



# AX Series

# INTELLIGENT SINGLE LOOP FIRE ALARM CONTROL PANEL



### Unique Features:

- ANSI/UL 864 9<sup>th</sup> 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:

Available in two (2) configurations, *AX-CTL-1* (small/compact enclosure) or *AX-CTL-1L* (standard AX Series sized enclosure), the *AX-CTL-1 (1L)* Intelligent Single Loop Fire Alarm Control Panel is a member of the industry leading AX Series fire alarm control panels by Advanced Fire Systems. The *AX-CTL-1 (1L)* contains the identical features as Advanced Fire Systems *AX-CTL-2* (2 loop) and *AX-CTL-4* (4 loop) Intelligent Fire Alarm Control Panels, and is ideally suited to smaller applications. However, as a member of the AX Series product line the *AX-CTL-1 (1L)* can easily be utilized in larger applications due to its integral peer-to-peer networking capabilities.

Designed with installation and service engineers in mind, the *AX-CTL-1 (1L)* intelligent panel is 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-1 (1L)* Intelligent Single Loop Fire Alarm Control Panel provides a single Style 4 or Style 6/7 Signaling Line Circuit (SLC). Communications to the field devices attached to the SLC is via an advanced, 100% digital protocol with advantages of being highly immune to noisy environments. The SLC supports up to 126 analog addressable devices (any combination of intelligent detectors, input and/or output devices). In addition, unique sub-addressing of various input and/or output devices is permitted, *expanding on overall AX-CTL-1 (1L) system capacity.*

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

The *AX-CTL-1 (1L)* intelligent panel has 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-1 (1L)* 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.



3118002NYM-001B



AX-CTL-1



AX-CTL-1L

### Features:

- Up to 126 Analog Addressable Points
- 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
- Built-in Intelligent Multi-Meter
- Optional Integral or Portable Printer

Product Data Sheet

Simplifying and reducing initial system set-up, each *AX-CTL-1 (1L)* Intelligent Single Loop Fire Alarm Control Panel is equipped with an installer-friendly “Auto-Learn/Loop Detection” feature that permits the rapid recognition of all signaling line circuit 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.

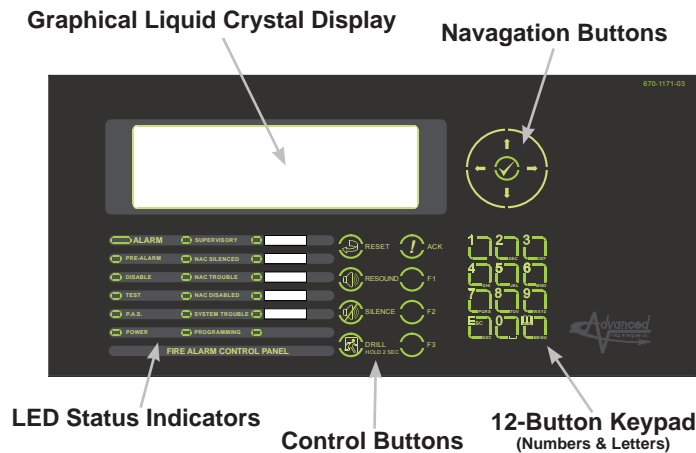
Designed with built-in powerful installation and customization tools, the *AX-CTL-1 (1L)* Intelligent Single Loop Fire Alarm Control Panel can adapt to virtually any application requirement. With *DynamiX* programming, typical time consuming complexities associated with I/O relationship programming such 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-CTL-1 (1L)* 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-CTL-1 (1L)* Intelligent Single Loop Fire Alarm Control Panel and to 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 make 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-CTL-1 (1L)* Intelligent Single Loop Fire Alarm Control Panel. The unit incorporates a graphical LCD display, LED status indicators, control buttons (including 3 programmable buttons), navigation buttons, and a 12-button keypad for complete system status, interrogation, and control.



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)

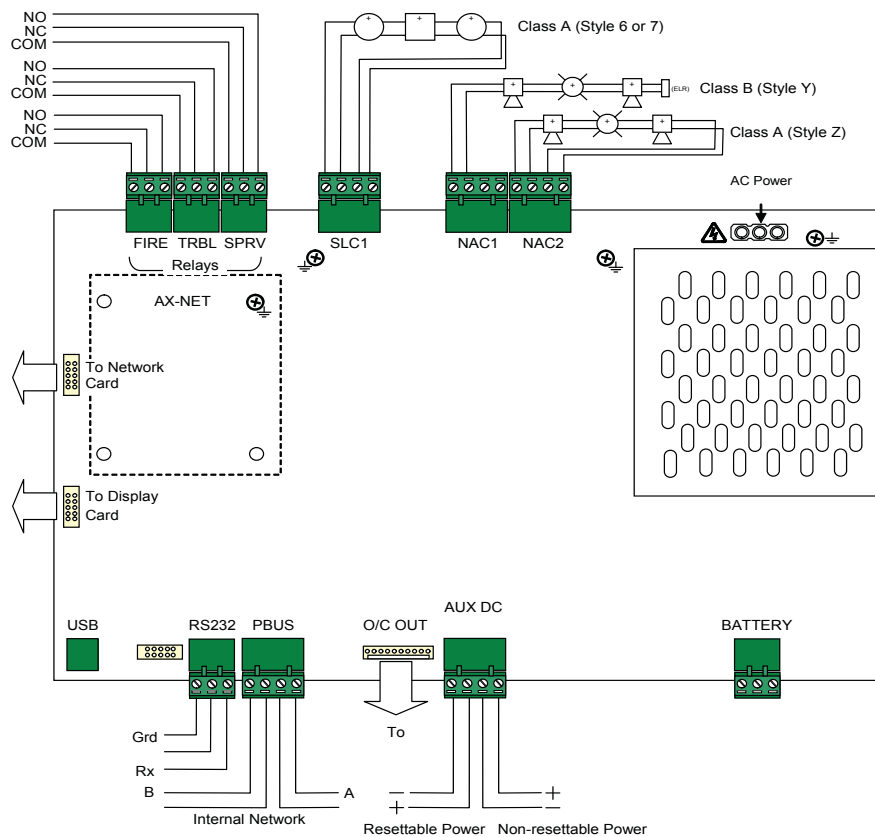
LED Indicators	
Alarm	Red
Pre-Alarm	Yellow
Disable	Yellow
Test	Yellow
P.A.S.	Yellow
Power	Green
Supervisory	Yellow
NAC Silenced	Yellow
NAC Trouble	Yellow
NAC Disabled	Yellow
System Trouble	Yellow
Programming	Yellow
Function 1	Red (programmable)
Function 2-5	Yellow (programmable)

The *AX-CTL-1 (1L)* intelligent panel can accommodate remote graphical LCD annunciators (with or without system control capabilities) on the *Ad-Net-Plus* peer-to-peer network. Multiple annunciator locations can be created based on installation demands. These locations can have either: no system control, partial system control, or full system control. When installations exceed a single panel's capacity, the Advanced 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 installation requirements.

Designed with the technician in mind, each module of the *AX-CTL-1 (1L)* intelligent 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-CTL-1 (1L)* intelligent 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.

<b>AX Series Intelligent Fire Alarm Control Panel Specifications</b>	
Operating Voltage	120 VAC (1.4A) - 240 VAC (0.7A), 50/60Hz
System-Brown-Out	98 VAC nominal
Battery Circuit	
Charging Voltage	27.4 VDC nominal
Temp. Compensated Charging Current	2 Amp
Battery Derating Factor	0.83A
Battery Capacity	7 Ah (minimum), 48 Ah (maximum)
Battery Fuse	5A @ 240 VAC, Time Delayed, Ceramic, High Breaking (In-line Wire Link)
Fire, Supervisory, and Trouble Relays	(Power Limited - when utilizing system power)
Type	Form "C"
Rating	1A @ 30 VDC/VAC
Trouble Relay	Normally Active (fail-safe operation)
Auxiliary Power Outputs	(Power Limited)
Resettable	
Voltage	24 VDC
Current	.5A
Reset Time	10 - 15 Seconds
Non-Resettable	
Voltage	24 VDC
Current	.5A
Humidity	85% RH
Temperatures	
Operating	32°F - 120°F (0°C - 49°C)
Recommended Room	60°F - 86°F (15°C - 27°C)
Enclosure Dimensions	
Back Box ( <i>AX-CTL-1L</i> )	17.75"H x 14.5"W x 4.5"D
Housing ( <i>AX-CTL-1L</i> )	19.25"H x 16"W x 5.25"D
SLC Loop	(Power Limited)
Class (Style)	Class "A" or "B" (Style 4, 6 or 7)
Voltage	24 VDC
Minimum Return Voltage	17 VDC
Current	.5A
NAC Circuit	(Power Limited)
Class (Style)	Class "A" or "B" (Style Z or Y)
Voltage	24 VDC (regulated)
Minimum Return Voltage	16 VDC
Current	2A
Maximum Voltage Drop	3 VDC
Maximum Line Impedance	1.5Ω
RS232	Supervised, Optically Isolated
Baud Rate	9600
Parity	None
Data Bits	8
Stop Bits	1
Base Card Operating Current	Quiescent      Alarm
<i>AX-CTL-1L (1L)</i>	110 mA          195 mA

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



## Ordering Information

AX-CTL-1	Intelligent Single Loop Fire Alarm Control Panel with compact enclosure, power supply/charger, 1 SLC, 2 NACs, 3 auxiliary relays (enclosure supports batteries 7Ah - 18Ah) [19.25"H x 16"W x 5.25"D]
AX-CTL-1L	Intelligent Single Loop Fire Alarm Control Panel with standard AX Series enclosure, power supply/charger, 1 SLC, 2 NACs, 3 auxiliary relays (enclosure supports batteries 7Ah - 18Ah)
AX-012	Thermal Strip Printer for AX-CTL-1 integral mounting
AX-BAT	AX <b>Series</b> Battery Box (supports up to 40Ah batteries)
<i>Options:</i>	
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
AX-ASW-16	6 Switches, w/ three integrated, programmable LED's per switch (red, yellow, green)



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