

## Overview

The EST2 Fire Alarm System is modular in design allowing systems to be easily configured to match installation requirements. With one Signature Data Circuit (SDC) EST2 is capable of supporting 96 detectors and 94 modules and has two built in Notification Appliance Circuits (NAC). The system supports the full line of Signature series detectors and modules. EST2's modular design means the system easily expands to two SDCs and four NACs by adding a single 2-LCX module increasing system capacity to 380 points/zones with four built in Notification Appliance Circuits.

The EST2 provides an RS-232 port to facilitate computer, coder and printer interfacing and an RS-485 communication port for supporting remote annunciation. Annunciation of system events are displayed on a back lit LCD with enhanced diagnostic LEDs on the front panel. There is space to add up to 48 additional points/zones of software controlled LED annunciation and switch control on the front panel. Both alpha-numeric LCD and annunciation LEDs are available for remote annunciation and control with the GE Security 2-LSRA and SAN series of annunciators.

EST2 features Auto Programming through the front panel and Custom Programming via PC laptop interface. The Auto Program mode will identify all devices on the SDC and automatically assign addresses to each device. Then the auto programming feature automatically links the proper response to the proper input, providing real time savings during installation.

## Standard Features

- Supports all GE Security Signature devices
- Autoprogramming of Signature data circuits
- Class B or A Signature data circuit(s), 96 detectors and 94 modules per circuit
- Two integral Class A or B notification appliance circuits
- Alarm, trouble, and supervisory contacts
- Prioritized status queues for alarm, supervisory, trouble and monitor inputs
- 576 event history log
- Enhanced sensitivity reports
- Optional expander Signature data circuit
- Designed and manufactured to ISO 9001 standards

# EST2

## Analog Control Panel



## Application

Using the advanced Signature family of detectors and modules provides a wide range of installation and operation benefits. Signature Series detectors and modules use Electronic Addressing — no dip switches or dials to set, speeding installation and programming. Multi-function and dual circuit modules reduce wiring costs. Multi-sensor technology eliminates detector application guess-work. Identification of dirty or defective detectors is automatic with EST2. Maintenance scheduling is easy and effective, ensuring that life safety protection is always maintained. In addition to Signatures inherent reduction of false alarms, EST2 allows the adjustment of detector sensitivity at different times of the day. Make detectors more sensitive at times when transient smoke is not likely to occur (night time) and less sensitive at times when transient smoke is likely to occur.

EST2 provides “Device Mapping”. This allows a laptop computer to show how the Signature Data Circuits are wired. As-built drawings become very easy.

The EST2 design provides application flexibility with installation options that give site specific customization and programming options that help satisfy local as well as national requirements. EST2 provides a choice of power supplies with 4.5 amp and 6.4 amp supplies available. Installation flexibility is provided with a choice of surface or semi-flush mounting wallboxes.

EST2 provides optional modules that ensure system customization and flexibility. In applications calling for coded signals, the optional CDR-3 module provides a choice of march time generator or Positive Successive Non-Interfering (PSNI) outputs. CDR-3 outputs are selectable as a coded dry contact or supervised coded 1000Hz audio tone. The march time output provides a continuous march-time beat at 20 or 120 beats per minute. The PSNI output provides up to four rounds of a unique output code for each of up to fifty input conditions. The unique output codes signal emergency response personnel to the location of an alarm.

For connection to a Central Monitoring Station the EST2 uses an optional built-in dual line dialer (DACT). The dialer mounts right on the EST2 main board reducing installation and maintenance costs. Multiple communication formats ensure compatibility with most Central Monitoring stations.

EST2 provides individual status queues annunciating Alarm, Supervisory, Trouble and Monitor operations. When a device operates the appropriate queue's status LED lights. Operator recognition of the active device type(s) is instantaneous. At the same time a programmed point or zone description displays on the back lit LCD giving specific text information on the active device(s). Review messages simply by selecting local silence, the queue from the front panel and scrolling. The last 576 events can be reviewed at any time via the enhanced History log. The new enhanced history log contains the complete event message with LIFO protocol (last in first out) insuring the most current events are always logged.

EST2 has optional LED/Switch modules that mount right beside the LCD and common control front panel. Annunciation flexibility is further enhanced with a wide variety of remote annunciation including remote LCD annunciators, remote LED annunciators and/or graphic annunciators.

Front panel diagnostic LEDs provide easily understood system status information. Standard software includes the following important features:

### TIMERS:

Programmable timers give flexibility to Signal Silence Inhibit, Reset Inhibit and Power fail trouble contact delay operation. In addition the Notification Appliance Circuits rate is selectable from steady, to Temporal, 120/20 or Temporal/20.

### DISABLE POINTS:

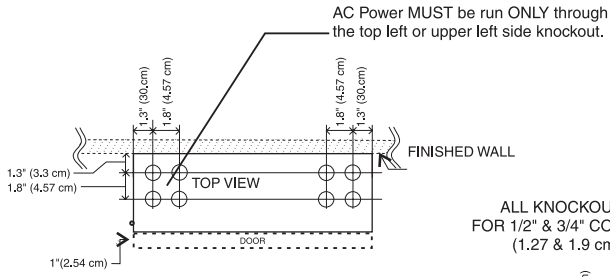
Specific devices on the SDC may be disable through simple front panel controls providing protection from unwanted alarms in areas with high concentrations of contaminants typically found when construction or renovation work is taking place.

### SENSITIVITY REPORTS:

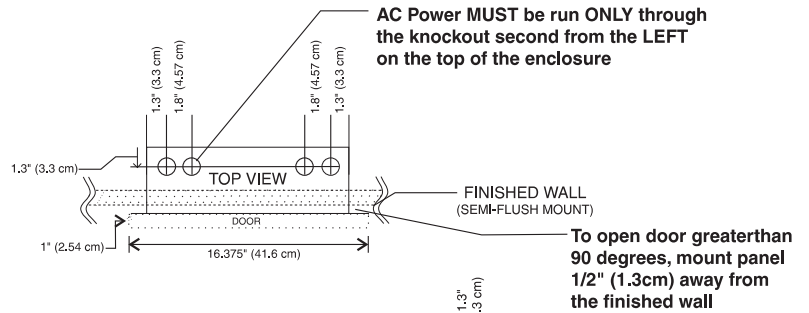
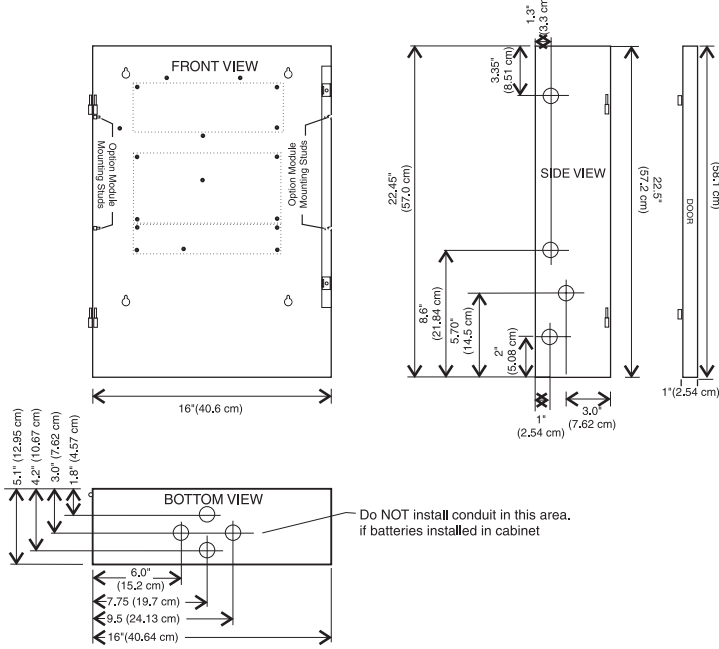
The sensitivity report provides detailed information on individual devices such as threshold level in % of obscuration, amount of environmental compensation remaining, device address and personality type.

**NO EVENT ACKNOWLEDGE REQUIRED!** The operator may review events at any time from any of the event queues after “Local Silence”. When the operator has finished reviewing events, and activates the Alarm Queue the first alarm will return to the LCD.

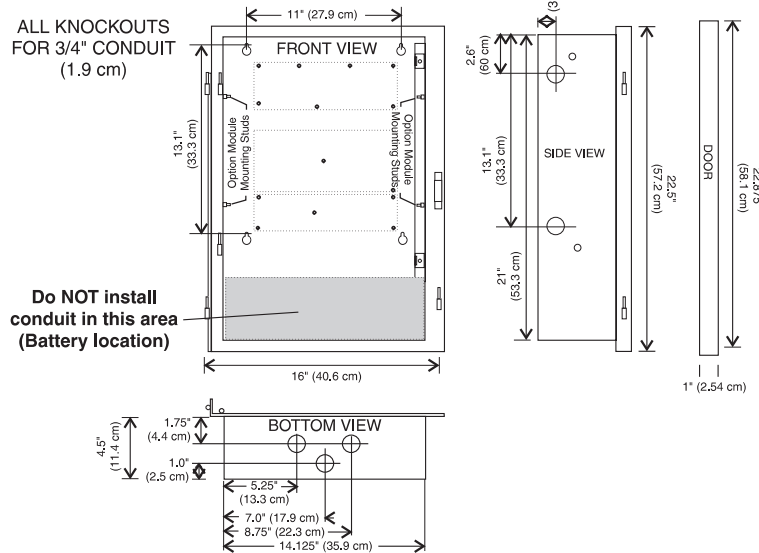
# Installation and Mounting



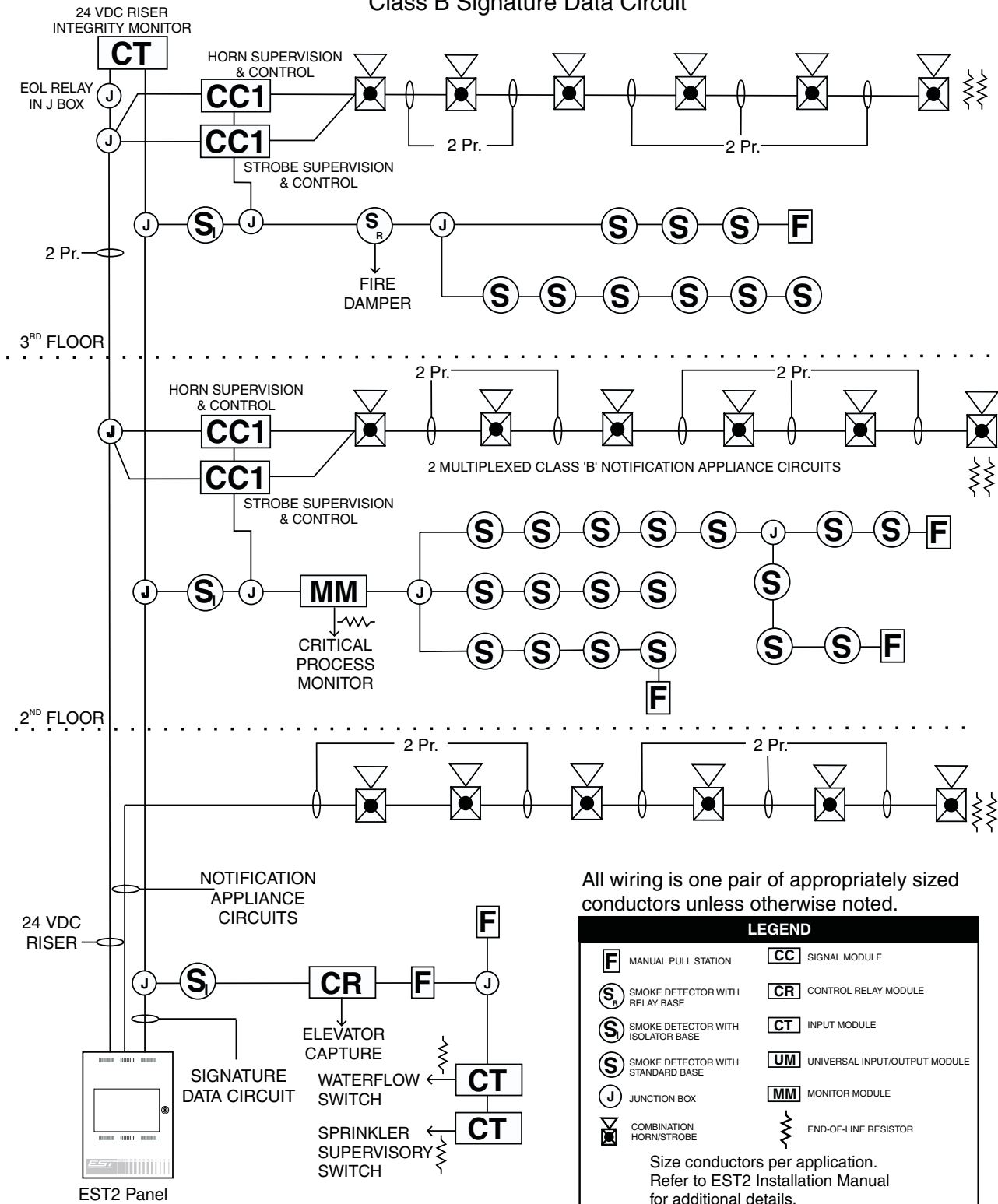
## Surface Mounting



## Semi-Flush Mounting



# Typical EST2 Panel Wiring Class B Signature Data Circuit



All wiring is one pair of appropriately sized conductors unless otherwise noted.

LEGEND	
<b>F</b>	MANUAL PULL STATION
<b>CC</b>	SIGNAL MODULE
<b>S<sub>r</sub></b>	SMOKE DETECTOR WITH RELAY BASE
<b>CR</b>	CONTROL RELAY MODULE
<b>S</b>	SMOKE DETECTOR WITH ISOLATOR BASE
<b>CT</b>	INPUT MODULE
<b>S</b>	SMOKE DETECTOR WITH STANDARD BASE
<b>UM</b>	UNIVERSAL INPUT/OUTPUT MODULE
<b>J</b>	JUNCTION BOX
<b>MM</b>	MONITOR MODULE
<b>⊓</b>	COMBINATION HORN/STROBE
<b>⊓</b>	END-OF-LINE RESISTOR

Size conductors per application. Refer to EST2 Installation Manual for additional details.

## Specifications

Catalog Number	2-PPS	2-PPS/6A	2-PPS-220	2-PPS/6A-220
Agency Listings	UL, ULC, FM, CSFM			
Line Power	120VAC 300 Watts Max., 50/60Hz		220-240VAC 300 Watts Max., 50/60Hz	
Auxiliary Output Power	500mA Max.	N/A	500mA Max.	N/A
Notification Appliance Power	3.5Amps @ 24Vdc nominal	Two 3.2 Amp taps @ 24Vdc nominal	3.5Amps @ 24Vdc nominal	Two 3.2 Amp taps @ 24Vdc nominal
Maximum Battery Size	2 of 12V10A - 10 Amp Hours (See Note 1)			
Signature Data Circuit	One circuit supports 96 Detectors, 94 Modules Maximum - 96 Isolator or Relay Bases (Expandable to two Circuits with 2-LCX)			
Terminal Wire Gauge	Notification Circuits 18-12 AWG (0.75 - 2.5 mm <sup>2</sup> ) All other circuits 18-14 AWG (0.75 - 1.5mm <sup>2</sup> )			
Relative Humidity	10-93% non condensing			
Temperature Rating	0°-49°C (32° - 120°F)			
Wiring Styles	Class A or Class B			
Communication Ports	One RS-232, One RS-485			
Standard Auxiliary Relays	One Alarm Contact - 24Vdc 1 Amp One Trouble Contact - 24Vdc 1 Amp One Supervisory Contact - 24Vdc 1 Amp			

Note 1: Surface mount EST2 Wall Boxes support up to two 12V17A batteries. For larger batteries use BC-1 or BC-2 battery cabinets.

## Related Equipment

Catalog Number	Description
SIGA-IS	Ionization Smoke Detector
SIGA-PS	Photoelectric Smoke Detector
SIGA-PHS	3D Multisensor Detector
SIGA-IPHS	4D Multisensor Detector
SIGA-HFS	Fixed Temperature Heat Detector
SIGA-HRS	ROR/Fixed Temperature Heat Detector
SIGA-DMP	Duct Detector Mounting Plate
SIGA-DH	Duct Smoke Detector Housing
SIGA-LED	Remote Alarm LED
SIGA-CT1	Single Input Module
SIGA-CT2	Dual Input Module
SIGA-CC1	Single Input Signal Module
SIGA-CC2	Dual Input signal Module
SIGA-CR	Control Relay Module
SIGA-MM1	Monitor Module
SIGA-WTM	Waterflow/Supervisory Module
SIGA-278	Double Action Fire Alarm Station
SIGA-270 series	Single and Two Stage Stations
SIGA-UM	Universal Module
2-SMK	Smoke Power Converter Module
2-CTM	City Tie Module

Catalog Number	Description
2-LSRA	LCD annunciator
2-LSRA-C	LCD annunciator w/ common controls
2-SMDN	LCD annunciator SAN mounting
2-SMDN-C	LCD annunciator SAN mounting w/ common controls
LSRA-232	Printer/programming port for LSRA Series
2-SANCOM	Common Controls for SAN annunciator
SAN-CPU	CPU for SAN annunciator
RSA4-COM/D	Common control module for 1577 Graphics
1577	Graphic annunciators
RSAN-PRT	Rack mount 40 column printer
PT-1S	Serial desk mount printer
RSAN-6	19 in rack mount unit accepts 6 SAN modules and 1 SAN-CPU
CDR3	Coder Module
IOP-3	RS-232 Isolator Module
RPM	Reverse Polarity Module
MTM-1	March Time Module
BC-1	Battery Cabinet - Space for two 12V24A batteries, 24 Amp Hour
BC-2	Battery Cabinet - Space for two 12V17A batteries, 17 Amp Hour

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## Ordering Information

Catalog Number	Description	Ship Wt. lb (kg)
<b>Fire Alarm Control and Power Supplies</b>		
2-MCD	Main Control and Display	1.5 (.7)
2-LCX	Expander Signature Data Circuit with two Notification Appliance Circuits	1 (.45)
2-DL2	Two Line Dialer	
2-PPS	4.5 Amp power supply 120 Vac	
2-PPS/6A	6.4 Amp power supply 120 Vac	
2-PPS/220	4.5 Amp power supply 220 Vac	2.5 (1.1)
2-PPS/6A-220A	6.4 Amp power supply 220 Vac	
<b>Panel Mounted Annunciator Modules</b>		
2-16R	16 Red LEDs	
2-16Y	16 Yellow LEDs	
2-16G	16 Green LEDs	
2-8RY	8 Red and 8 Yellow LEDs	
2-12R4Y	12 Red LEDs and 4 Yellow LEDs	
2-16G8S	16 Green LEDs and 8 Two-position Switches	1 (.45)
2-16R8S	16 Red LEDs and 8 Two-position Switches	
2-16RYS	8 Alternating Red over Yellow LED pairs and 8 Two-position switches	
2-16Y8S	16 Yellow LEDs and 8 Two-position Switches	
2-8GYS	8 Alternating Green over Yellow LED pairs and 8 Two-position switches	
2-8RYS	8 Red LEDs, 8 Yellow LEDs and 8 Two-position Switches	
<b>Wall Boxes</b>		
2-WB	Semi-Flush Wall Box - Gray finish	
2-WBR	Semi-Flush Wall Box - Red finish	
2-WBS	Surface Wall Box - Gray finish	8 (3.6)
2-WBSR	Surface Wall Box - Red finish	
2-RM7	Mounting Plate	10 (4.5)
2-RMLCD	Adapter Plate	0.5 (0.2)
2-RMAUD	Audio Mounting Plate	2 (0.9)
CB31-B	Backbox for CB31 cabinet	
CB45-B	Backbox for CB45 cabinet	
<b>Wall Box Doors</b>		
2-WBD	Inner and outer door for 2-WB wall box	
2-WBDR	Inner and outer door for 2-WBR wall box	
2-WBDS	Inner and outer door for 2-WBS wall box	8 (3.6)
2-WBDSR	Inner and outer door for 2-WBSR wall box	
CB31(R)-D	Door Assembly for CB31 cabinet	
CB45(R)-D	Door Assembly for CB45 cabinet	

