all eight zones) and if required, earth/ground fault contacts for AX-CZM module status.

Each AX-CZM module makes use of Advanced’s software monitoring and real-time power management (SMART-PM) techniques to minimise current requirements under alarm conditions across multiple zones. This SMART-PM technology results in lower power consumption, and increased fire alarm control panel battery life. Using the SMART-PM information, each zone circuit is capable of indicating a trouble condition when a 2mA load is exceeded (i.e. too many conventional smoke detectors added to the circuit).



Features

- Axis AX Series P-BUS or Standalone Operation
- Eight Class B or Four Class A Zone Circuits
- Programmable Class B End-of-Line
- P-BUS Operation Supports Sixteen AX-CZM’s
- Three Form “C” Relay Contacts
- Advanced Power Management (SMARTPM)
- Programmable End-of-Line 6.8K, 4.7K or 3.9K
- 50 Ω Initiating Circuit Resistance
- Ideal for Retrofit Applications
- Extensive 2-Wire Detector Compatibility
- Conventional Detector and Contact Device Monitoring
- Programmable Alarm Verification
- P-BUS Supervised Remote Power Supply Monitoring
- 128 Class B (or 64 Class A) Zones and 48 Relays per Axis AX Series Panel
- Removable Terminal Blocks
- Programmable Latching/Non-Latching Input Types

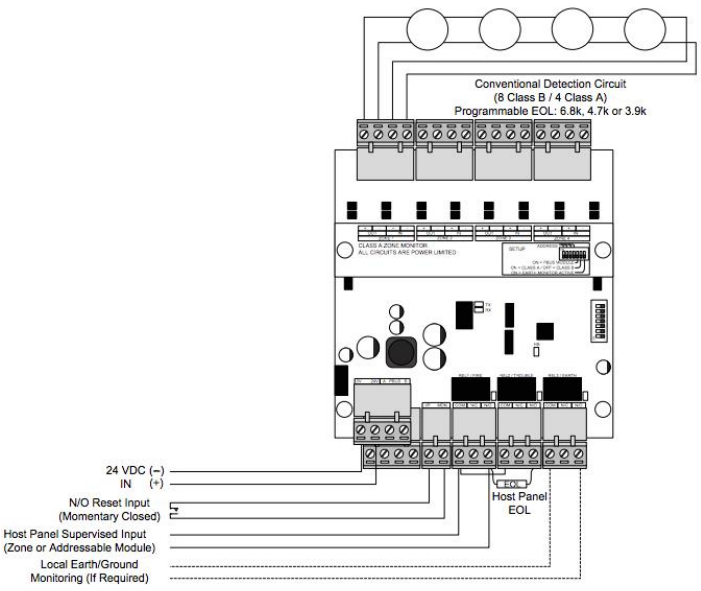
Listings and Approvals

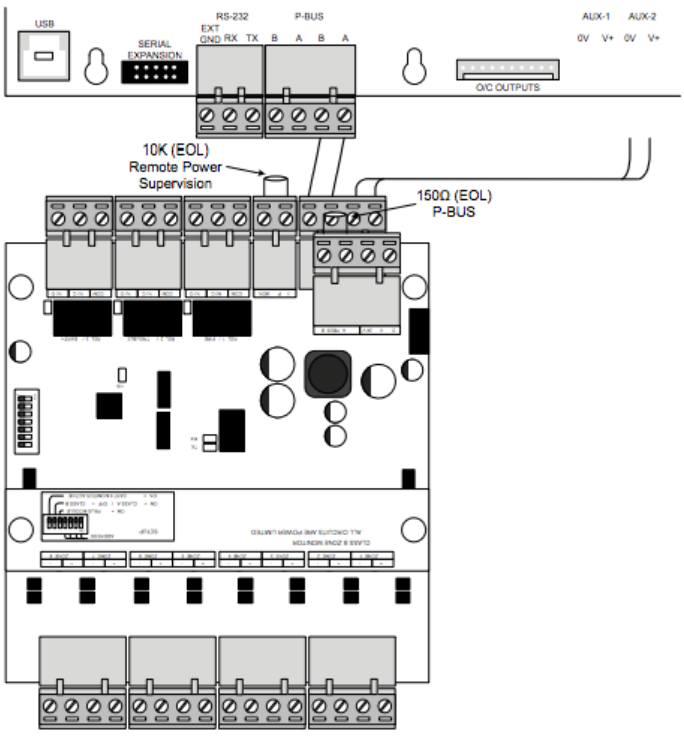
- Certified to UL864 10th Edition – File No. S25235
- CSFM Approved: Pending
- NYCFD COA: Pending

Specification

Operating Voltage	24 VDC
Operating Current	
Quiescent	110mA (Vs = 24, 8 Zones = Min Load)
Minimum	120mA (Vs = 24, 8 Zones = Max Load, Relays OFF)
Maximum	135mA (Vs = 24V, 8 Zones = Max Load, Relays ON)
Alarm	At Least 318mA (8 Zones = Max Load, 3 Relays ON)
Relays	
Relay 1	"Standalone" Common Alarm
Relay 2	"Standalone" Common Trouble (Fail-Safe)
Relay 3	"Standalone" Earth/Ground Fault
Ratings	1A @ 30 VDC
LEDs	
Red	Relay 1 - "Standalone" Alarm
Green	Relay 2 - "Standalone" Normal
Yellow	Relay 3 - "Standalone" Earth/Ground
Resistors	
Class B EOL	6.8K 4.7K or 3.9K
P-BUS Operation	10K
Remote Power	150K
End-of-Line	
Environment	Indoor, Dry
Operating Temperature	32ºF - 120ºF (0ºC - 49ºC)
Humidity	93% (Non-Condensing)
Weight	5.3 oz
Dimension	4.2" X 5"

Wiring Diagrams





Order Codes and Options

AX-CZM	Conventional Zone Module
AXM-009*	Peripheral bus enclosure (Supports 2 x AX-CZM)

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

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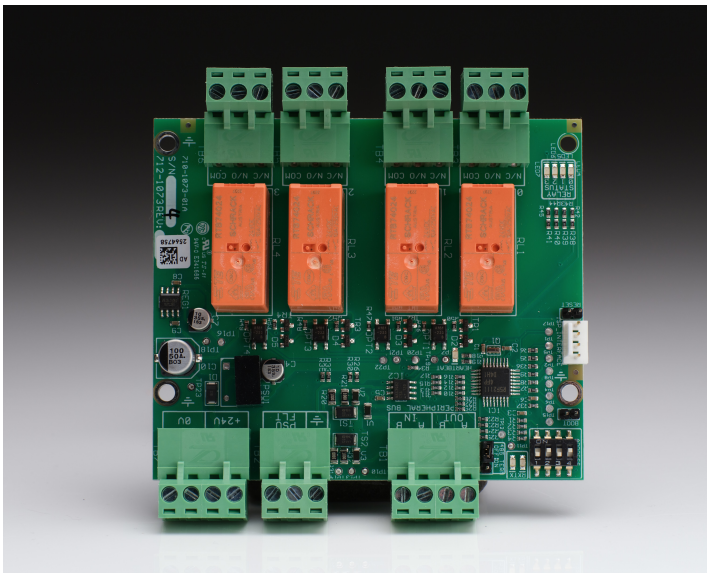
Axis AX

4 Point Relay Card

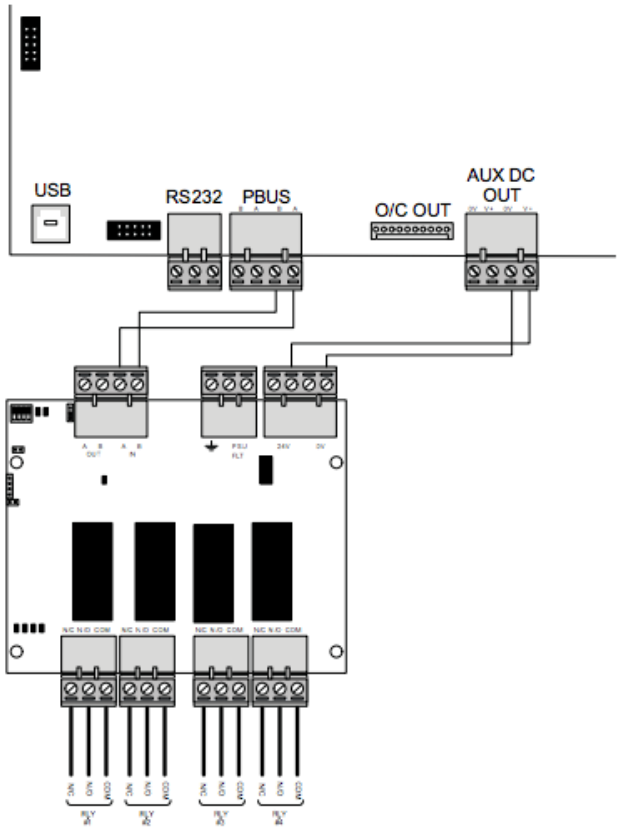
The AX-RL4 4 Point Relay Card is an optional PBUS (RS485 network) peripheral module that provides four individually programmable relay outputs from an Axis AX fire alarm control panel. Up to sixteen (16) AX-RL4 cards can be connected to a single Axis AX fire alarm control panel providing a maximum of 64 relay outputs. Each output of the AX-RL4 is fully field programmable using the powerful cause and effect rules of Advanced's PC-NeT field configuration program.

The AX-RL4 4 Point Relay Card, can be installed in two different configurations; one AX-RL4 can be mounted within the Axis AX fire alarm control panel enclosure (if mounting location is available) or two (2) AX-RL4 cards can be mounted in a separate enclosure.

Each AX-RL4 card has onboard LEDs for the indication of individual relay activation, PBUS (RS485 network) communications and microprocessor heartbeat.



Wiring Diagram



Features

- Field Programmable Relay Card
- Mounted locally to FACP, or externally up to approx. 20m (or 65 ft) via RS485 PBus
- Powerful Cause & Effect Programming
- 120/240 VAC @ 5 Amp Rating
- Dedicated Power Supply Monitored Input
- Fully synchronised 64 Relays per Axis AX Series FACP Peripheral Bus
- Removable Field Wiring Terminal Blocks

Listings and Approvals

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

Specification

Operating Voltage	15-30 VDC (From base card or listed power supply)
Operating Current Quiescent Alarm	 22 mA 100 mA
Output Ratings	5A @ 30 VDC/120VAC
LED Indicators	Relay Output Active PBus Communicators (RX/TX) Processor Heartbeat
End-of-Lines	10 KΩ - Fault Remote Power Supply 150 KΩ - PBUS EOL Built on Board
Environment	Indoor, Dry
Operating Temperature	32°F - 120°F (0°C-48°C)
Humidity	10-95% (Non-Condensing)
Weight (AX-RL4)	3 oz
Optional Enclosure Dimension	8.58" X 11.81" X 1.77"

Order Codes and Options

AX-RL4	4 Point Relay Card
AXM-009*	Optional Listed Enclosure (Supports 2 AX-RL4's)

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

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Advanced

Axis AX

Switch LED Module

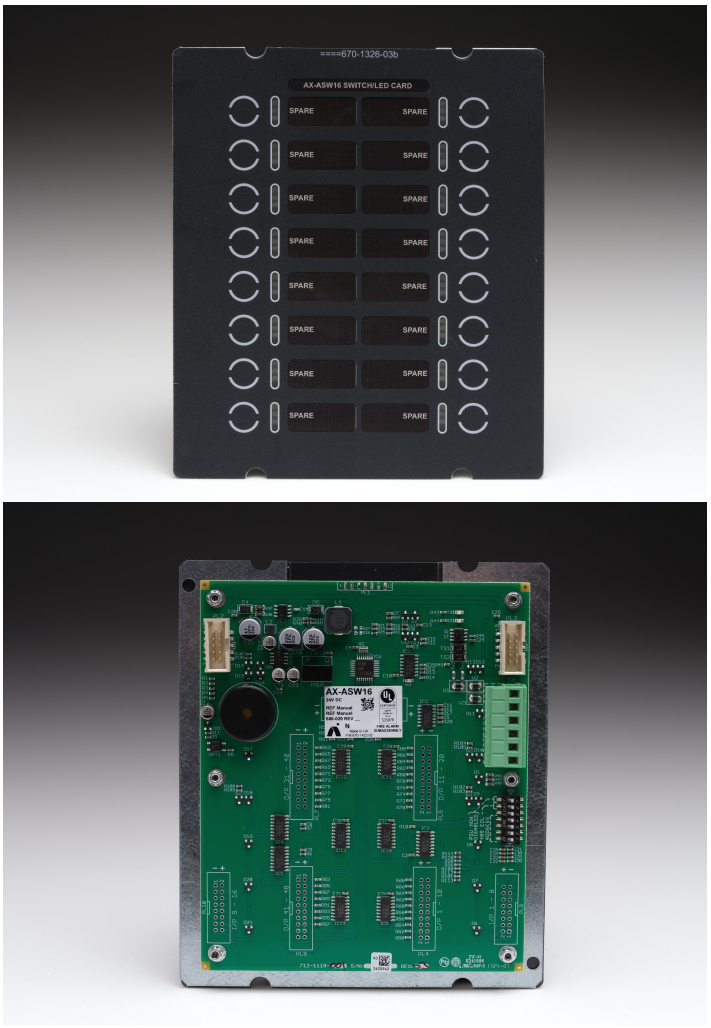
Providing superior flexibility and customisation, the Switch LED Module (AX-ASW-16) provides full control and annunciation of any individual input, output, zone, or group of devices on an Axis AX fire alarm control panel or Axis AX series network. The level of annunciation and control is totally controlled by the system programming and the installation requirements.

To meet this level of flexibility, the AX-ASW-16 is a freely programmable I/O module, providing 16 switches and 48 LEDs. Switches and LEDs can be programmed as a set or independently, based on user requirements.

The AX-ASW-16 is easily configurable using the Advanced PC-NeT field configuration tool, which works in a Windows environment. Switches can be programmed to bypass (disable/enable) points, zones and/or groups. They can also be programmed to turn On/Off relay points, NAC circuits, city connections, or they can be configured to provide complete HOA (Hand-Off-Auto) control functionality. When interfacing to an Advanced audio system, controls can be configured for All Call, All Evac, All Alert, Select Zone/Area Paging, individual message selection, firefighter telephone selection and much more.

LEDs are programmable for a number of status indications of points, zones and/or groups within the system including alarm, supervisory, trouble, switch active, relay active etc. In addition, LEDs can be programmed for primary and secondary status events, along with flash rates based on last known status/event (ie: off, on steady, 1/2 second flash or 1-second flash).

Up to 16 AX-ASW-16 modules can be connected to an Axis AX fire alarm control panel, providing 256 switches and 768 LEDs. Switches and LEDs can be assigned to a single host Axis AX panel or transmitted over the Advanced peer-to-peer network to other network nodes (FACPs). Other Axis AX fire alarm control panels on the network can have their own set of AX-ASW-16 modules.



Features

- Freely Programmable I/O Module
- 16 Switches and 48 LEDs
- Field Programmable with PC-NeT Tool
- Communicates via PBUS (RS-485 Network)
- Each Axis AX FACP Supports up to 16 Modules
- Simple DIP Switch Addressing
- Can be Installed Remotely from Axis AX FACP
- Easy Panel or Remote Installation/Configuration
- Supervised External Trouble Input
- Configurable On-Board Piezo (Buzzer)
- Multi-Module Daisy Chaining

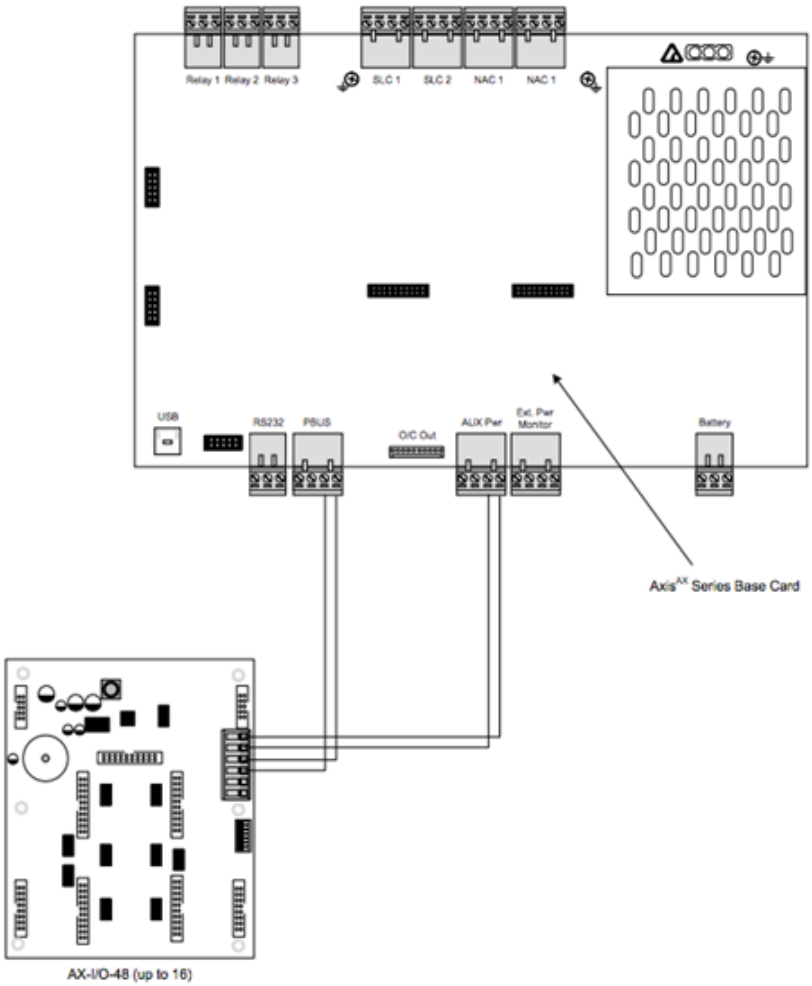
Listings and Approvals

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

Specification

Input Voltage (DC)	24 VDC (Operating range 18-28 VDC)
Operating Current Quiescent Alarm All LEDs Active (On) One LED (Approximate)	 14 mA 55 mA 0.8 mA
Switches	16 Programmable Switches Push Button Toggle
LED Indicators	48 LEDs 16 Green 16 Yellow 16 Red
External Monitoring Input	Supervised Closed Contact (N/C)
Piezo (Buzzer)	Field Configurable On/Off, Pulse/Steady
Screw Terminals	12 - 24 AWG
Daisy Chain Headers	10-Way IDC Ribbon Connector for Multi-Module Interconnect

Wiring Diagram



Order Codes and Options

AX-ASW-16	Switch LED Monitor

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Advanced

Axis AX

Switch/LED Driver Module

Providing superior flexibility and customisation, the Switch/LED Driver Module (AX-I/O-48) provides full control and annunciation of any individual input, output, zone, or group of devices on an Axis AX fire alarm control panel or network. The level of annunciation and control is totally controlled by the system programming and the installation requirements.

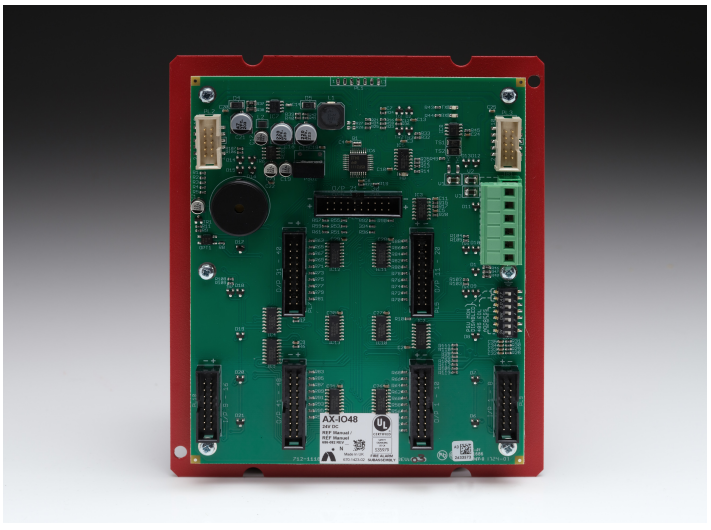
To meet this level of flexibility, the AX-I/O-48 is a freely programmable I/O module, providing 16 switch inputs and 48 LED driver outputs. Switch inputs and LED driver outputs can be completely field programmable based on user requirements.

The AX-I/O-48 is easily configurable using the Advanced PC-NeT field configuration tool, which works in a Windows environment. Switch inputs can be programmed to bypass (disable/enable) points, zones and/or groups. They can also be programmed to turn on/off relay points, NAC circuits, city connections, or they can be configured to provide complete HOA (Hand-Off-Auto) control functionality. When interfacing to listed annunciators, each I/O can be configured based on annunciator requirements.

LED driver outputs are programmable for a number of status indications of points, zones and/or groups within the system including alarm, supervisory, trouble, switch active, relay active etc. In addition, LED driver outputs can be programmed for primary and secondary status events, along with flash rates based on last known status/event (ie: off, on steady, 1/2 second flash or 1-second flash).

Up to 16 AX-I/O-48 modules can be connected to an Axis AX fire alarm control panel, providing 256 switch inputs and 768 LED driver outputs. Switch inputs and LED driver outputs can be assigned to a single Axis AX panel or can be transmitted over the Advanced peer-to-peer network to other network nodes (FACPs). Other Axis AX fire alarm control panels on the network can have their own set of AX-I/O-48 modules.

The switch/LED driver module can also be used to manually control live voice communications and message/tones or firefighter phones from the Axis AX fire alarm control panel.



Features

- Ideal for Interfacing to Custom Graphic Annunciators
- Freely Programmable Driver Module
- 16 Switch Inputs and 48 LED Driver Outputs
- Field Programmable with PC-NeT Tool
- Communicates via PBUS (RS-485 Network)
- Adaptable to many Listed Annunciators
- Each Axis AX FACP Supports up to 16 Modules
- Compact, Attractive Appearance
- Simple DIP Switch Addressing
- Can be Installed Remotely from Axis AX FACP
- Supervised External Trouble Input
- Configurable On-Board Piezo (Buzzer)
- Multi-Module Daisy Chaining

Listings and Approvals

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

Wiring Diagram

Specification

Input Voltage (DC)	24 VDC (Operating range 18-28 VDC)
Operating Current Quiescent Alarm One Drive Output Active	 13mA – All Driver Outputs Off 53mA – All Driver Outputs Active 0.1042mA
Switches	16 Programmable Switch Inputs
LED Driver Outputs	48
External Monitoring Input	Supervised Closed Contact 9N/C0
Piezo (Buzzer)	Field Configurable On/Off, Pulse/Steady
Screw Terminals	12 - 24 AWG
Daisy Chain Headers	10-Way IDC Ribbon Connector for Multi-Module Interconnect

Order Codes and Options

AX-I/O-48	Switch/LED Driver Module

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LED Modules

The Advanced LED Modules consist of three (3) different types of modules that provide excellent system annunciation and flexibility. Each module is fully compatible with Axis AX fire alarm control panels, “V” series integrated audio panels and Axis AX command centre panels. Each Axis AX panel can support up to sixteen (16) Axis AX Switch LED Modules in any combination.

The three (3) different types of LED Modules are the AX-LED16RY, AX-LED32R, and AX-LED32Y.

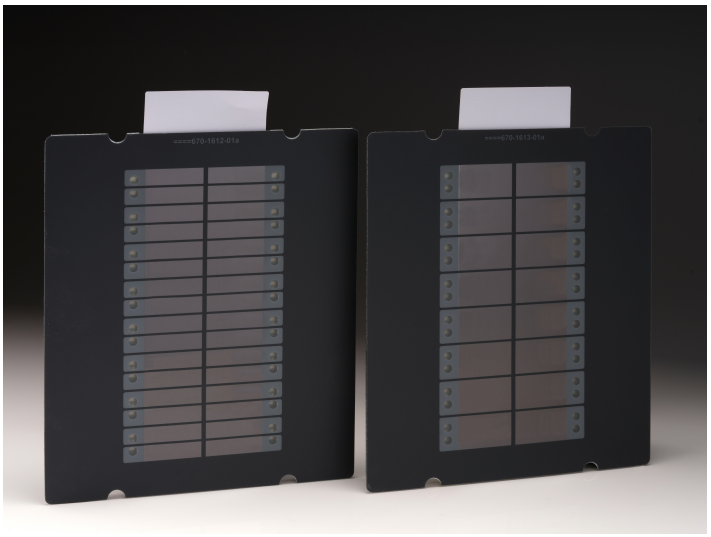
The AX-LED16RY consists of sixteen (16) red and sixteen (16) yellow LEDs. These are typically used to annunciate the alarm and trouble status of up to 16 individual zones or areas.

The AX-LED32R consists of thirty-two (32) red LEDs. These are typically used to annunciate the alarm status of up to 32 zones or areas.

The AX-LED32Y consists of thirty-two (32) yellow LEDs. These are typically used to annunciate the trouble of up to 32 zones or areas

In addition to the above-mentioned zone or area annunciation, each LED can be mapped or assigned to any system function in support of fire alarm, system status, non-fire conditions, warnings or mass notification events. Each LED can also be further programmed for primary and secondary functions with flash rates based on last known status/event (off, on steady, 1/2 second flash or 1-second flash).

LED modules can be installed in any available single aperture location of an Axis AX Series Intelligent Fire Alarm Control Panel, “V” Series Integrated Audio Panel or Axis AX Command Center Panel. Also, LED Modules can be mounted remotely from the main fire alarm control panel in one of the Advanced, attractive remote annunciation enclosures (AX-LZA-CAB1, AX-LZA-CAB2 or within a large selection of AX-LOC enclosures).



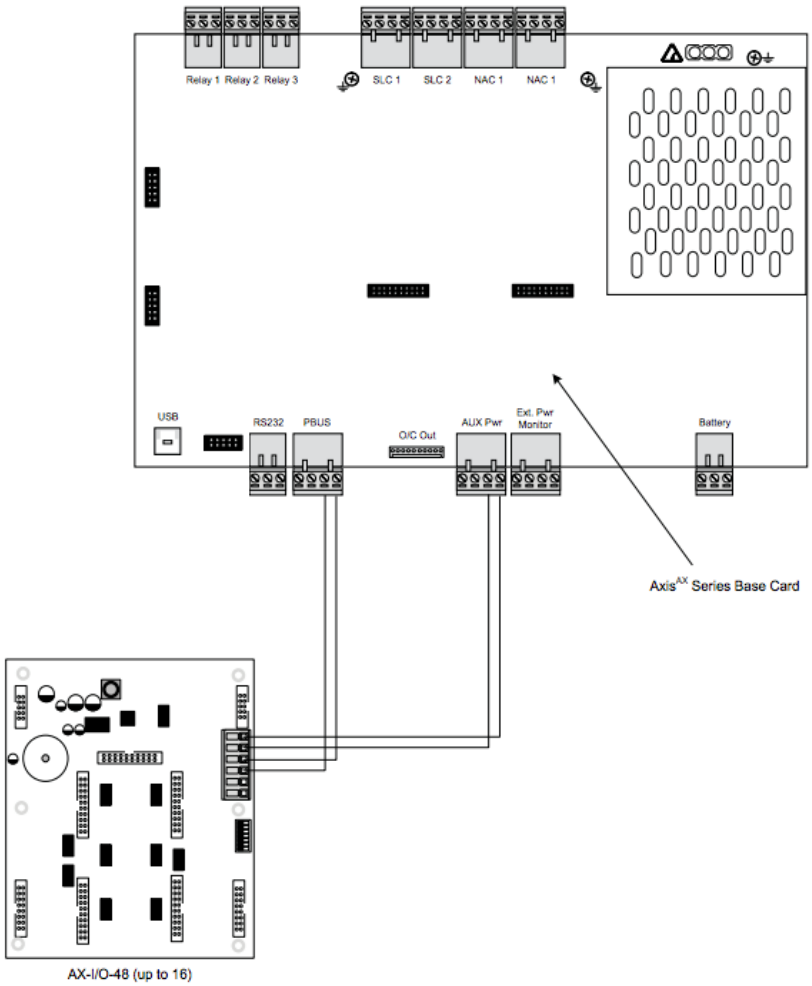
Features

- Compact, Attractive Appearance
- Freely Programmable LEDs
- Up to 16 Modules per Axis AX FACP
- Field Programmable with PC-NeT Tool
- Communicates via PBUS (RS-485 Network)
- Local Axis AX FACP or Remote Mounting Options
- Simple DIP Switch Addressing
- Large Customer Slide-in Label Area
- Supervised External Trouble Input
- Configurable On-Board Piezo (Buzzer)
- Multi-Module Daisy Chaining

Listings and Approvals

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

Wiring Diagram



Specification

Input Voltage (DC)	24 VDC (Operating range 18-28 VDC)
Operating Current Quiescent Active All LEDs Active (on) One LED (approximate)	 14 mA 55 mA 0.8 mA
LED Indicators AX-LED16RY AX-LED32R AX-LED32Y	 16 Red and 16 Yellow 32 Red 32 Yellow
External Monitoring Input	Supervised Closed Contact (N/C)
Piezo (Buzzer)	Field Configurable On/Off, Pulse/Steady
Screw Terminals	12 - 24 AWG
Daisy Chain Headers	10-Way IDC Ribbon Connector for Multi-Module Interconnect

Order Codes and Options

AX-LED16RY	LED Module Incorporating 16 Red and 16 Yellow LEDs
AX-LED32R	LED Module Incorporating 32 Red LEDs
AX-LED32Y	LED Module Incorporating 32 Yellow LEDs
AX-LZA-CAB1*	Local Zone Annunciator Cabinet - Single Aperture module
AX-LZA-CAB2*	Local Zone Annunciator Cabinet - 2 x Single Aperture modules
AX-LZA-CAB4*	Local Zone Annunciator Cabinet - 4 x Single Aperture modules

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

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Advanced

Axis AX

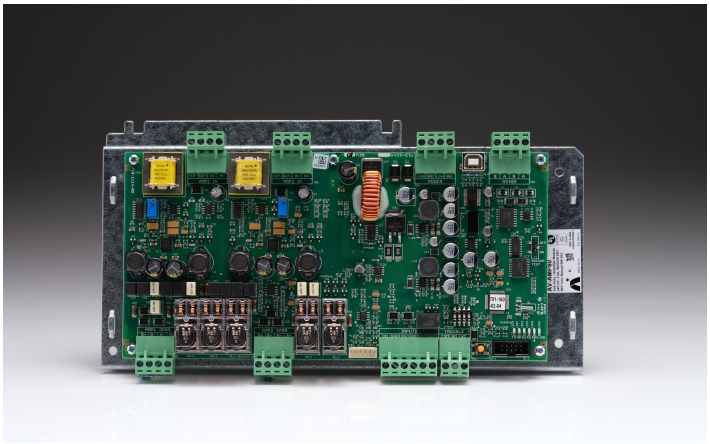
80W Audio Amplifier Module

The Advanced AV-AMP-80 module provides Digital Audio capabilities to Axis AX “V” Series, Axis AX Command Centers and the AV-VB Distributed Audio Booster. The module provides two Class A or B 40 Watt Audio Notification Appliance Circuits (ANACs). Communications with an Axis AX panel is achieved through the use of the AX-CTL onboard PBUS (RS485 network) interface port. This interface is used for control of the module including the selection of the 16-channel flash-based digital messages, message repeat cycles, activation of the audio output, and monitoring of any AV-AMP-80 trouble condition.

The module also includes the capability to be externally triggered by three (3) programmable dry contact inputs. Trigger 1 causes message one to be played. Trigger 2 causes message two to be played. Trigger 3 has the highest priority and activates booster mode. In booster mode, signals appearing at “AMP 1 Booster Audio Input” and “AMP 2 Booster Audio Input” are amplified up to 25 Vrms levels and are amplified out the two audio notification appliance circuits. Trigger 3 overrides Triggers 1 and 2 to support higher priority paging. For installations requiring local paging, the AV-AMP-80 module includes a 6-pin ribbon cable connection that easily interfaces to the Advanced AV-MIC microphone.

The AV-AMP-80 module includes a field programmable 16 channel message generator, programmable through the Advanced audio module field configuration tool. The 16 messages are stored in onboard E2 memory. The PC-NeT tool is required for programming all Axis AX Series FACPs, annunciators, network options and the AV-AMP-80 control-by-event logic.

There are two (2) 40 Watt amplifiers that output identical messages simultaneously. A programming option provides for selecting a 1 to 1 backup (may be required in some jurisdictions). “Booster” configuration is provided by use of the AMP audio I/O terminals. This is ideal for synchronizing audio signals and sharply reducing installation costs.



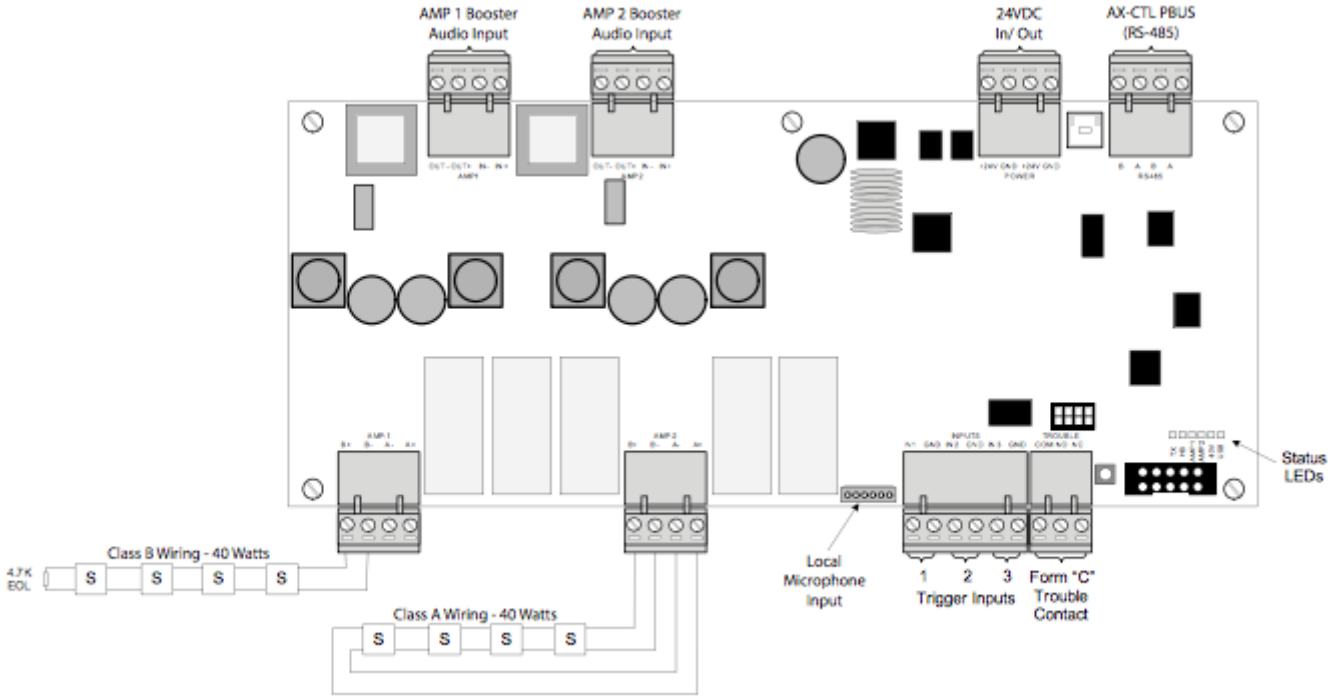
Features

- Dual 40 Watt @ 25 Vrms Amplifiers
- 16-Channel Digital Message Generator
- PC-NeT Programmable
- Unique “Booster” Option
- Compact/Efficient Digital Amplifier Design
- Class A or B Wiring
- Isolated PBUS (RS-485 Network) Interface
- Freely Programmable CBE logic
- PC-NeT Configuration Tool Compatible
- Automatic one-to-one Backup Option
- Supervised Microphone Input for AV-MIC Module
- Three Programmable External Trigger Inputs
- Up to 16 Amplifiers per FACP

Listings and Approvals

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

Wiring Diagram



Specification

Input Voltage (DC)	24 VDC (Operating Range 15-30 VDC)
Current	50mA (Quiescent) 220mA Plus 51mA per 1 Watt of audio (maximum 3.4A @ 80 Watts)
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 or Contact Closures (Triggers #1, #2 and #3)
AV-MIC	Supervised Microphone Input
Printed Circuit Board Dimensions	9'' Long X 4.25" Wide

Order Codes and Options

AV-AMP-80	Audio Amplifier Module with Two 40 Watt Speaker Outputs
AV-MIC*	Microphone and Enclosure Assembly
AV-VB*	Distributed Audio Booster. Includes One AV-AMP-80, One AX-PSU-6, and Enclosure

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

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Axis AX

Thermal Strip Printer

The AX-PRN panel enclosure mount, thermal strip printer is an ancillary peripheral for use with the Axis AX Series range of Intelligent Fire Alarm Control Panels

The strip printer can be configured to provide automatic or on-demand printing of Intelligent Fire Alarm Control Panel history event logs and system status events

On networked systems, automatic printing of alarms can be printed from anywhere on the network, unless the panel containing the strip printer is programmed not to show the specific network event.

The strip printer operates silently and fast, with integral battery backup to enable continuous, uninterrupted operation even during AC failures. Each provides 30 character width printing.

Spare rolls of thermal paper can easily be replaced due to the mechanisms easy access front-loading compartment.

Listings and Approvals

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



Features

- Thermal Printing
- Silent Operation
- Fast Instant Response
- Integral Battery Backup

Automatic Printing for:

- Alarms
- Troubles
- Off Normal Events

On Demand Option For Printing:

- Input Status and Configuration
- Output Status and Configuration
- Disablements
- History Event Logs
- Network Troubles
- System Testing

Specification

Printer Type	Thermal dot matrix
Print Resolution	384 Dots Per Line
Operating Voltage	5 VDC
Operating Current Quiescent Continuous Printing (Typical 30% duty cycle)	 18 mA 538 mA (average)/1.0A (peak) @24V
Operating Temperature	60ºF - 86ºF (15ºC - 27ºC)

Order Codes and Options

AX-PRN*	Thermal Strip Printer single aperture mount, Axis AX Series Panels
MXS-509	Spare Thermal Printer Rolls (58mm wide x 10m long) Qty 1

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

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Axis AX

Fan/Damper Control Module

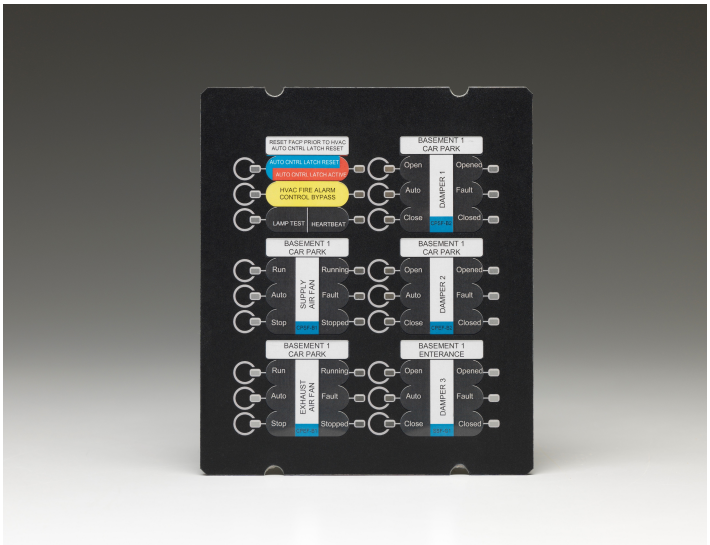
Providing superior flexibility and customization, the Fan/Damper Control Module (AX-ACM-6) provides three position (ON/OFF/AUTO) smoke control and annunciation of any fan, damper or combination fan/damper, controlled by an Axis AX Intelligent Fire Alarm Control Panel. Each fan/damper control module can accommodate six (6) fan, damper or combination fan/damper control areas. Control area buttons include Run – Auto – Stop (Close – Auto – Open) with white position status LEDs. Control areas also include three status LEDs (red, yellow and green) for the indication of the fan, damper or combination fan/damper Running – Trouble – Stopped (Closed – Trouble – Opened) status.

Besides offering control areas for fans, dampers and combination fans/dampers, a control area can also be configured as a master smoke control area. A master smoke control area provides three control buttons with activation white LEDs and three (red, yellow and green) status LEDs. Master smoke control buttons include, a HVAC reset button (i.e. firefighter fan/damper restart) for the reset of FACP controlled HVAC latched relays, an HVAC fire alarm control bypass button and a lamp test button. The three status LEDs include, a red HVAC latched relays require reset LED, a yellow HVAC fire alarm control bypass active LED and green smoke control operation heartbeat LED.

The AX-ACM-6 is easily configurable utilizing the Advanced PC-NeT field configuration tool which works in a Windows environment. The level of annunciation and control is totally controlled by the system programming and the installation requirements.

Up to 16 AX-ACM-6 modules can be connected to an Axis AX Intelligent Fire Alarm Control Panel, Local Operating Console or Peripheral Expansion Network Node Module. The SLC (signaling line circuit) fan and damper control and status modules can either be connected to the fire alarm panel with associated smoke control or connected to other fire alarm panel SLC circuits located throughout an Advanced peer-to-peer network. In addition to the SLC devices being distributed around the network, additional duplicate smoke control locations can be configured within a network, with one being in control at a single time.

The AX-ACM-6 fan/damper control module can be mounted in any single aperture location of an Axis AX enclosure (fire alarm control panel, local zone annunciator, local operating console, etc.). Located on each AX-ACM-6 module are two slide-in label areas, these label areas are for the labeling of installation specific control areas.



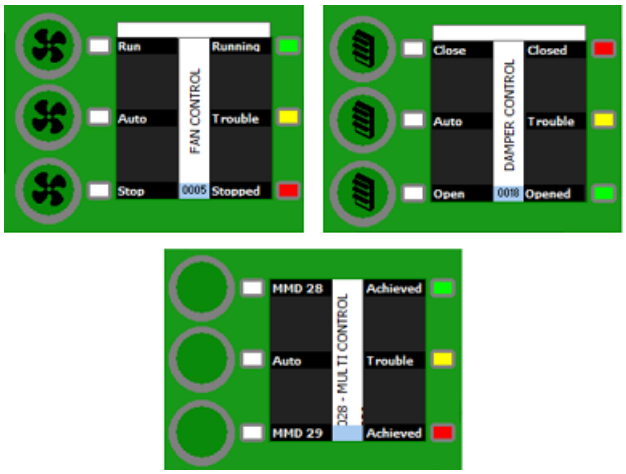
Features

- Listed for Dedicated & Non Dedicated Smoke Control
- Freely Programmable ON/OFF/AUTO Control
- Includes Six (6) Fan/Damper Control Areas
- Optional Programmable Master Smoke Control Area
- Communicates via Advanced PBUS
- Includes 18 Switches and 36 LEDs
- Easy Slide-In Label Locations
- Supervised Monitoring Trouble Input
- Configurable On-Board Piezo (Buzzer)
- Multi-Module Daisy Chain Connections for Ease of Installation

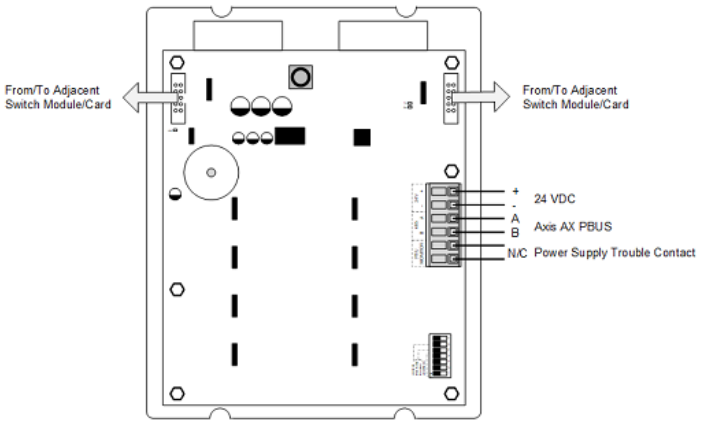
Listings and Approvals

- Certified to UL864 10thEdition – File No. S35979
- Meets Requirements under UL Category Code UUKL & NFPA92
- CSFM Approved: Pending

Control Buttons & Status LEDs



Wiring Diagram



Specification

Input Voltage (DC)	18-28 VDC (wired from FACP 24VDC or fire alarm listed power supply)
Operating Current	60mA max Typical all outputs OFF: 14mA Typical all outputs ON: 55mA
Inputs	18 Buttons (3 per Fan/Damper Control)
Outputs	36 LEDs (6 per Fan/Damper Control) Programmable on-board buzzer (piezo)
Piezo (Buzzer)	Field Configurable: Pulse (half second), Pulse (one second) or Steady
External Monitoring Input	Supervised Closed Contact
Operating Temperature	32^0F - 120^0F (0^0C - 49^0C)
Humidity	10 - 95% RH (Non-Condensing)
Dimensions	6.6"(H) x 5.7"(W) x 1.2"(D)
Weight	11 oz
Daisy Chain Serial Headers	10-Way IDC Ribbon Connector for Multi-Module Interconnect

Ordering Information

AX-ACM-6	Fan/Damper Control Module

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