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SIGNALING



An Introduction to

SIGMA A-XT

K1810-13

Extinguishant Control Panel UL/FM Approved



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FAST
FIRE & SECURITY TECHNOLOGY

Sigma A-XT

Sigma A-XT is a 3 zone conventional fire releasing panel that is UL and FM Approved for releasing. Sigma A-XT offers outstanding value and performance for all small to medium fixed fire-fighting installations.

With three initiating circuits as standard, release can be configured to activate from any combination of detection zone inputs to allow (among other combinations) any two from three types of activations for detection in ceiling void, room and floor void applications.

The extensive configuration options of the Sigma A-XT allow the functionality of the system to be extensively modified. The panel contains a large LED display to enable easy configuration and control which also displays the time remaining until release for added user safety. Sigma A-XT is fully programmable using simple menu options. The panel is a single board construction which provides an easy replacement solution. It is also compatible with a

The countdown time is duplicated on up to seven remote status units to provide local indication of the system status.

With all the electronics mounted on a single, easily removable, steel plate Sigma A-XT panels are both robust and easy to install. Sigma A-XT is supplied in an enclosure that matches the design and color of the Kentec Elite RS range and is available in standard red or optional gray.



Sigma A-Si Status Unit

The Sigma A-Si range of status indicators provides detailed status information for Sigma A-XT releasing control equipment. All models provide high brightness, LED indication of Manual Only, Automatic and Manual, Abort Operated, Disabled, Imminent and Released conditions. Models are also available with zonal fire indicators and a common trouble indicator.

For systems where local control of the Automatic/Manual mode and or a Manual extinguishant release control are required, units are available with these controls fitted. All models have supervised inputs for the remote connection of Automatic/Manual mode and abort switches. All units contain a large, LED display that shows a countdown of the time remaining until release in seconds. Up to seven Sigma A-SI status units can be connected to the Sigma A-XT serial bus and require just two cores for data and two cores for power. Once connected, status units are supervised, and the Sigma A-XT control panel will indicate a trouble condition should any unit become disconnected.



K1821-11
6 lamp status unit surface mount - red

K1821-13
6 lamp status unit with mode select keyswitch surface mount - red

K1821-15
6 lamp status unit with manual release surface mount

K1821-17
6 lamp status unit with mode select keyswitch & manual release surface mount - red

K1821-19
10 lamp status unit with mode select keyswitch & manual release surface mount - red

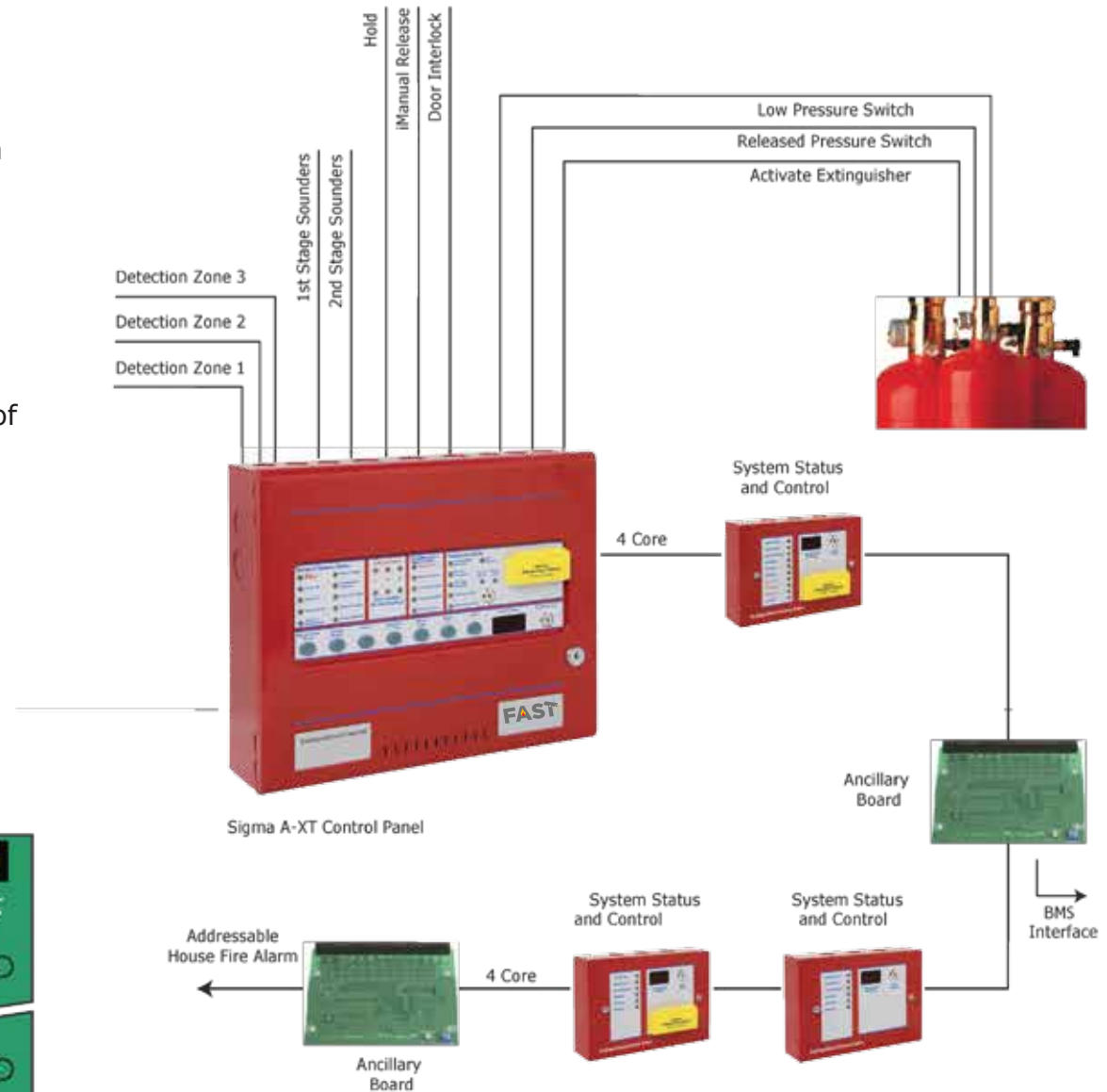
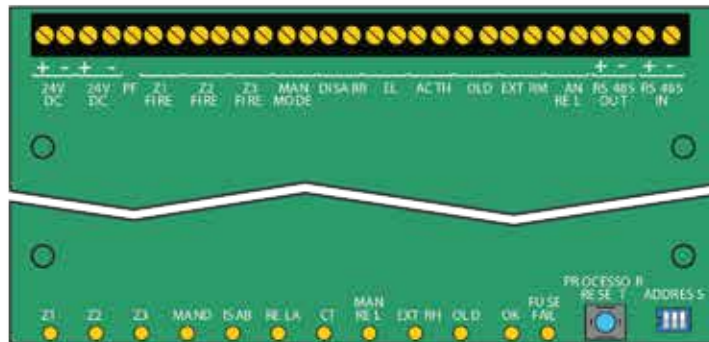
Sigma A-XT Ancillary PCB

The Sigma A-XT Ancillary Board is compatible with all Sigma A-XT control panels. The board provides volt-free normally open contacts, enabling control of sub systems and plant remotely from the main panel over a two-wire data bus.

Ancillary boards require only a two-core data cable from the main control panel and a two-core power cable from the main panel. Up to seven ancillary boards can be connected to a control panel and each is allocated to an address from one to seven using a binary coded DIL switch. The total length of the data cable from the main panel to the last repeater must not exceed 4000 feet. A mixture of status units and Ancillary boards, up to a maximum of seven of each type, can be connected to the serial data bus. Each output has an LED indicator which shows which output are operated.

The Sigma A-XT Ancillary PCB contains volt free changeover contacts for signaling of the following:

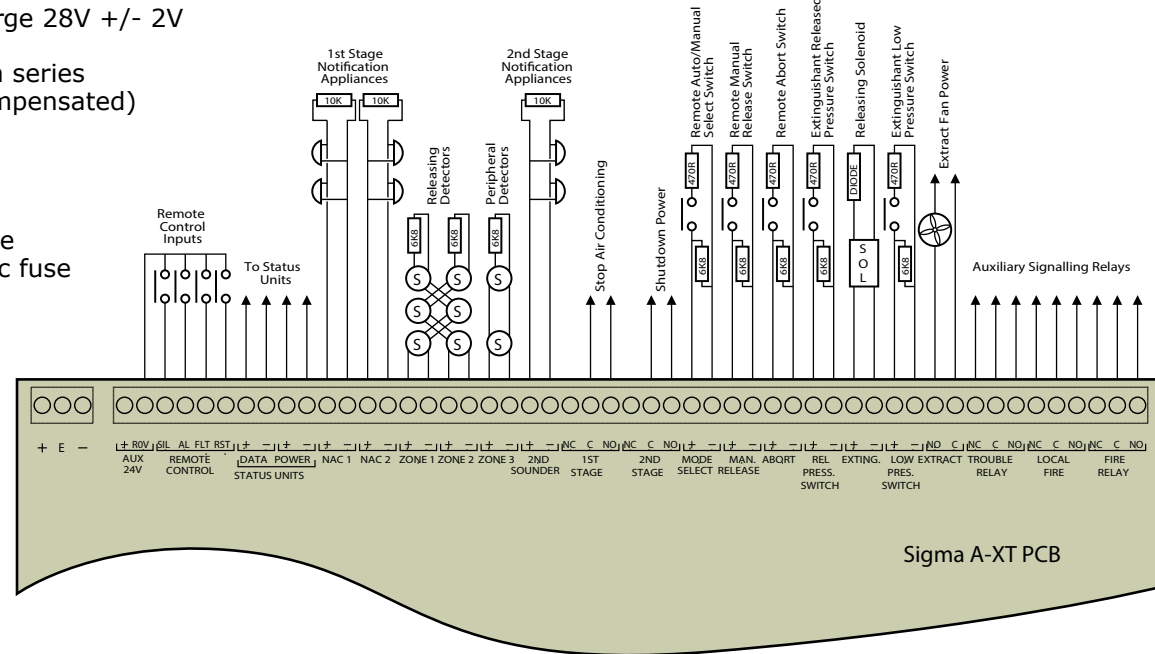
- Manual only mode
- Disablement active
- Manual Release Operated
- Extract Fan Activated
- Zone 1 Fire
- Zone 2 Fire
- Zone 3 Fire
- Abort Activated
- Released
- Activated



Example System Schematic

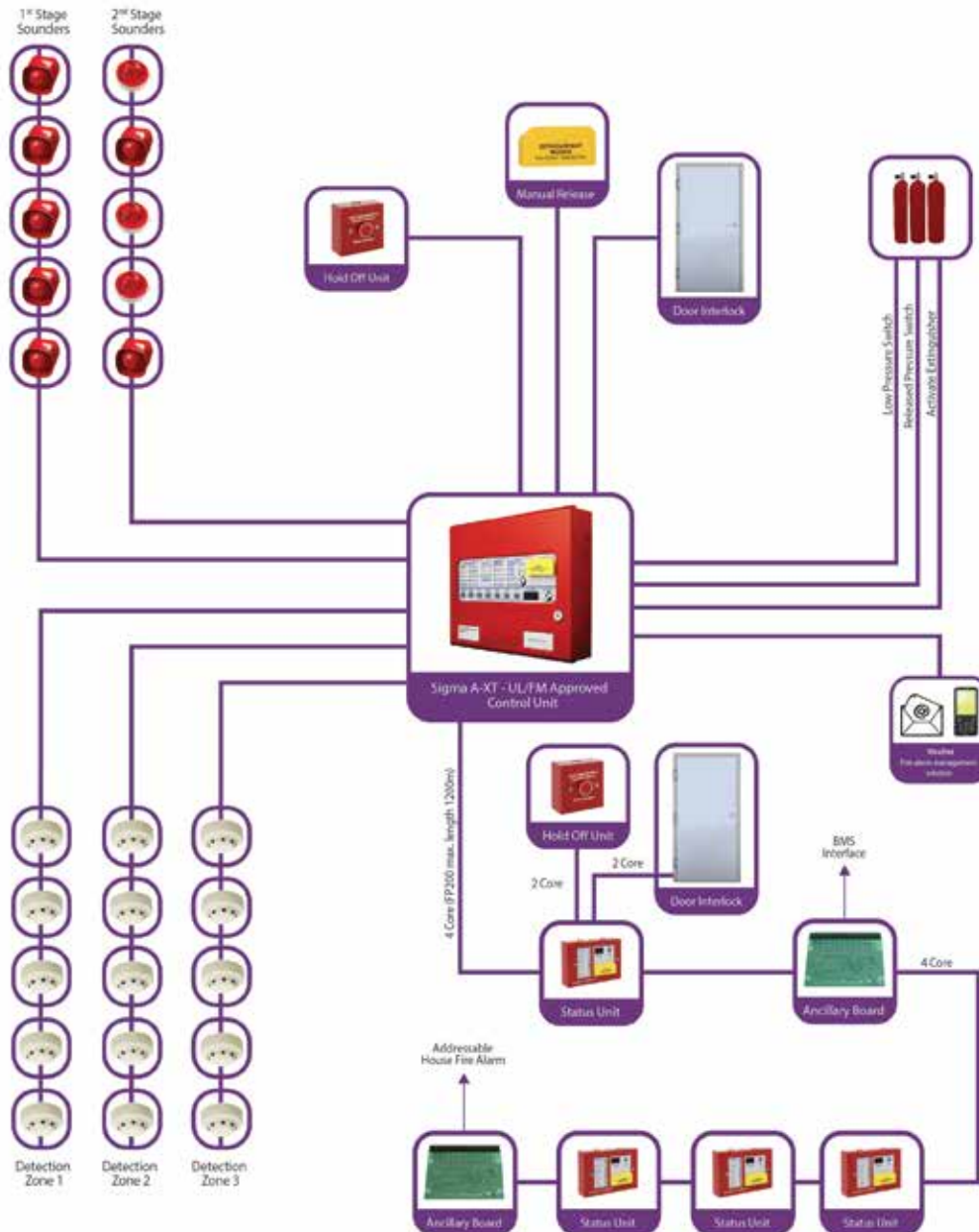
Sigma A-XT | K1810-13 | Technical Specification

- Construction - 1.2mm mild sheet steel
- IP Rating - IP30
- Finish - Epoxy powder coated
- Colour - lid & box - Red RAL 3002 (optional grey BS 00 A 05 semi-matt)
- Mains supply - 230V AC or 115V AC
- Mains supply fuse - 1.6 Amp (F1.6A L250V)
- Power supply rating - 3 Amps total including battery charge 28V +/- 2V
- Maximum ripple current - 200 millivolts
- Battery type (Yuasa NP) - Two 12 Volt 7Ah sealed lead acid in series
- Battery charge voltage - 27.6VDC nominal (temperature compensated)
- Battery charge current - 0.7A maximum
- Battery fuse - 20mm, 3.15A glass
- Maximum current draw from batteries - 3 Amps
- Quiescent current of panel in mains fail - 0.095A
- ROV output - Fused at 500mA with electronic fuse
- Sounder outputs - 24V Fused at 500mA with electronic fuse
- Fault relay contact rating - 30VDC 1A Amp maximum
- Fire relay contact rating - 30VDC 1A Amp maximum
- Local fire relay contact rating - 30VDC 1A Amp maximum
- First stage contact rating - 30VDC 1A Amp maximum
- Second stage contact rating - 30VDC 1A Amp maximum
- Extract contact rating - 30VDC 1A Amp maximum
- Zone quiescent current - 2mA maximum
- Terminal capacity - 12 AWG
- Number of detectors per zone - Dependent on type (maximum 32)
- NAC rating - 0.5A per circuit
- Detection circuit end of line - 6K8 5% 1/2 Watt resistor
- Monitored input end of line - 6K8 5% 1/2 Watt resistor
- Sounder circuit end of line - 10K 5% 1/4 Watt resistor
- Extinguishant output EOL - 1N4004 Diode
- No. of initiating circuits - 3
- No. of NAC circuits - 2 x 1st Stage, 1 x 2nd Stage
- Extinguishant release output - Fused at 1 Amp
- Extinguishant release delay - Adjustable 0 to 60 seconds (in 5 second steps)
- Extinguishant release duration - Adjustable 60 to 300 seconds (in 5 second steps)
- SIL, AL, FLT, RST inputs - Switched -ve, max resistance 100 Ohms
- Zone normal threshold - 8K ohms to 1K ohm
- Detector alarm threshold - 999 ohms to 400 ohms
- Call point alarm threshold - 399 ohms to 100 ohms
- Short circuit threshold - 99 ohms to 0 ohms
- Monitored inputs normal threshold - 8K ohms to 1K ohm
- Monitored inputs alarm threshold - 999 ohms to 100 ohms
- Monitored inputs Short circuit threshold - 99 ohms to 0 ohms
- Status unit/Ancillary board connection - Two wire RS485 connection
- Status unit power output - Fused at 500mA with electronic fuse



Ordering Code

Product Code	Description	Size (mm)
K1810-13	Surface mounting panel - Red 230V	368 x 310 x 90



Sigma A-XT Feature

- UL864 and FM Listed
- Three initiation circuits as standard
- Any single zone or any combinations of zones can be configured to release
- Configurable first stage NAC delays
- Configurable detection delays
- Zero time delay upon manual release option
- Supports up to seven, four wire status indicators
- Built in Extract Fan control
- Compatible with I.S. barriers
- Non-latching zone input option to receive signals from other systems such as aspirating equipment
- Configurable releasing delays up to 60 seconds in 5 second stops
- Configurable releasing duration up to 5 minutes in 5 second steps.
- Countdown timer shows time remaining until release



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