Advanced

Axis AX

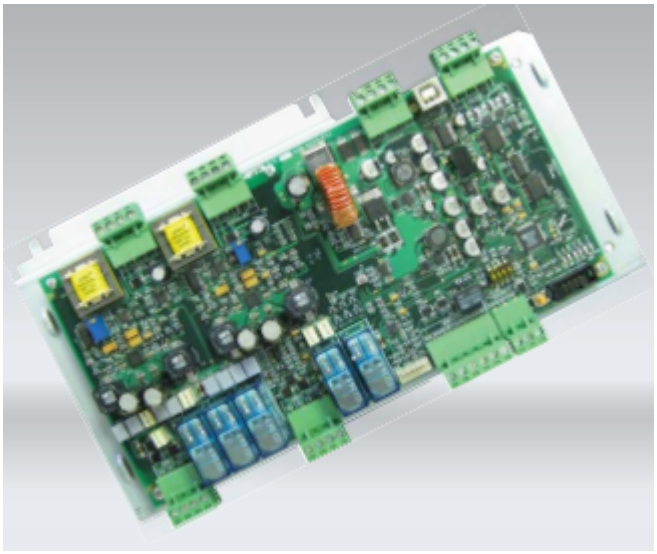
Audio Amplifier Module

The Advanced CAV-AMP-80 module provides Digital Audio capabilities to Axis AX “V” Series, Axis AX Command Centers, CAV-VBM Audio Panel and the CAV-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 CAX-CTL onboard PBUS (RS-485 network) interface port (contact AFSI regarding correct software version). This interface is used for control of the module including selection of the 16-channel flash-based digital messages, message repeat cycles, activation of the audio output, and monitoring of any CAV-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 CAV-AMP-80 module includes a 6-pin ribbon cable connection that easily interfaces to the Advanced CAV-MIC microphone.

The CAV-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 CAV-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.



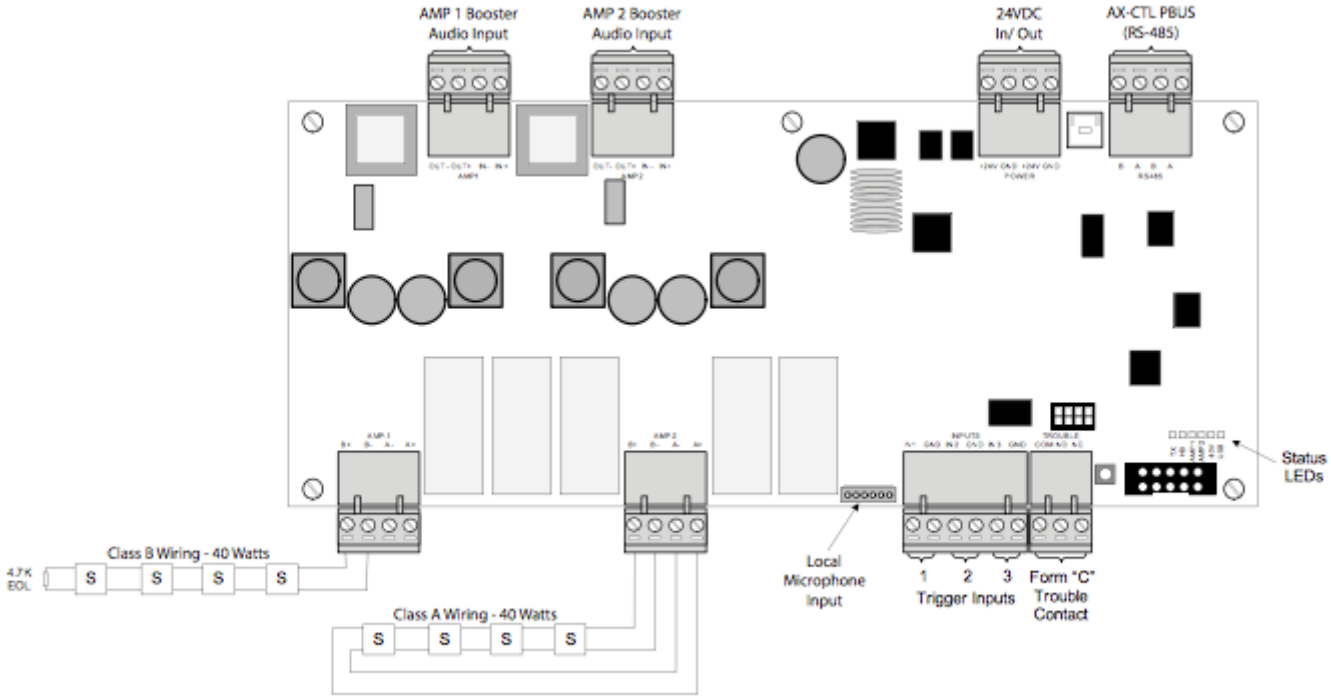
Features

- 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 CAV-MIC Module
- Three Programmable External Trigger Inputs

Listings and Approvals

- CAN/ULC-S527-11 & CAN/ULC-S559-04 Listed: 100780709NYM-001

Wiring Diagram



Specification

Input Voltage (DC)	24 VDC (Operating Range 15-30 VDC)
Current	.035A (Quiescent) .220A Plus Total Speaker Circuit Load (Alarm)
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)
CAV-MIC	Supervised Microphone Input
Printed Circuit Board Dimensions	9'' Long X 4.25" Wide

Order Codes and Options

CAV-AMP-80	Audio Amplifier Module with Two 40 Watt Speaker Outputs
CAV-ZS	Audio Zone Splitter Module
CAV-MIC*	Microphone and Enclosure Assembly
CAV-VB*	Distributed Audio Booster. Includes One AV-AMP-80, One AX-PSU-6, and Enclosure
CAV-VBM*	Audio Panel w/Microphone. Includes One AV-AMP-80, One AX-PSU-6, One AV-MIC, Manual Message Selection Switches and Enclosure
CAV-V70*	Universal Audio Converter (Converts 25Vrms to 70Vrms)

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

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Advanced

Axis AX

Remote Graphical LCD Annunciators

Providing superior flexibility and customization to an Axis AX Series Intelligent Fire Alarm Control Panel installation, the Axis AX Series Remote Graphical LCD Annunciators are available in two (2) models, the CAX-ANN-C and CAX-ANN-D. The CAX-ANN-C provides annunciation and programmable peer-to-peer system controls while the CAX-ANN-D provides annunciation only. To prevent unauthorized access to the CAX-ANN-C, the unit can be set to password required access for all controls, or an optional access enable keyswitch (p/n: AX-KSW) can be installed, thereby restricting access to the Reset, Silence, Resound and Drill functions without first activating the keyswitch. Designed to adapt to any installation the graphical annunciators are compact and attractive.

Both units incorporate the Advanced industry unique backlit 240 x 64 graphical LCD display. The graphical LCD display allows adaptation to virtually any language and character set. In addition to the programmable language capabilities, the graphical LCD display allows users/customers to customize the display with installation/company logo and details which will be displayed during normal system mode.

The level of information displayed and the control capabilities of each CAX-ANN-C and CAX-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 CAX-ANN-C and CAX-ANN-D communicate over the Advanced AD-NeT-PluS fault tolerant, Style 4 or 7, peer-to-peer network. This is a true peer-to-peer network with full cross node reporting. The CAX-ANN-C and CAX-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). In addition, a tamperproof box p/n: CAX-ANN-TP and a weatherproof box p/n: CAX-ANN-WP are available.



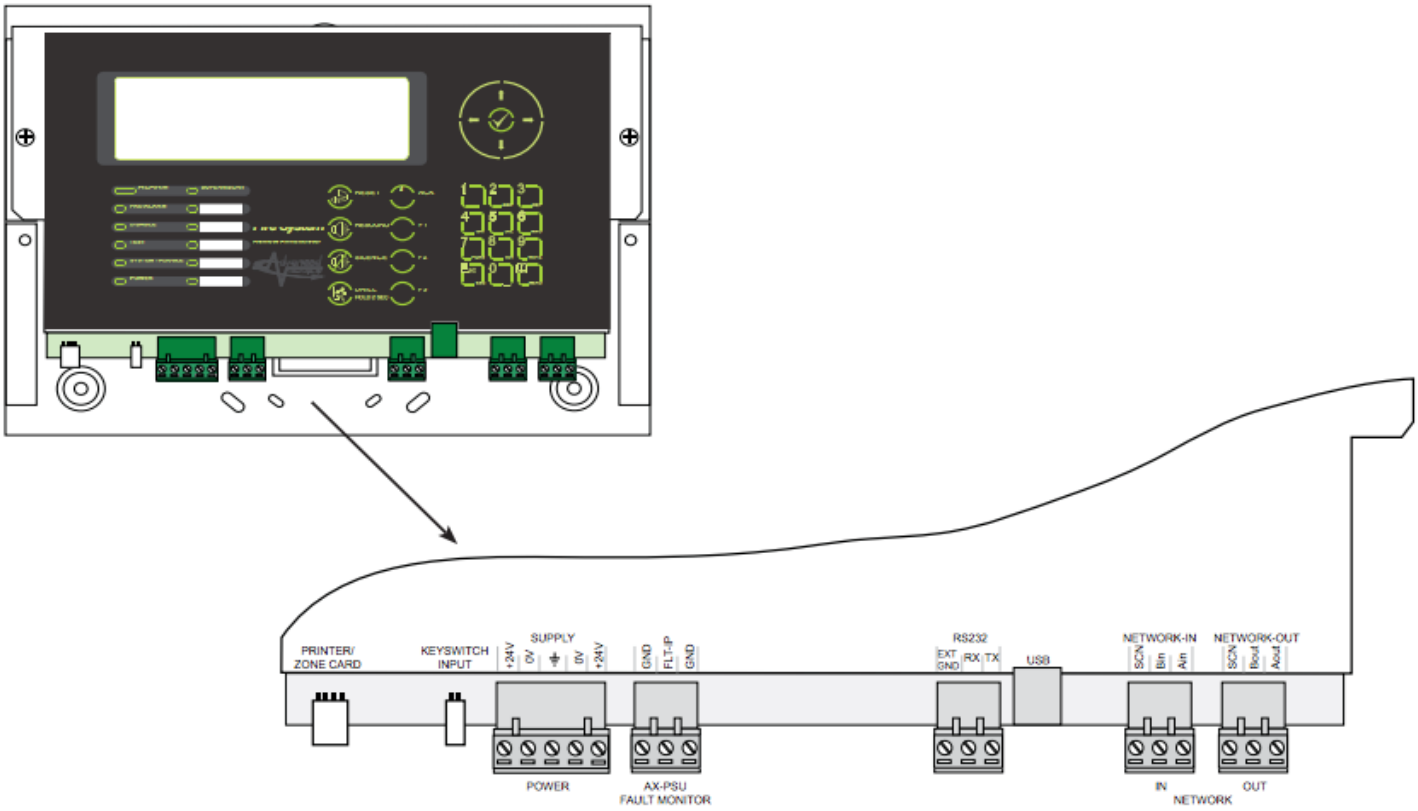
Features

- Advanced User Interface with Graphical LCD
- Vector Reporting of Events
- Full System Control or Annunciation Only
- Dedicated System & Navigation Keys
- AD-NeT-PluS Peer-to-Peer Network Compatible
- Compact, Attractive Appearance
- Backlit 240 x 64 Graphical LCD Display
- Style 4 or 7 Network Communications
- Multiple Language Adaptability
- Optional Access Enable Key-Switch
- 5000ft Maximum Cable Length
- Supervised External Trouble Input

Listings and Approvals

- CAN/ULC-S527-11 & CAN/ULC-S559-04 Listed: 100780709NYM-001

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
Weight	4.5 lbs

Order Codes and Options

CAX-ANN-C*	Remote Graphical LCD Annunciator with Control (Style 4)
CAX-ANN-C/ST7*	Remote Graphical LCD Annunciator with Control (Style 7)
CAX-ANN-D*	Remote Graphical LCD Annunciator without Control (Style 4)
CAX-ANN-D/ST7*	Remote Graphical LCD Annunciator without Control (Style 7)
	CAX-ANN Options:
CAX-KSW	Optional Access Enable Keyswitch
CAXM-008	Trim-Ring for Semi-Flush Mounting
CAX-ANN-TP	Tamperproof Enclosure
CAX-ANN-WP	Weatherproof Enclosure (Comes with 24V heater)

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

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Axis AX

Remote Annunciator Enclosures

Advanced offers two optional surface mount Remote Annunciator Enclosures, CAX-ANN-WP and CAX-ANN-TP. Each enclosure accommodates one AX-ANN-C or AX-ANN-D remote annunciator.

The CAX-ANN-WP is a weatherproof remote annunciator enclosure incorporating a heater and thermostat protecting the CAX-ANN-C and CAX-ANN-D remote annunciator from weather and outdoor elements, while the CAX-ANN-TP is a tamperproof remote annunciator enclosure protecting the CAX-ANN-C and CAX-ANN-D remote annunciator from vandalism and malicious damage.

In addition the CAX-ANN-WP incorporates a gasket, clear Lexan window and a corrosive resistant piano hinged drop-down door to prevent dust and moisture buildup on the remote annunciator.



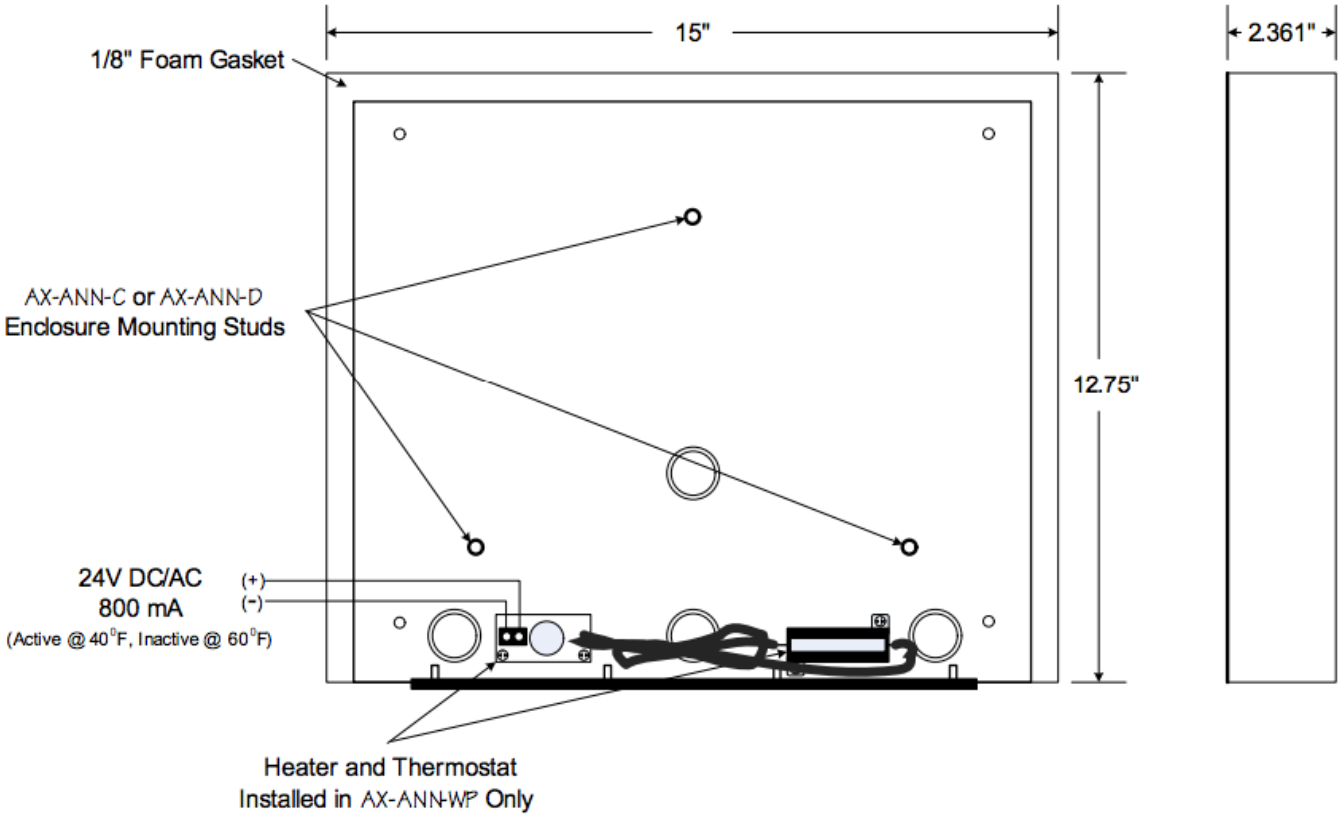
Features

- 16 Gauge Cold Rolled Steel Construction
- Houses one CAX-ANN-C or CAX-ANN-D Annunciator
- Full Length Piano Hinged Drop-Down Door
- Clear Lexan Window
- Tamperproof Version for Vandalism Protection
- Weatherproof Version Includes Built-In Heater
- CAT-30 Keyed to Match Fire Alarm Control Panel
- Powder Coated Red
- Dimensions 15”W x 12.75”H x 2.361”D
- Surface Mount

Specification

Electrical Characteristics	
CAX-ANN-WP Heater/Thermostat	24V DC/AC @ 800 mA (Active at 40ºF, inactive at 60ºF)
Keylock	CAT-30
Knockouts	Four ½“
Color	Red
Dimensions	15”W x 12.75”H x 2.361”D
Weight	9.0 lbs

Wiring Diagram



Order Codes and Options

CAX-ANN-TP	Tamperproof Enclosure (Less CAX-ANN-C or CAX-ANN-D annunciator)
CAX-ANN-WP	Weatherproof Enclosure with 24V heater/thermostat (Less CAX-ANN-C or CAX-ANN-D annunciator)

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Axis AX

Switch LED Module

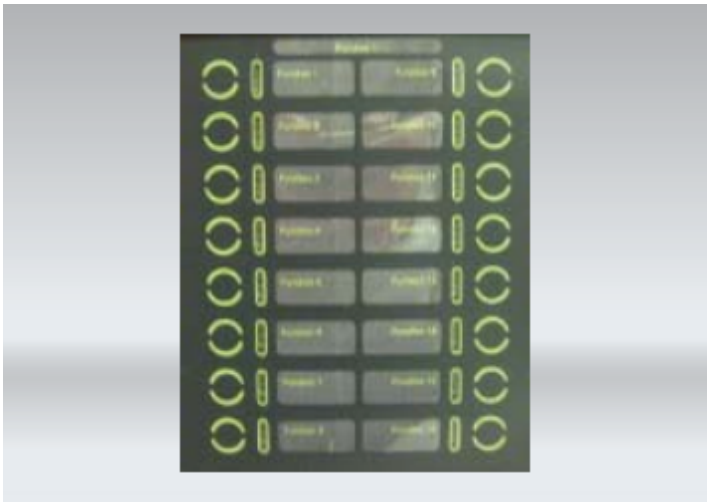
Providing superior flexibility and customization, the Switch LED Module (CAX-ASW-16) provides full control and annunciation of any individual input, output, zone, or group of devices on an Axis AX Series Intelligent Fire Alarm Control Panel or Axis AX Series network. The level of annunciation and control is totally controlled by the system programming and the installation requirements.

To meet this level of flexibility, the CAX-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 CAX-ASW-16 is easily configurable utilizing 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 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 (i.e: off, on steady, 1/2 second flash or 1 second flash).

Up to 16 CAX-ASW-16 modules can be connected to an Axis AX Series Intelligent Fire Alarm Control Panel, providing 256 switches and 768 LEDs. Switches and LEDs can be assigned to a single host Axis AX Series Intelligent Fire Alarm Control Panel or can be transmitted over the Advanced Ad-NeT-PluS peer-to-peer network to other network nodes (FACPs). In addition, other Axis AX Series Intelligent Fire Alarm Control Panels on the network can have their own set of CAX-ASW-16 modules.



Features

- Compact, Attractive Appearance
- 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
- Programmable Mass Notification Functionality
- 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

- CAN/ULC-S527-11 & CAN/ULC-S559-04 Listed: 100780709NYM-001

Specification

Input Voltage (DC)	24 VDC (Operating range 18-28 VDC)
Operating Current Quiescent Alarm All LEDs Active (On) One LED (Approximate)	 15 mA 53 mA 0.8 mA
Switches	16 Programmable Switches Push Button Toggle Latch/Non-Latch
LED Indicators	48 LEDs 16 Green 16 Yellow 16 Red
External Monitoring Input	Supervised Closed Contact
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

CAX-ASW-16	Switch LED Monitor

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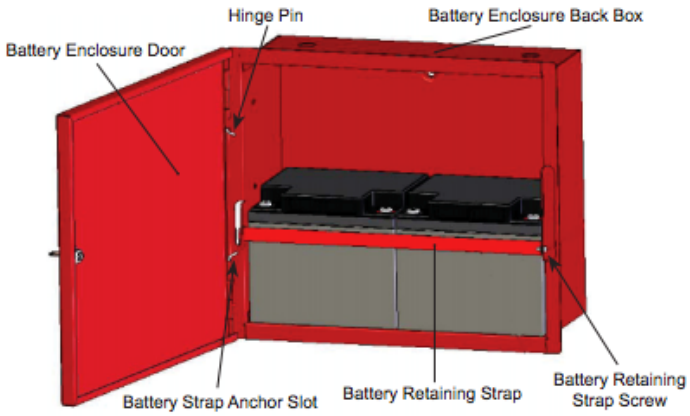
Advanced

Axis AX

Battery Enclosure

The CAX-BAT, Battery Enclosure, is designed to accommodate up to 40Ah batteries to support the Advanced Axis AX Series Intelligent Fire Alarm Control Panels. In addition an optional battery tray can be added to support multiple sets of batteries.

Note: The battery charging output of the Axis AX Series Intelligent Fire Alarm Control Panels (via CAX-CTL Base Card and CAX-PSU-6 power supplies) is temperature compensated to maintain the optimum charging voltage in accordance with the manufacturers' specifications. Housing the batteries in the external enclosure could lead to the batteries being charged at an incorrect voltage – to avoid this, ensure that the external battery enclosure is installed in an area with an equivalent environment to the installed location of the Axis AX Intelligent Fire Alarm Control Panel.



Features

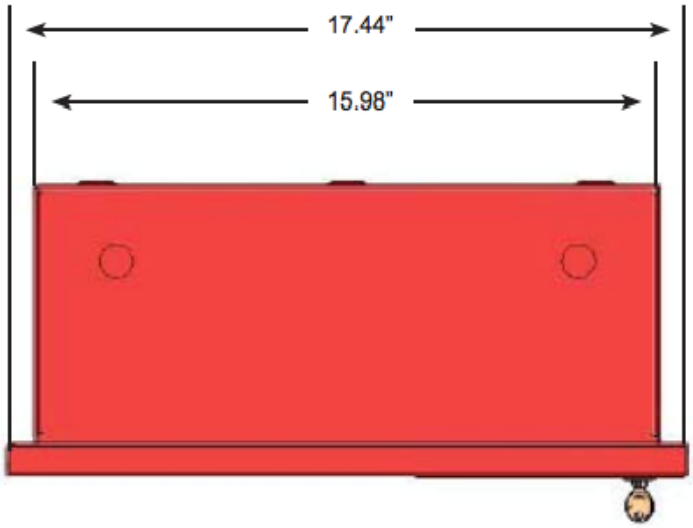
- Accommodates up to 40Ah Batteries
- CAT30 Keyed to match Axis AX FACP & Pull Stations
- Surface or Semi-Flush Mounting
- Integral Battery Retaining Strap
- 16 Gauge Steel Construction
- Easy to Install
- Available in Red or Gray Color
- Two 3/4" Knockouts
- Optional Battery Tray

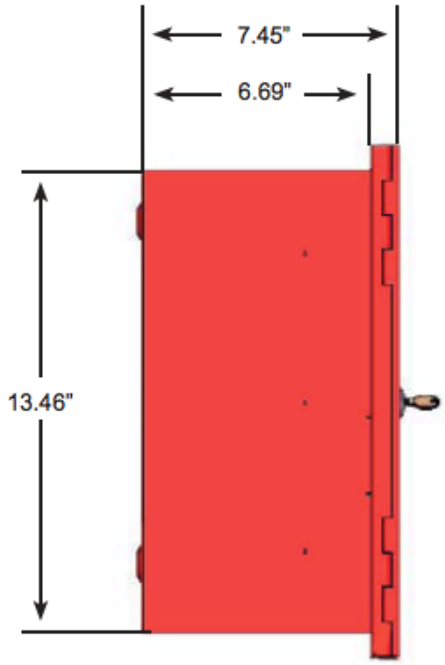
Listings and Approvals

- CAN/ULC-S527-11 & CAN/ULC-S559-04 Listed: 100780709NYM-001

Specification

Dimensions	15" H x 17½" W x 7½" D
Weight	20 lbs
Knockouts (2)	¾" (Two at the top of the enclosure)
Enclosure	16 AWG Zintec Sheet Steel
Color	Red RAL3002 Carmine Red





Order Codes and Options

CAX-BAT	Battery Enclosure
AX-BAT-TRAY	Battery Tray (Supports multiple sets of batteries)

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Axis AX

City Tie Module

The CAX-CTY, City Tie Module, is an interface module that allows the Axis AX Series Intelligent Fire Alarm Control Panel, via a dedicated notification appliance circuit, to control and monitor a Local Energy Masterbox. When properly connected, supervision of all wiring is provided along with all the necessary power to trip the Masterbox coil.

The compact designed CAX-CTY, connects to any Axis AX Series dedicated notification appliance circuit (CAX-LPD/CAX-NAC [internal panel NACs] or SLC loop external NAC module). The module may be installed in a standard electrical box with or without the SLC loop external NAC module.



Features

- ANSI/UL 864 Listed
- Supervised Masterbox Trip Circuitry
- Superior Transient Protection
- NAC Circuit Interface
- Compact, Design
- Standard Electrical Box Mount
- Supports DynamiX I/O Relationship Programming
- Optional Disconnect Switch w/LED Status

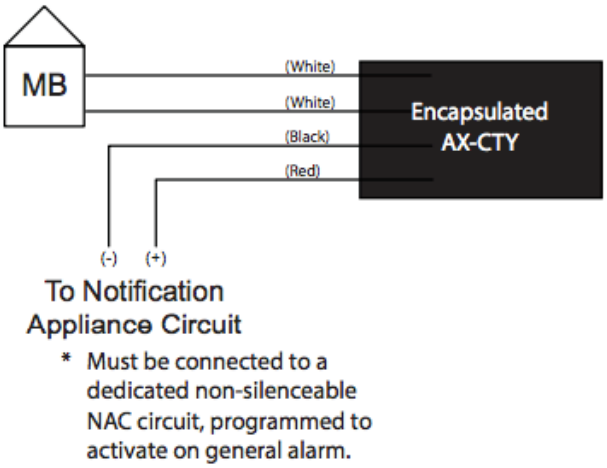
Listings and Approvals

- CAN/ULC-S527-11 & CAN/ULC-S559-04 Listed: 100780709NYM-001

Specification

Operating Voltage	18 - 28 VDC
Operating Current Quiescent Alarm	 0 mA 0.5 A (Max) for less than 1/2 a Second
Operating Temperature	32ºF-120ºF (0ºC-48ºC)
Environment	Indoor, Dry
Humidity	10-95% (Non-condensing)
Dimensions	1/2 ” H x 1” W x 8 1 / 2 ” L (Includes wire length)
Weight	0.8 oz

Wiring Diagram



Order Codes and Options

CAX-CTY	City Tie Module

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Axis AX

Conventional Zone Module

The CAX-CZM, is an Advanced Conventional Zone Module that can be monitored and controlled by an Axis AX Series fire alarm control panel (P-BUS, “Peripheral Bus”, operating mode), or by any ANSI/UL 864 Listed fire alarm control panel (“Standalone” operating mode).

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

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

In the “Peripheral Bus” or “Standalone” operating modes, the AX-CZM module gets powered from either the Axis AX Series Intelligent Fire Alarm Control Panel, Host fire alarm control panel or by an ANSI/UL Listed 24 VDC nominal power supply. In “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 CAX-CZM module makes use of Advanced’ Software Monitoring And Real Time Power Management (SMART-PM) techniques in order to minimize 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. Utilizing 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 CAX-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
- 28 Zones and 48 Relays per Axis AX Series Panel
- Removable Terminal Blocks
- Programmable Latching/Non-Latching Input Types

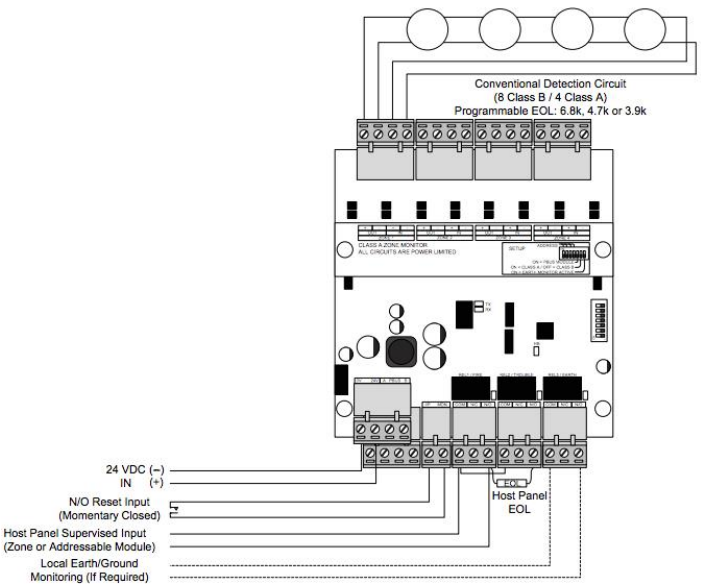
Listings and Approvals

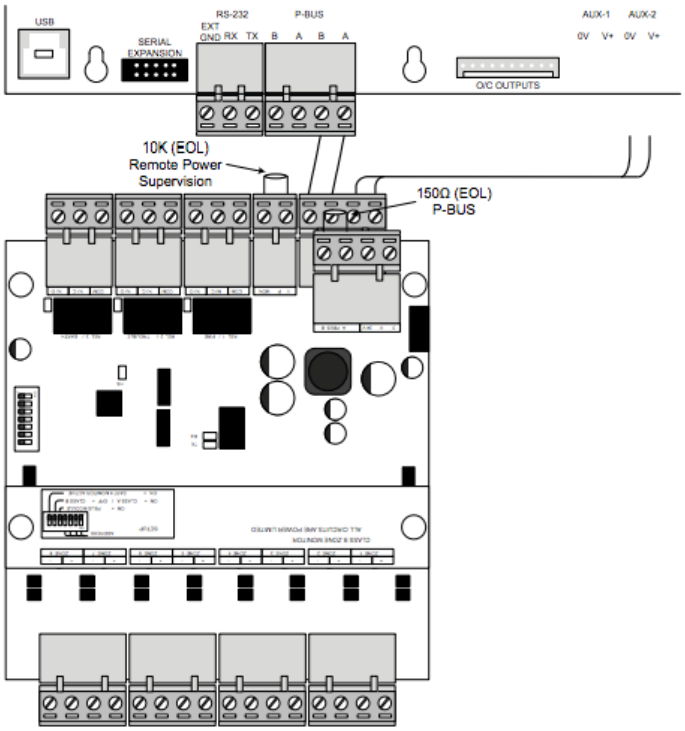
- ETL ANSI/UL 864 Listed: 101564744NYM-001
- UL UOXX (Control Unit Accessory, System) Listed: S2446
- CSFM Approved: 7165-1713:0101

Specification

Operating Voltage	24 VDC
Operating Current	
Quiescent	110mA (8 Zones = Min Load)
Minimum	120mA (8 Zones = Max Load, Relays Off)
Maximum	135mA (8 Zones = Max Load, Relays On)
Alarm	At Least 318mA (8 Zones = Max Load, 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	32°F - 120°F (0°C - 49°C)
Humidity	93% (Non-Condensing)
Weight	5.3 oz
Dimension	4.2" X 5"

Wiring Diagrams





Order Codes and Options

CAX-CZM	Conventional Zone Module
AXM-009*	Optional Enclosure (Supports 2 AX-CZM's)

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

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Axis AX

General Purpose Enclosure

The Advanced General Purpose Enclosure (AX-GCAB) provides an economical surface mount enclosure for mounting any optional Advanced products (i.e. AXI/O-48, AX-CZM, etc).

The AX-GCAB is fabricated from 16 gauge steel with a durable, red or gray textured powder coat finish. It features a lift-a-way hinged door for ease of access and maintenance and is key locked (CAT 30) to match other Advanced products (FACP, pull stations, etc).

Each AX-GCAB enclosure includes a 20 gauge steel back plate which incorporates pre-drilled holes for mounting optional products. Addition holes can be drilled to customize configurations for installation of other equipment.



Features

- Compact, Attractive Appearance
- Easy to Install
- Keyed (CAT30) to match Axis AX Series FACP
- Locked Hinged Front Door Access
- Surface Mount
- 16 Gauge Steel Construction
- 20 Gauge Steel Back Plate
- Available in Red or Gray Color
- Five (5) Knockout Clusters (1/2”,3/4”, 1”, 1 1/2” and 2”)
- Integral Threaded Grounding Stud and Lug.

Listings and Approvals

- ETL ANSI/UL 864 Listed: 101564744NYM-001
- CAN/ULC-S527-11 & CAN/ULC-S559-04 Listed: 100780709NYM-001

Order Codes and Options

AX-GCAB	General Purpose Enclosure

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

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Advanced

Axis AX

Switch/LED Driver Module

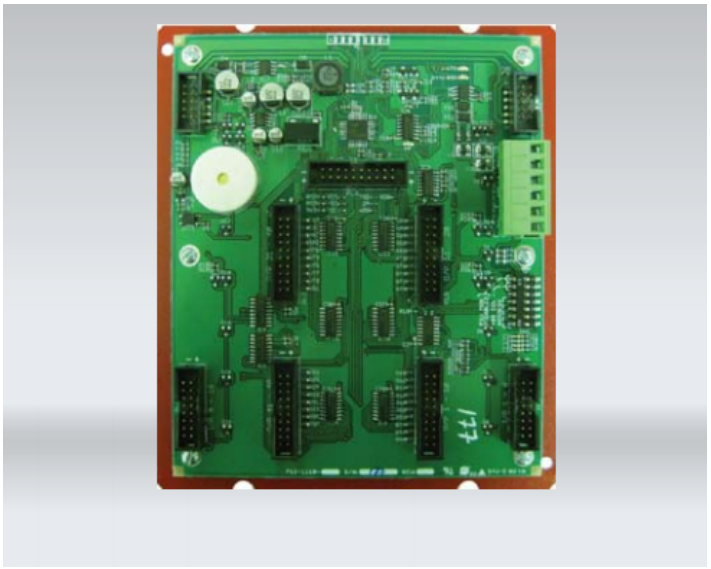
Providing superior flexibility and customization, the Switch/LED Driver Module (CAX-I/O-48) provides full control and annunciation of any individual input, output, zone, or group of devices on an Axis AX Series Intelligent Fire Alarm Control Panel or Axis AX Series network. The level of annunciation and control is totally controlled by the system programming and the installation requirements.

To meet this level of flexibility, the CAX-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 CAX-I/O-48 is easily configurable utilizing 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 (i.e: off, on steady, 1/2 second flash or 1 second flash).

Up to 16 CAX-I/O-48 modules can be connected to an Axis AX Series Intelligent 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 Series Intelligent Fire Alarm Control Panel or can be transmitted over the Advanced Ad-NeT-PluS peer-to-peer network to other network nodes (FACPs). In addition, other Axis AX Series Intelligent Fire Alarm Control Panels on the network can have their own set of CAX-I/O-48 modules.



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

- CAN/ULC-S527-11 & CAN/ULC-S559-04 Listed: 100780709NYM-001

Wiring Diagram

Specification

Input Voltage (DC)	24 VDC (Operating range 18-28 VDC)
Operating Current Quiescent	11mA – All Driver Outputs Off

Alarm One Drive Output Active	50mA – All Driver Outputs Active .1042mA
Switches	16 Programmable Switch Inputs
LED Driver Outputs	48
External Monitoring Input	Supervised Closed Contact
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

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

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LED Modules

As a member of the Axis AX Switch LED Module family, the Advanced LED Modules consist of three (3) different types of modules that provide tremendous system annunciation and flexibility. Each module is fully compatible with the Axis AX Series Intelligent Fire Alarm Control Panels, “V” Series Integrated Audio Panels and Axis AX Command Center Panels. Each Axis AX Series 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 CAX-LED16RY, CAX-LED32R and CAX-LED32Y.

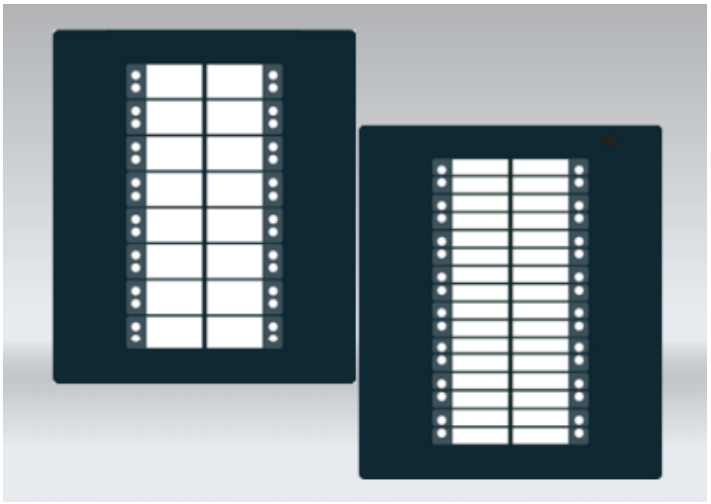
The CAX-LED16RY consists of sixteen (16) red and sixteen (16) yellow LEDs. These are typically used to annunciate the alarm and trouble status of up to 16 individual zones or areas.

The CAX-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 CAX-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. In addition, LED Modules can be mounted remotely from the main fire alarm control panel in one of the Advanced attractive remote annunciation enclosures (CAX-LZA-CAB1, CAX-LZA-CAB2 or within a large selection of CAX-LOC enclosures).



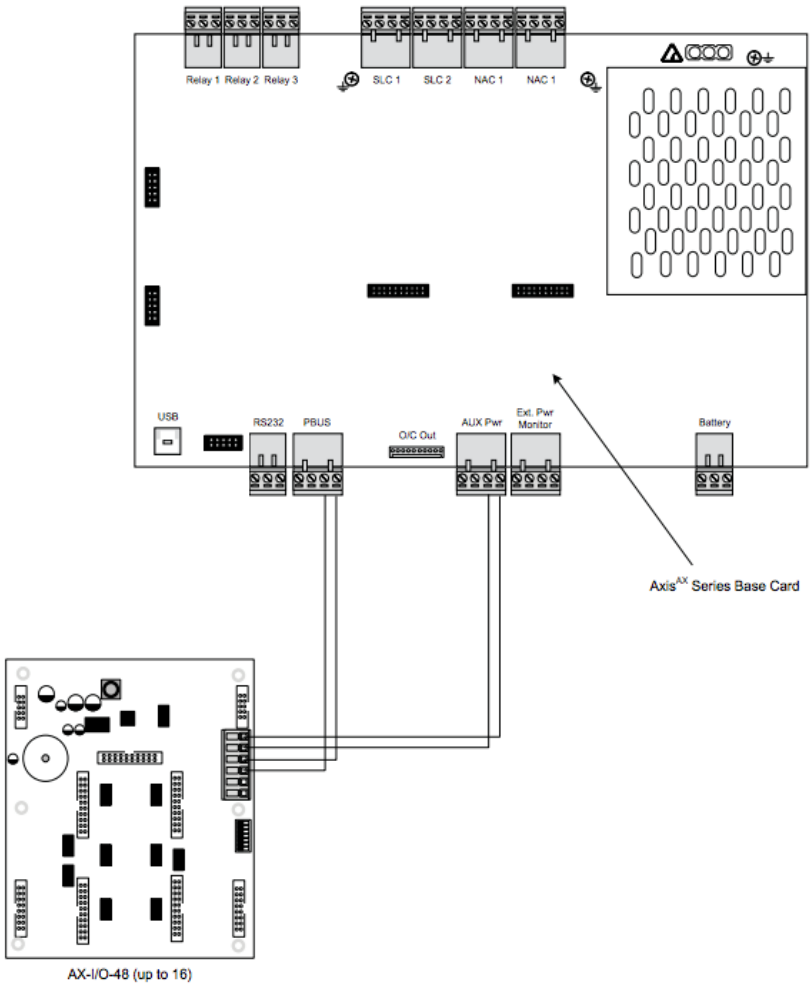
Features

- 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

- ETL ANSI/UL 864 Listed: 101564744NYM-001

Wiring Diagram



Specification

Input Voltage (DC)	24 VDC (Operating range 18-28 VDC)
Operating Current Quiescent Active All LEDs Active (on) One LED (approximate)	 15 mA 41 mA 0.8 mA
LED Indicators CAX-LED16RY CAX-LED32R CAX-LED32Y	 16 Red and 16 Yellow 32 Red 32 Yellow
External Monitoring Input	Supervised Closed Contact
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

CAX-LED16RY	LED Module Incorporating 16 Red and 16 Yellow LEDs
CAX-LED32R	LED Module Incorporating 32 Red LEDs
CAX-LED32Y	LED Module Incorporating 32 Yellow LEDs

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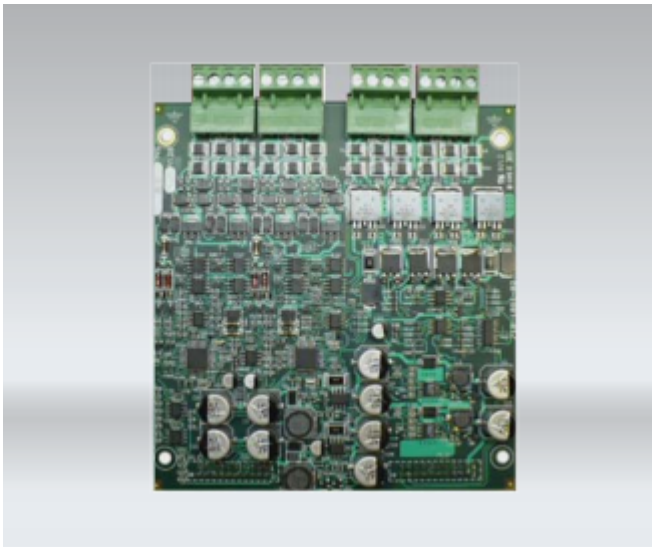
Axis AX

AX-LPD Module

Advanced CAX-LPD module provides SLC and NAC circuit expansion of an existing CAX-CTL-2 Intelligent Fire Alarm Control Panel. The module provides two Style 4 or Style 6/7 Signaling Line Circuits (SLCs) and two notification appliance circuits (NACs). Communications to field devices attached to the SLCs is via an advanced, 100% digital protocol with advantages of being highly immune to noisy environments and will operate over non-shielded cable without causing interference problems with sensitive electronic equipment. The NAC circuits are filtered and regulated, capable of being wired Class A or B, each rated 2 Amp @ 24 VDC. Due to exceptional regulation and high rating, the NAC outputs provide compatibility with virtually any Listed notification appliance.

Each SLC circuit supports up to 126 analog 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.

Advanced CAX-NAC module provides NAC circuit expansion of an existing CAX-CTL-2 Intelligent 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 exceptional regulation and high rating, the NAC outputs provide compatibility with virtually any Listed notification appliance.



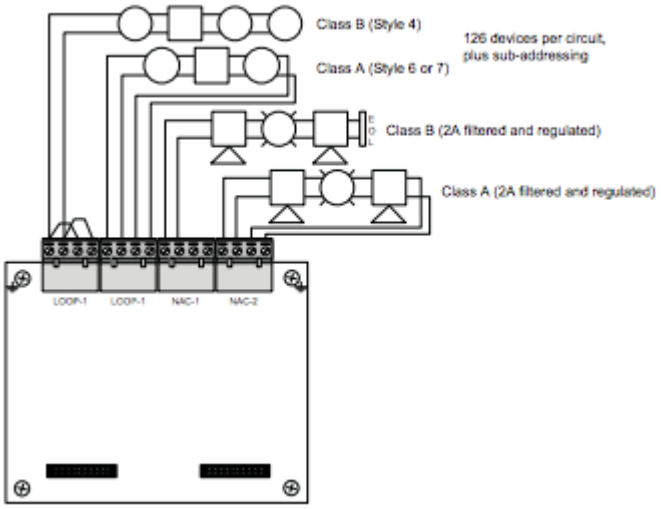
Features

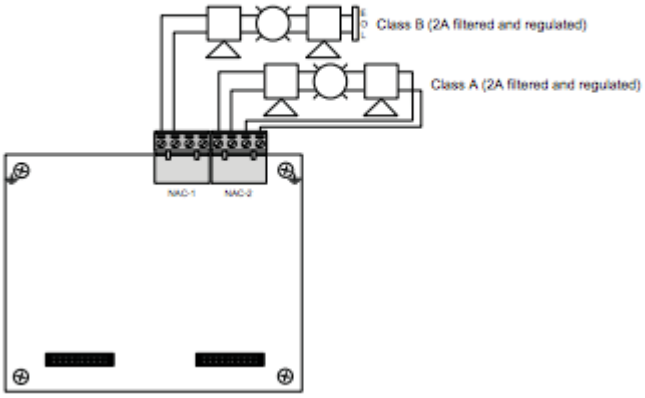
- 2 SLC/NAC or 2 NAC Expansion
- “DynamiX” I/O Relationship Programming
- Multi-Pattern & Two-Stage NAC Control
- 252 Analog Addressable Point Expansion
- Automatic Detector Testing with Maintenance Alert
- Automatic Drift Compensation per Detector
- Alarm Verification and PAS
- Style 4, 6 & 7 SLC Operation (126 devices per SLC)
- SLC’s Support Loop Powered Technology
- Class A or B NAC Circuits
- Multi-Pattern and Two-Stage NAC Circuit Control
- Synchronized 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

- CAN/ULC-S527-11 & CAN/ULC-S559-04 Listed: 100780709NYM- 001

Wiring Diagrams





Specification

SLC Loop	
Class (Style)	Class A or B (Style 4, 6 or 7)
Voltage	24 VDC
Minimum Return Voltage	17 VDC
Current	.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

CAX-LPD	2-Way SLC/NAC
CAX-NAC	2-Way NAC

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Axis AX

Local Zone Annunciator Enclosures

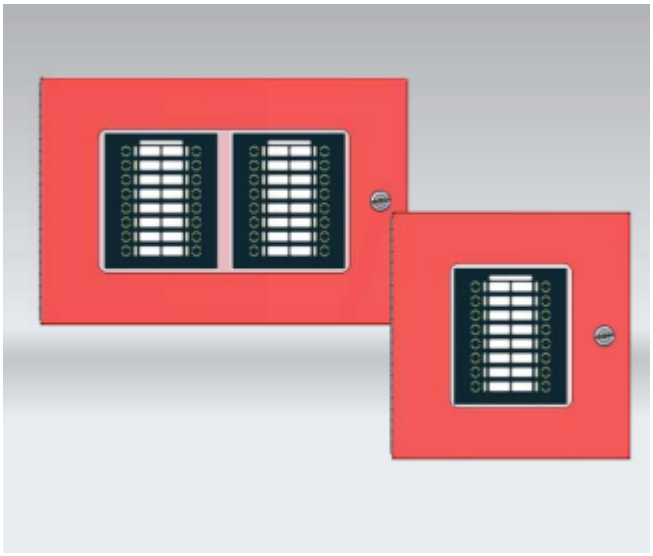
Often fire alarm applications call for LED type annunciation, and in some cases, control functionality located remotely from the fire alarm control panel. In these circumstances, it is essential that the annunciator be fully supervised, adequately protected in a locked enclosure and be attractive in appearance. With these requirements in mind, Advanced developed its CAX-LZACAB series of enclosures

The CAX-LZA-CAB series enclosures provide superior flexibility and customization to an Axis AX Series Intelligent Fire Alarm Control Panel installation, the enclosures (CAX-LZA-CAB1 and CAX-LZA-CAB2) provide for remote usage of Advanced switch LED modules, CAX-ASW-16, CAX-I/O-48, CAX-LED16RY, CAX-LED32R and CAX-LED32Y. Available in two (2) configurations, cabinet styles 1 and 2, and four (4) model types for gray and red color, the AX-LZA-CAB series enclosures can accommodate any remote LED annunciation and/or control requirement.

The CAX-LZA-CAB1 Local Zone Annunciator Enclosure is designed to hold a single Advanced switch LED module.

The CAX-LZA-CAB2 Local Zone Annunciator Enclosure is designed to hold up to two Advanced switch LED modules. Within this enclosure, modules can be mixed and matched to suit the installation application.

The CAX-LZA-CAB1 and CAX-LZA-CAB2 enclosures are designed to be surface or semi-flush mounted with optional trimming (CAX-LZA-CAB1-TR or CAX-LZA-CAB2- TR). In addition, the enclosures can also be mounted to a 4” double gang electrical box and are available in either red or gray color.

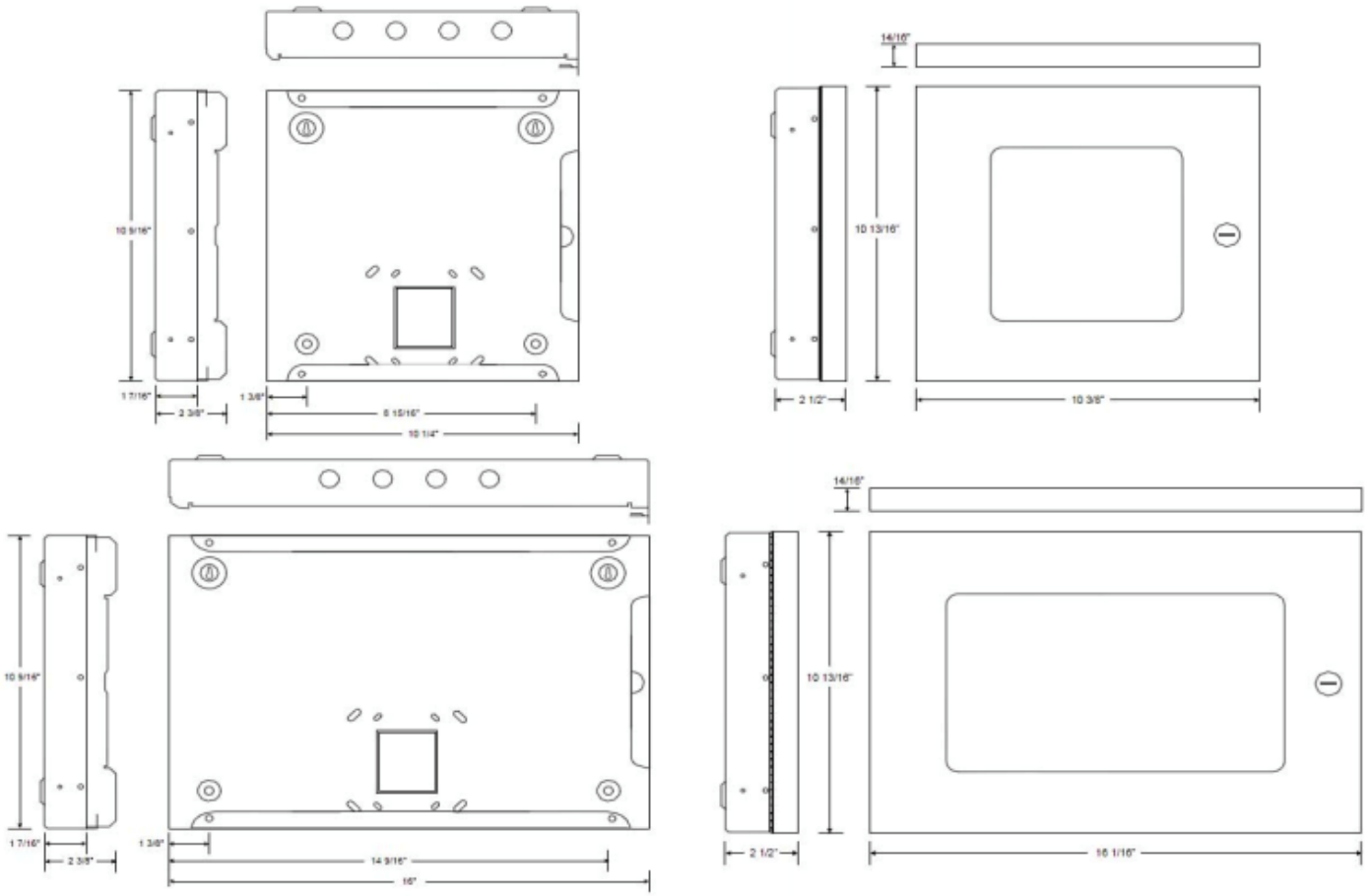


Features

- Compact, Attractive Appearance
- Keyed (CAT30) to match Axis AX Series FACP
- Designed for Remote System Annunciation & Control
- Locked Hinged Front Door Access
- Easy to Install
- Surface or Semi-Flush Mounting
- 16 Gauge Steel Construction
- Available in Red or Gray Color
- Four (4) 5/8” Knockouts
- Optional 4” Double Gang Electrical Box Mounting

Listings and Approvals

- CAN/ULC-S527-11 & CAN/ULC-S559-04 Listed: 100780709NYM-001



Order Codes and Options

CAX-LZA-CAB1	Single Aperture, Local Zone Annunciator Enclosure
CAX-LZA-CAB2	Dual Aperture, Local Zone Annunciator Enclosure
	Options
CAX-LZA-CAB1-TR	Semi-Flush Mount, Local Zone Annunciator CAB1, Trim Ring
CAX-LZA-CAB2-TR	Semi-Flush Mount, Local Zone Annunciator CAB2, Trim Ring

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

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Serial to Fiber Optic Converter

The CAX-MOXA, Serial to Fiber Optic Converter, allows Advanced Axis AX Series AD-NeT-PluS network (peer-to-peer network) installations to be converted from copper wiring to fiber optic cabling.

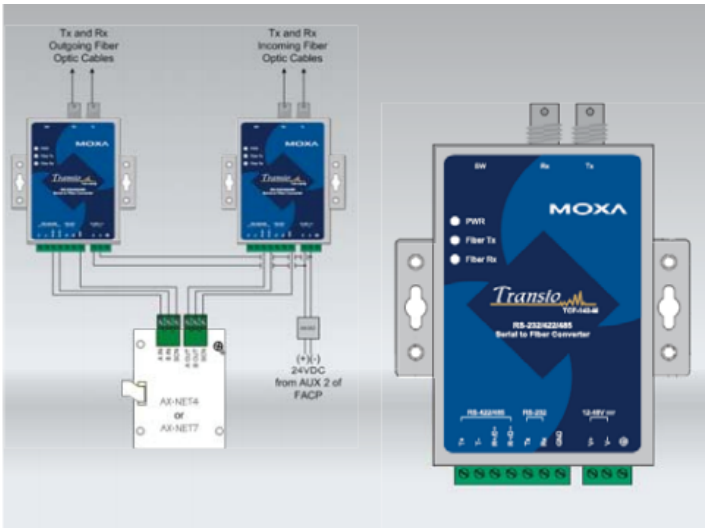
By converting AD-NeTPluS networks from copper wiring to fiber optic cabling a customer gains immunity from electrical interference, immunity from adverse temperature and moisture conditions, and a communications path/length that exceeds copper wiring distances.

The CAX-MOXA is mounted in its own enclosure (CAX-GCAB) adjacent to the Axis AX Series AD-NeT-PluS node (i.e. Intelligent Fire Alarm Control Panel, Annunciator, CAX-LAN [ipGateway] or any other network node) that it is going to be converting to fiber optic cabling.

A total of two CAX-MOXA serial to fiber converters will be required for the incoming network and outgoing network wiring of each node for Style 7 configurations. However, in a Style 4 network configuration only one CAX-MOXA serial to fiber converter is required at the beginning of the network and one at the end of the network, with all nodes in between requiring two.

By utilizing CAX-MOXA, Serial to Fiber Optic Converters, installation cabling can be a mixture of both copper and fiber optic cabling. This allows the use of the fiber optics only in those areas requiring fiber optic communications paths.

Each set of CAX-MOXA's get connected to the AD-NeTPluS node 24 VDC non-resettable power via an CAX-DCI isolation power module.



Features

- Converts Copper Wiring to Fibre Optic Cable
- Increased Immunity from Electrical Interference
- Supports Style 4 and 7 Configurations
- Increases Network Distances
- On-Board Status LEDs
- Allows AD-NeT-PluS to Support Fibre Optic Cabling
- Entire Installations or a Mixture of Copper & Fiber Optic Cabling
- Easy to Install and Maintain
- Removable Terminal Blocks
- ST Fiber Optic Connections

Listings and Approvals

- CAN/ULC-S527-11 & CAN/ULC-S559-04 Listed: 100780709NYM-001

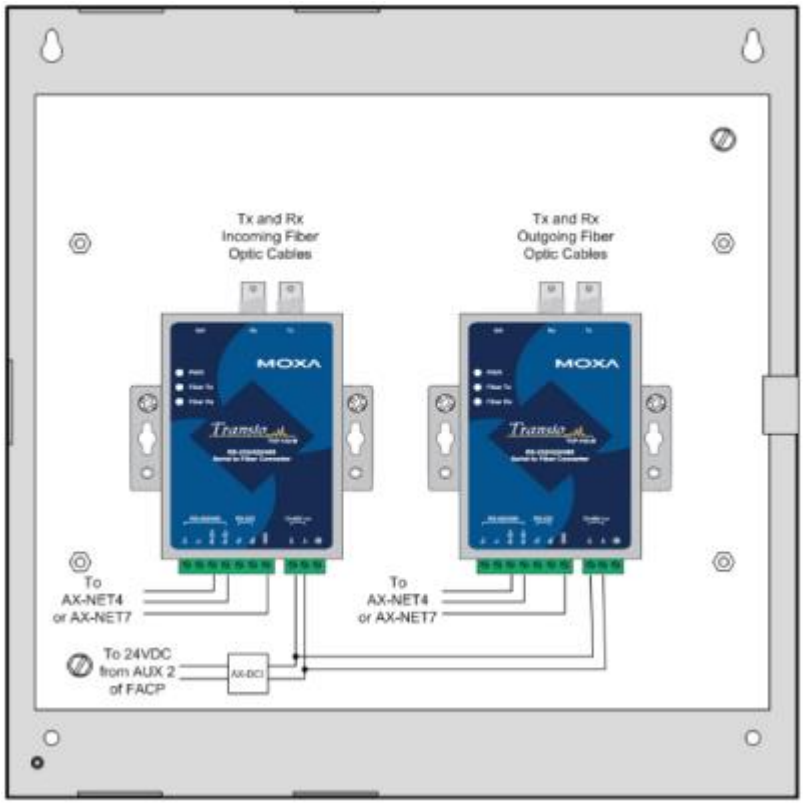
Specification

Operating Voltage	12 - 48 VDC
Operating Current	17 mA
Operating Temperature	32-120°F (0-48°C)
Environment	Indoor, Dry
Fiber Communications Connector Type Distance Support Cable Wavelength TX Output RX Sensitivity Transmission	 ST 5 km 50/125, 62.5/125 or 100/140 ìm 850 nm > -5 dBm -20 dBm Half or Full Duplex
Humidity	10-95% (Non-condensing)
Dimensions	3.95”L x 2.64”W x .87”H
Weight	4.5 oz
CAX-DCI	
Operating Voltage	18 - 30 VDC
Wiring Input Current Output Current	Power Limited with Auto-Recovery Short Circuit Protection 0.11 Amp 0.083 Amp (Maximum draw)
CAX-GCAB	
Environment	Indoor, Dry
Humidity	10-95% (Non-condensing)
Dimensions	14”H x 14”W x 3 1/4”D
Weight	11 lb 4 oz

Order Codes and Options

CAX-MOXA	Serial to Fiber Optic Converter
CAX-DCI	DC Power Isolator Module
CAX-GCAB	General Purpose UL Listed Enclosure with Universal Mounting Plate

Wiring Diagram



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AD-NeT-PluS Network Modules

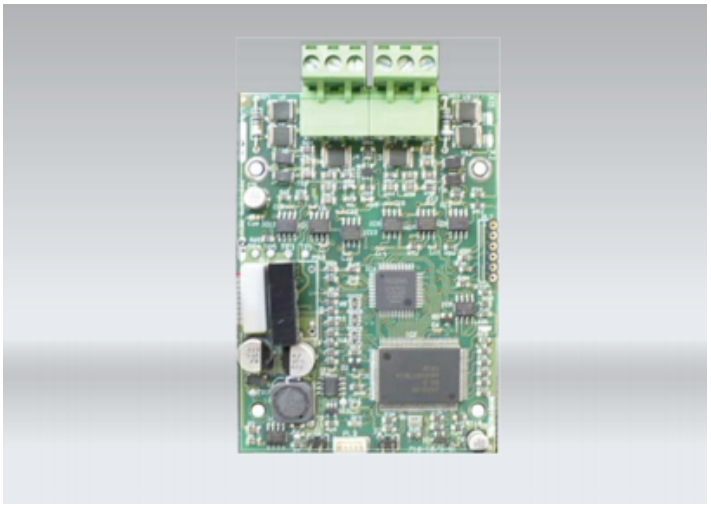
Providing superior flexibility and customization to an Axis AX Series installation, the CAX-NET4 and CAX-NET7 network modules provide both the benefits of distributed intelligence and reduced installation costs while meeting the smallest to largest network demands.

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

The Advanced network, AD-NeT-PluS, 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 be displayed on any Axis AX Series Intelligent Fire Alarm Control Panel or Remote Graphical LCD Annunciator. Details include alarm, mass notification, supervisory, warning, trouble, control events and disabled zone/points as well as analog 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 vector information and control, allowing specific nodes to be dedicated to alarms, mass notifications, troubles, supervisory or other status events.



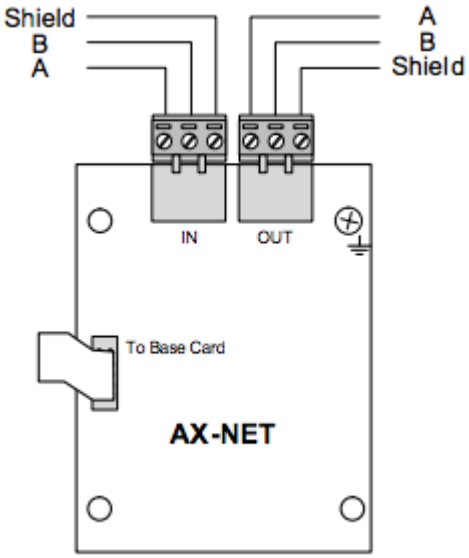
Features

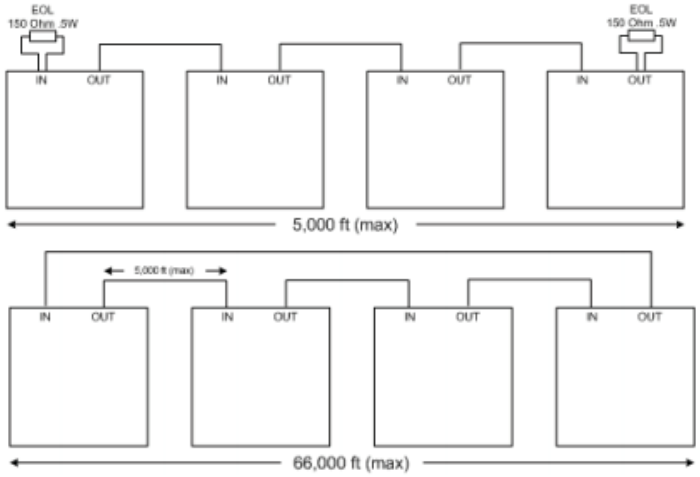
- Style 4 or 7 Network Communicators
- AD-NeT-PluS Peer-to-Peer Network
- Fully Fault Tolerant Network
- Up to 5000ft Between Nodes
- Full Network Analysis from any Node
- 200 Nodes Per Network
- Up to 1000 Shared Network Zones
- Uncomplicated and Simplistic Installation

Listings and Approvals

- CAN/ULC-S527-11 & CAN/ULC-S559-04 Listed: 100780709NYM-001

Wiring Diagrams





Specification

Operating Current (CAX-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 CAX-NET4 & CAX-NET7	 3½“ H x x 2½“ W x ½” D
Weight CAX-NET4 & CAX-NET7	 1.7 oz
Nodes/Distances CAX-NET4 CAX-NET7	 32 Nodes, 5000ft Maximum (EOL 150 Ohm .5 Watt [both ends]) 200 Nodes, 5000ft Between Nodes, 66000ft maximum
Wiring	Twisted pair 18 - 20 AWG Minimum Recommended Twisted Shielded (Belden 8760, 8762)

Ordering Codes and Options

CAX-NET4	Style 4 Network Module
CAX-NET7	Style 7 Network Module
712-1049	Remote Annunciator Style 7 Module Replacement

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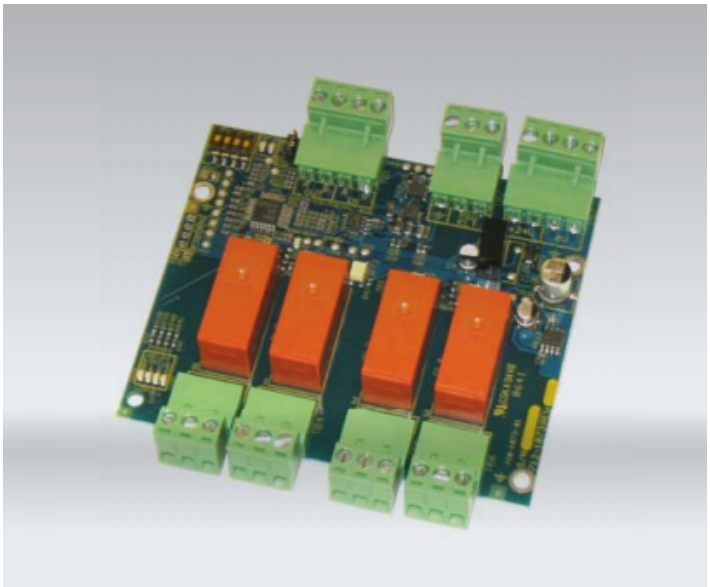
Axis AX

4 Point Relay Card

The CAX-RL4, 4 Point Relay Card, is an optional PBUS (RS485 network) peripheral module that provides four individually programmable relay outputs from an Axis AX Series Intelligent Fire Alarm Control Panel. Up to sixteen (16) CAX-RL4 cards can be connected to a single Axis AX Series Intelligent Fire Alarm Control Panel providing a maximum of 64 relay outputs. Each output of the CAX-RL4 is fully field programmable using the Advanced powerful 'DynamiX' cause and effect rules of its PC-NeT field configuration program.

The CAX-RL4, 4 Point Relay Card, can be installed in two different configurations; one CAX-RL4 can be mounted within the Axis AX Series Intelligent Fire Alarm Control Panel enclosure (if mounting location is available) or two (2) CAX-RL4 cards can be mounted in a separate enclosure.

Each CAX-RL4 card has on-board LEDs for the indication of individual relay activation, PBUS (RS-485 network) communications and microprocessor heartbeat.



Features

- Field Programmable Relay Card
- 16 Cards per Axis AX Series FACP Peripheral Bus
- Powerful DynamiX Cause & Effect Programming
- 120 VAC @ 5 Amp Rating
- Dedicated Power Supply Monitored Input
- 64 Relays per Axis AX Series FACP Peripheral Bus
- Removable Field Wiring Terminal Blocks

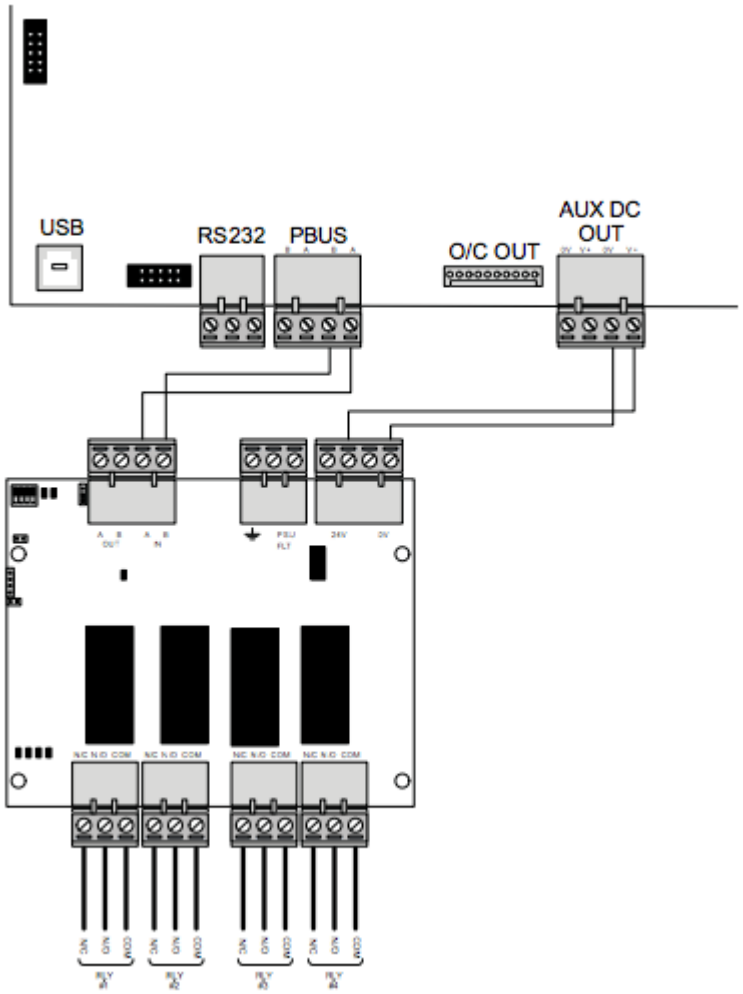
Listings and Approvals

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

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	32ºF - 120ºF (0ºC-48ºC)
Humidity	10-95% (Non-Condensing)
Weight (CAX-RL4)	3 oz
Optional Enclosure Dimension	8.58" X 11.81" X 1.77"

Wiring Diagrams



Order Codes and Options

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

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Advanced

Axis AX

8-Way Relay Output Card

The CAX-RL8, 8-Way Relay Output Card, is an internal peripheral card for use with Advanced Axis AX Series Intelligent Fire Alarm Control Panels. The CAX-RL8 card provides 2 Form-C and 6 Form-A (normally open) freely programmable relay contacts. Communications of the card and relays is done via a flat ribbon cable connection to the CAX-CTL base card.

Compatible with the Axis AX Series Dynamix I/O relationship programming, the relays of the CAX-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 CAX-RL8 relay output is pre-configured to activate on common alarm.

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



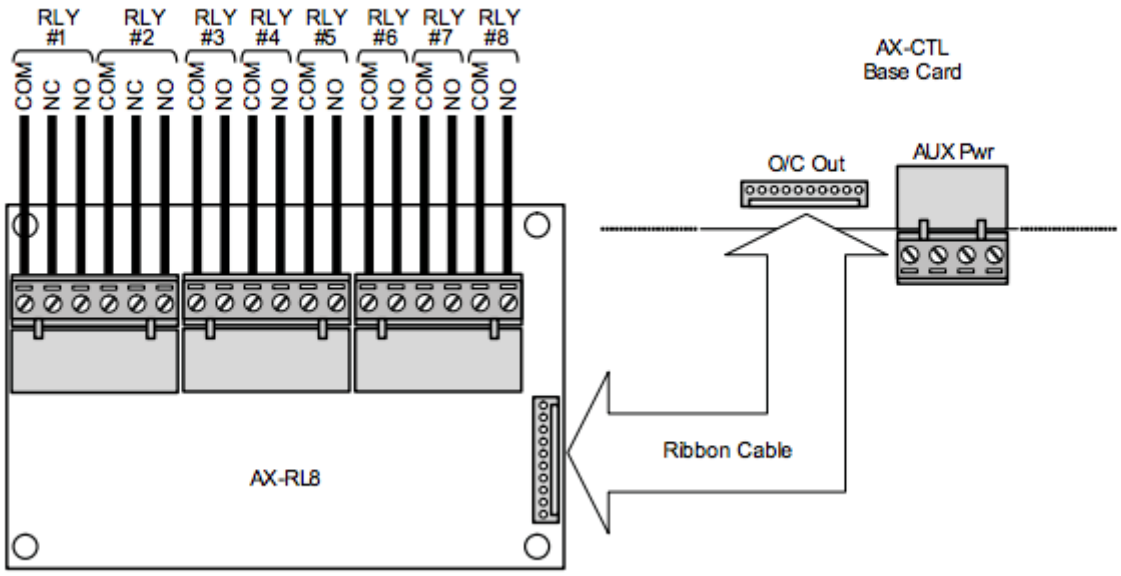
Features

- 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 Silencable or Non-Silencable
- Cost-Effective Ancillary Output
- Programmable Timing Functions
- Supports DynamiX I/O Relationship Programming
- Removable Field Wiring Terminal Blocks
- Rapid Activation Response

Listings and Approvals

- CAN/ULC-S527-11 & CAN/ULC-S559-04 Listed: 100780709NYM-001

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

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

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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.