



AX Series

INTELLIGENT FIRE ALARM CONTROL PANELS



Unique Features:

- ANSI/UL 864 9th Edition Listed
- Advanced User Interface w/Graphical LCD
- “Dynamix” I/O Relationship Programming
- Multi-Pattern & Two-Stage NAC Control
- Remote Diagnostic Virtual Panel Simulator
- AD-NeT-Plus Peer-to-Peer Networking

Description:

Advanced Fire Systems have combined the latest technology with many years of fire experience, to create the **AX Series** Intelligent Fire Alarm Control Panels. The panels are highly flexible and ideally suited to meet the needs of virtually any commercial, industrial or institutional application. The **AX Series** Intelligent Fire Alarm Control Panels are available in two standard models, the AX-CTL-2 and AX-CTL-4. Modular construction permits field configuration of a panel(s) to suit specific installation requirements. Upon request, the factory will install the modules you specify prior to shipment. Custom metalwork enclosure options are also available. Consult the factory for more details.

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, maintenance, and future upgrades.

The *AX-CTL-2* Intelligent Fire Alarm Control Panel provides two Style 4 or Style 6/7 Signaling Line Circuits (SLCs). 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.

Each SLC supports up to 126 analog addressable devices (any combination of intelligent detectors, input and/or output devices), for a total system capacity of 252 points standard. In addition, our unique sub-addressing of various input and/or output devices is permitted, *expanding system capacity up to 1000 points.*

The *AX-CTL-2* also comes with two filter, voltage regulated Notification Appliance Circuits (NACs), Class A or B, each rated 2Amp @ 24 VDC. Due to exceptional regulation and high rating, the onboard NAC outputs provide compatibility with virtually any Listed notification appliance.



Features:

- Up to 252 Analog Addressable Points (Standard w/ *AX-CTL-2*)
- Up to 504 Analog/Addressable Points (Standard w/ *AX-CTL-4*)
- Automatic Drift Compensation per Detector
- Automatic Detector Testing w/Maintenance Alert
- Alarm Verification and PAS
- Style 4, 6 & 7 SLC Operation
- Class “A” (Style Z) or “B” (Style Y) NAC Circuits
- Freely Programmable NAC Circuit Patterns
- Voltage Regulated NACs (Compatible with most Listed NAC devices)
- “Auto-Learn/Loop Detection” Programming
- Field Programmable from Keypad or PC
- User-Friendly PC-NeT Field Configuration Program
- Power Limited Power Supply & Outputs
- 5 to 10 Amps of System Power
- Built-in Intelligent Multi-Meter

Product Data Sheet

The AX-CTL-4 Intelligent Fire Alarm Control Panel provides four Style Signaling Line Circuits (SLCs) and four fully filtered, voltage regulated Notification Appliance Circuits (NACs), each rated 2 Amp @ 24 VDC. In this configuration, the AX Series panel can accommodate a total system capacity of 504 analog addressable points standard, and up to 200 points when applying the sub-addressing method.

Both the AX-CTL-2 and AX-CTL-4 intelligent panels have resettable and non-resettable power outputs, each rated .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.

Simplifying and reducing initial system set-up, each AX Series Intelligent Fire Alarm Control Panel is equipped with an installer-friendly "Auto-Learn/Loop Detection" feature that permits the rapid recognition of all signaling line circuits' devices. This rapid recognition, simplifies the assignment of critical life safety functions immediately. Assignments include: intelligent detector type and operation criteria, addressable input device recognition as an alarm input, and addressable output control on a general alarm basis.

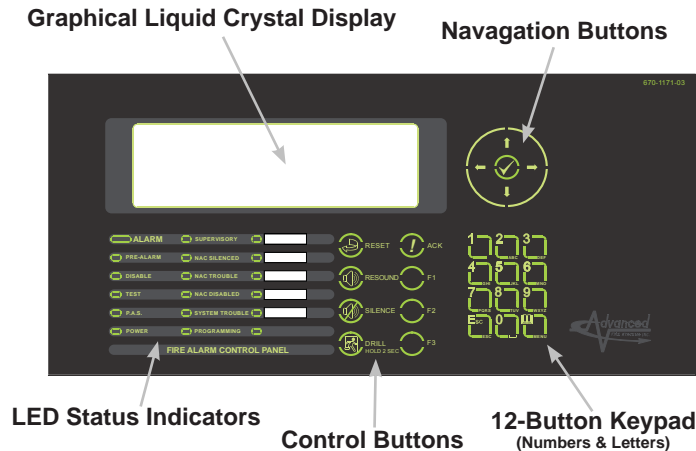
Designed with built-in powerful installation and customization tools, the AX Series Intelligent Fire Alarm Control Panel(s) can adapt to virtually any application requirement. With Dynamix programming, typical time consuming complexities associated with I/O relationship programming such as two-stage multi-pattern NAC control, intelligent detector drift compensation, precision response/sensitivity mode settings, flexible timing functions, and more, are sharply reduced.

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

To maximize the capability and flexibility of the AX Series Intelligent Fire Alarm Control Panel(s), and expand upon the customization of an installation, the Advanced Fire Systems Windows based, PC-Net field configuration tool is available. The PC-Net field configuration tool is a powerful, user-friendly programming tool that allows users to perform virtually any I/O relationship with multiple criteria. Simple drop-down menus with point-and-click operation makes project commissioning and troubleshooting fast and efficient.

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.



| Buttons (Keys) | |
|----------------|---|
| | Reset |
| | Ack (panel buzzer acknowledge) |
| | Resound (resound signals) |
| | Silence (silence signals) |
| | 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 | Yellow |
| 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 |
| Function 1 | Red (programmable) |
| Function 2-5 | Yellow (programmable) |

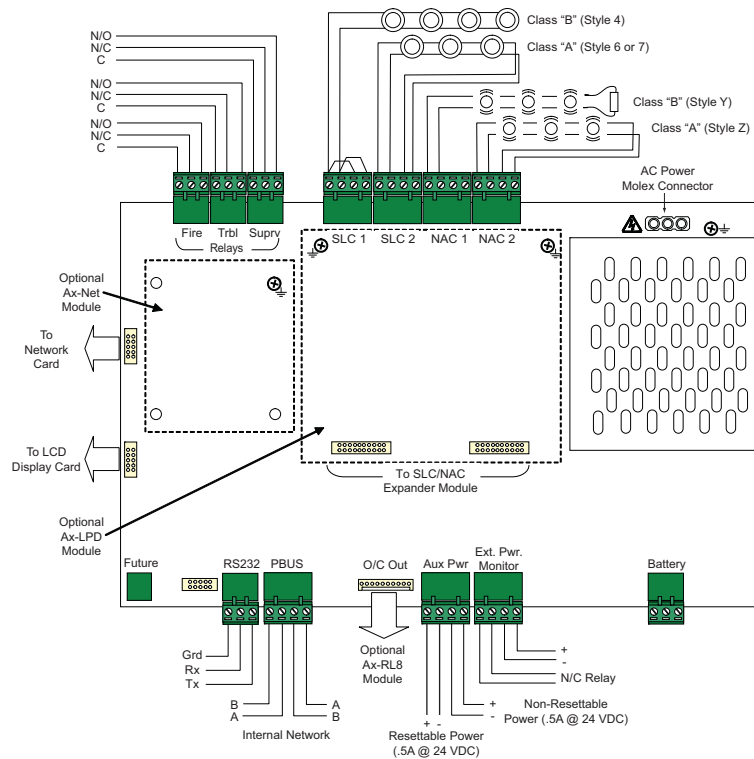
The **AX Series** system accommodates remote graphical LCD annunciators (with or without system control capabilities) on the **Ad-Net-Plus** peer-to-peer network. Multiple annunciator locations can be created based on installation demands. These locations can have either: no system control, partial system control, or full system control. In addition, information on system status changes can be vectored, allowing displays to receive only information pertaining to specific events.

The **AX Series** panels can accommodate very large, sophisticated applications with relative ease. When installations exceed a single panel's capacity, Advanced Fire Systems **Ad-Net-Plus** peer-to-peer network may be implemented and provide 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 the overall installation requirements.

Designed with the technician in mind, each module of the **AX Series** panel is easy to install and service. The integral power supply offers status LEDs, *temperature compensated charging*, and the ability to operate directly from the batteries when AC supply is not yet available at the installation site. A unique *built-in intelligent multi-meter* allows technicians to interrogate any input and/or output and diagnose potential time consuming trouble issues with virtually no complications or aggravation. With an **AX Series** panel, servicing a customer after installation can be as simple as using Advanced Fire Systems *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. The Remote Diagnostic Virtual Panel Simulator, *emulates the onsite control panel LCD and keypad in real time from an offsite location*. The simulator is an incredibly powerful tool for diagnosing and troubleshooting site applications.

| AX Series Intelligent Fire Alarm Control Panel Specifications | |
|--|---|
| Operating Voltage | 120 VAC (1.4A) - 240 VAC (0.7A), 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 Amp 0.83A 7 Ah (minimum), 48 Ah (maximum) 5A @ 240 VAC, Time Delayed, Ceramic, High Breaking (In-line 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 .5A 10 - 15 Seconds 24 VDC .5A |
| Humidity | 85% RH |
| Temperatures Operating Recommended Room | 32°F - 120°F (0°C - 49°C) 60°F - 86°F (15°C - 27°C) |
| Enclosure Dimensions Standard Enclosure Back Box Housing Deep Enclosure Back Box Housing | 22.6"H x 14.5"W x 3.94"D 24.1"H x 16"W x 4.75"D 22.6"H x 14.5"W x 5.5"D 24.1"H x 16"W x 6.3"D |
| SLC Loop Class (Style) Voltage Minimum Return Voltage Current | (Power Limited) Class "A" or "B" (Style 4, 6 or 7) 24 VDC 17 VDC .5A |
| NAC Circuit Class (Style) Voltage Minimum Return Voltage Current Maximum Voltage Drop Maximum Line Impedance | (Power Limited) Class "A" or "B" (Style Z or Y) 24 VDC (regulated) 16 VDC 2A 3 VDC 1.5Ω |
| RS232 Baud Rate Parity Data Bits Stop Bits | Supervised, Optically Isolated 9600 None 8 1 |
| Base Card Operating Current AX-CTL-2 AX-CTL-4 | Quiescent Alarm 110 mA 195 mA 175 mA 260 mA |

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



Ordering Information

| | |
|-----------------|--|
| AX-CTL-2 | AX Series Intelligent Fire Alarm Control Panel with cabinet, power supply/charger, 2 SLCs, 2 NACs, 3 auxiliary relays (cabinet supports batteries 7Ah - 18Ah) |
| AX-CTL-4 | AX Series Intelligent Fire Alarm Control Panel with cabinet, power supply/charger, 4 SLCs, 4 NACs, 3 auxiliary relays (cabinet supports batteries 7Ah - 18Ah) |
| <i>Options:</i> | |
| 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 (Style 4) |
| AX-NET7 | Network Interface Card (Style 7) |
| AX-RL8 | 8-Way Relay Output Card (Programmable) |
| AX-CTY | City Tie Module |
| AX-ANN-C | Remote Graphical LCD Annunciator w/Control (Style 4) |
| AX-ANN-C/ST7 | Remote Graphical LCD Annunciator w/Control (Style 7) |
| AX-ANN-D | Remote Graphical LCD Annunciator w/o Control (Style 4) |
| AX-ANN-D/ST7 | Remote Graphical LCD Annunciator w/o Control (Style 7) |
| D9068P | Digital Alarm Communicator FACP Powered, PCB only, Serial port compatible, w/cables. |
| AX-ASW-16 | 16 Switch, 48 LED Annunciator Module |

* Refer to individual Ax **Series** module data sheets for more specific details.



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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.