eView Installation Manual

Revision History

Revision	Date	Status	Description
E01.00	08/26/2008	Initial release	Modify original from parent company.
E01.01	09/08/2008	internal edits	Added part number to manual. Change name of remote annunciator from “VES Information Display” to “eView””. Change contact information from “Central Time” to “Eastern Standard Time”. Global change of eLITE to Elite Panel. Remove reference to eView without a control keyswitch. Remove reference to items included with the eView packaging. Global change from DIL to DIP. Add US units of measurement to metric. Add reference for configuring with Loop Explorer and eSP Discovery. Change from Syncro and Syncro AS to eLAN and Elite. Update VES part numbering. Increased font-size of title and centered image on front-cover.
E01.02	09/16/2008	Internal edits	Added RMA and warranty return process in Introduction, Section 1. Added “location security” to step one of “To complete the installation:”, Installation, Section 3. Identify correct values for Specifications, Appendix A. Added step#2 to Installation, Section 3, “Remove AC and battery power to the eLAN or Elite Panel”.
E01.03	11/20/2008	Content changes under UL project 08CA27859.	Removed VESNet, eNET and firmware reference from first paragraph of Section 2, Overview. Re-drafted this paragraph to include reference to the buzzer annunciation and silence, the front-panel controls, the use of level 2 and the RS485 connection. Added low temperature, high temperature and relative humidity to the Operating Environment section of Appendix A, Specifications. Changed document revision on all footers from E01.02 to E01.03.
E01.04	01/14/2009	Content changes under UL project 08CA27859.	Added maximum input rating of 24 VDC @ 110 mA to Appendix A, Specifications, Electrical. Changed the range of wire sizes from “18 through 24 AWG” to “14 through 24 AWG” on page 10 of 16 in Section 3, Installation, Before You Begin. This change was performed to be consistent with terminal block information provided in Appendix A, Specifications Electrical. Replaced VES logo header on cover. Corrected header spacing. Removed page count from back cover. Page count changed from 17 to 16. Changed inconsistent header spacing to consistent spacing throughout document. Corrected spelling. Changed the document revision on all footers from E01.03 to E01.04.
E01.06	02/05/2009	Non-content changes	Updated photo on front cover and in Section 1, Introduction. Changed dimensions from metric to US standard in Section 3, Installation, Mounting. Replaced VES logo on legal page.
E01.06	10/16/2009	Non-content changes	Added RS panel illustration to Section 3, Installation.

Underwriters Laboratories (UL)

File number (S 8485)

Fire Alarm Equipment

VES, LCC

NFPA

FCC Compliance

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the Installation Manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Any changes or modifications not expressly approved by VES, LCC could void the user's authority to operate this equipment under the rules and regulations of the FCC.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

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Section 1
Introduction

This manual describes the installation of eView, VF1172-00 and trim ring kit VF1173-00.

This section describes:

- Using This Manual
- Related Documentation
- Document Conventions
- If You Need Help
- Contacting VES For Repair

The figure below illustrates the front-panel of the eView, VF1172-00:

Figure 1-1
eView Front-Panel

Specify Trim Ring Kit VF1173-00 for recessed-wall-mounting of the eView.

Using This Manual

The following sections provide instructions for installing, testing and troubleshooting the eView:

Section 1	**Introduction** provides document conventions, the technical help-line, repair and return information.
Section 2	**Overview** provides a summary features of the eView.
Section 3	**Installation** describes how to install, configure and troubleshoot the eView.
Appendix A	**Specifications** provides operating characteristics of the eView.

Related Documentation

The following documents shall be used to provide additional information for installing the eView:

- eLAN H Installation Manual With Releasing VF1615-00, Rev.E05.XX
- eLAN A Installation Manual With Releasing VF1635-00, Rev.E02.XX
- Elite H Installation Manual, VF3515-00, Rev.E02.XX
- Elite A Installation Manual, VF3514-00, Rev.E02.XX
- eMatrix Installation Manual VF3513-00, Rev.E01.XX

Document Conventions

This document contains conventions for part numbers and writing style.

Part Numbers

Part numbers are provided in Section 1 and Appendix B of this manual. Refer to Appendix B, Equipment List for a complete list of part numbers required for completing this installation.

Writing styles

Before you begin using this installation manual, familiarize yourself with the following stylistic conventions:

Bold type	Indicates text that you must type exactly as it appears or indicates a default value.
Italic type	Denotes a displayed variable, a variable that you must type, or is used for emphasis.
Courier font	Indicates text displayed on a computer screen.

If You Need Help

If you need technical support contact VES at (800) 274 - 9514 or email techsupport@ves-network.com.
VES technical support is available Monday through Friday, 8:00 AM to 6:00 PM, Eastern Standard Time.

Contacting VES Tech Support

On-site technicians familiar with the product issue should contact VES Tech Support and include the:

- Product part number
- Purchase order or VES order number
- Product serial number
- Current function of the product
- Expected function of the product
- Installation of the product

RMA Returns Required

A Return Material Authorization (RMA) must be assigned to all products returning to VES. VES Tech Support will assign an RMA to a returning product after recording information collected from the on-site technician. VES cannot not accept product-returns that do not include an accompanying RMA number.

An RMA number is assigned when:

- A product issue is acknowledged by a VES Tech Support representative
- A product was damaged during shipping
- An order was placed using an incorrect part number *
- An order was placed using an incorrect part quantity *
- An order is no longer required *

** Restocking fees may apply.*

Warranty Returns

VES Tech Support can replace a defective product when the original purchase is within the warranty period defined in the sales contract. Check your sales-contract for more information or contact your VES sales representative about the warranty period described in your sales-contract.

Warranty products that have been placed in service will be repaired or replaced by VES.
Warranty products that have *not* been placed in service will be returned to VES stock and an equivalent credit will be provided to the contractor.

Advanced Replacements

Suspect-products that fail to operate in the field can be replaced quickly using the advanced replacement process. The advanced replacement process is available to all contractors who maintain an acceptable line of credit with VES.

Initiate the advanced replacement process by requesting an RMA number from a VES Tech Support representative. Advanced replacements can be shipped to your location when the suspect-product is covered under warranty and when a replacement product is in stock. All advanced replacement products are shipped UPS ground.

Expedited Replacements

Advanced replacements can be expedited at the request of the contractor. Shipping costs associated with this process are the responsibility of the contractor.

Returning Products

Suspect products returning to VES using the advanced replacement process must be received 30 days from the RMA issue-date. Contractors can be billed for returning products received following this 30 day period.

Suspect-Product Testing

Suspect-products returned to VES are tested to confirm operating failures experienced in the field.
If the suspect-product is found to be functional, contractors must absorb the following expenses:

- Shipping of the advanced replacement product
- Return-shipping of the suspect-product
- Cost of the advanced replacement product

Product Return Address

Prominently display the RMA number on all packages sent to VES for return.
Ship all return products to:
Attention: RMA # _____
VES, LLC
620 Allendale Road, Suite 175
King of Prussia, PA. 19406

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Section 2
Overview

The eView provides annunciation and control while operating on the COMMS (+ , -) terminals of the eLAN and Elite Panel. The COMMS (+, -) terminals provide an RS485 communication path to devices such as the VES eView.

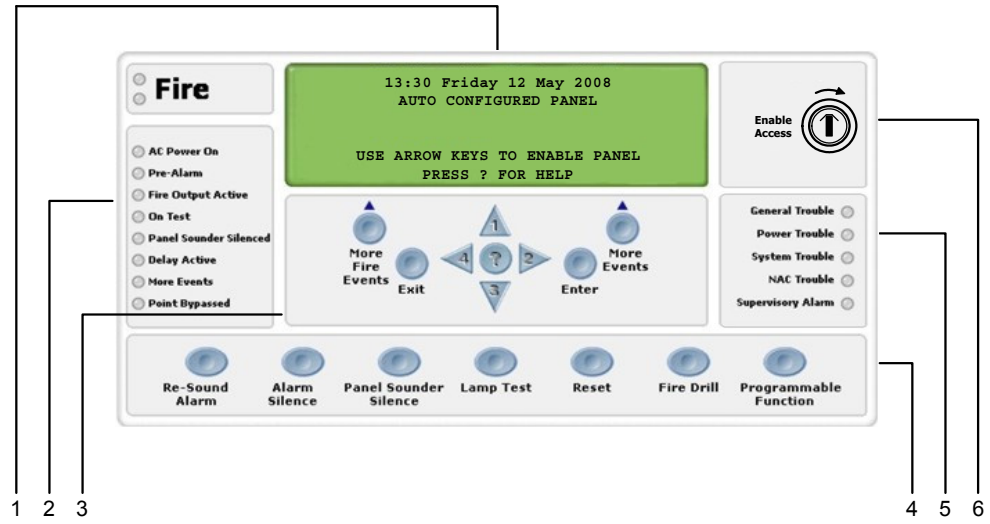
Front-panel controls and indicators of the eView are identical to those provided on the eLAN and Elite Panel. Operate Access Level 2 on the eView exactly as performed on the eLAN and Elite Panel.
The RS485 communication path does not support the simultaneous operation of Level 2 on multiple eViews. Operate Level 2 on one eView at a time when multiple eViews are connected on the RS485 communication path.

The buzzer of the eView can annunciate and silence in unison with the eLAN and the Elite Panel. The buzzer can also annunciate or silence locally using the front-panel controls of the eView.

Controls and Indicators

The figure below illustrates controls and indicators of the VES eView:

Figure 2-1
Controls and Indicators



Key	Description
1	LCD display
2	Left-panel-indicators
3	Upper-control-pad
4	Lower-control-pad
5	Right-panel-indicators
6	Access level keyswitch

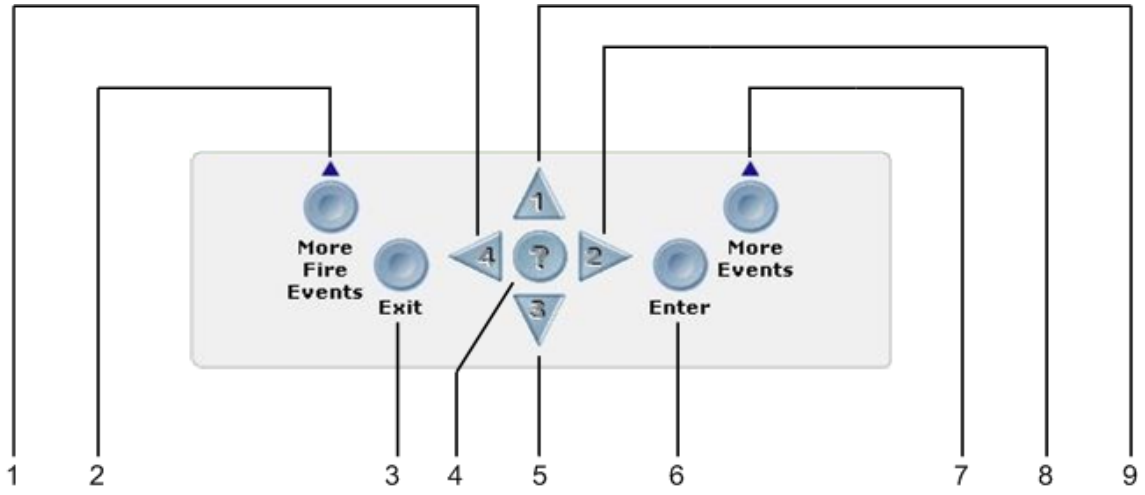
Controls

The VES eView contains upper-panel and lower-panel control-pads.

Upper-Control-Pad

The figure below illustrates the eView upper-control-pad:

Figure 2-2
Upper-Control-Pad

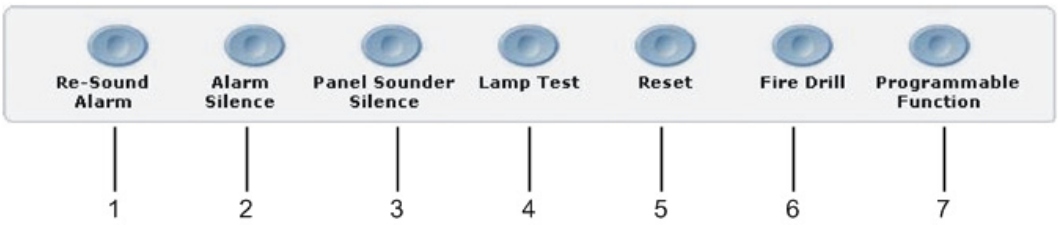


Key	Name	Description
1	Central keypad number four	Navigates menu selections to the left.
2	More Fire Events	Displays the number of alarms present on the eView and overrides the display provided by menu navigation.
3	Exit	Cancels the current menu selection.
4	Central keypad question mark	Provides a “help screen” for the current menu display and also displays status. For example, recommendations are displayed during alarm or fault conditions. If a menu function is accessed then help relating to that function will be displayed.
5	Central keypad number three	Navigates menu selections down.
6	Enter	Enables the menu selection.
7	More Events	Displays the number of events present and overrides menu navigation. Provides event status for Fire, Pre-Alarm, Trouble, Disablements and Other.
8	Central keypad number two	Navigates menu selections to the right.
9	Central keypad number one	Navigates menu selections up.

Lower-Control-Pad

The figure below illustrates the eView lower-control-pad:

Figure 2-3
Lower-Control-Pad



Key	Name	Description
1	Re-Sound Alarm	Re-sounds the alarm in Access Level 2 when sounders are muted with the Alarm Silence button.
2	Alarm Silence	Silences NACs connected to the eView after receiving authorization through Access Level 2.
3	Panel Sounder Silence	Mutes the internal buzzer of the eView. No other sounder outputs are affected by this operation.
4	Lamp Test	Tests front-panel indicators and the internal buzzer by illuminating all LEDs while darkening the front-panel display and sounding the buzzer.
5	Reset	Resets latching inputs such as fire and pre-alarm events after receiving authorization through Access Level 2. Fault events are non-latching inputs and cannot be cleared by the Reset button. Non-latching inputs are cleared when faults are cleared.
6	Fire Drill	Provides a fire drill for the eView after receiving authorization through Access Level 2. During the drill: • The “On Test” LED illuminates continuously • The “Fire” LEDs blink • The internal buzzer sounds intermittently • The display provides the message, “FIRE DRILL:FIRE DRILL ZONE 00* To stop the fire drill: 1 Press 4 to display the “SET ACCESS LEVEL 2 MENU”. 2 Provide Access Level 2 authorization. 3 Press Reset or Fire Drill on the lower-control-pad.
7	Programmable Function	Activates inputs, outputs or actions defined in the configuration when in Access Level 2.

Indicators

The VES eView contains left and right panel-indicators.

Left-Panel-Indicators

The figure below illustrates left-panel-indicators:

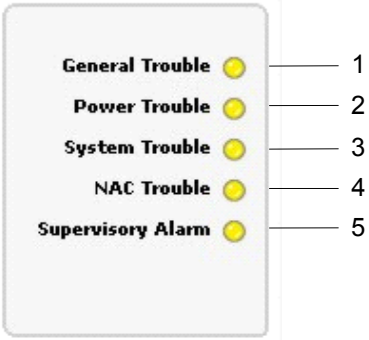
Figure 2-4
Left-Panel-Indicators

Key	LED	Color
1	Fire, NAC Output State - Flashing = NACs Activated - ON Continuous = NACs silenced - OFF = Panel and NACs Reset	Red
2	Fire, NAC Output State - Flashing = NACs Activated - ON Continuous = NACs silenced - OFF = Panel and NACs Reset	Red
3	AC Power On	Green
4	Pre Alarm	Yellow
5	Fire Output Active	Red
6	On Test	Yellow
7	Panel Sounder Silenced	Yellow
8	Delay Active	Yellow
9	More Events	Yellow
10	Point Bypassed	Yellow

Right Panel Indicators

The figure below illustrates right panel indicators:

Figure 2-5
Right Panel Indicators



Key	Description	Color
1	General Trouble	Yellow
2	Power Trouble	Yellow
3	System Trouble	Yellow
4	NAC Trouble	Yellow
5	Supervisory Alarm	Yellow

Section 3
Installation

This section provides instructions for connecting cables, mounting and testing the eView.
To complete the installation:

1. Notify the monitoring center and local security that the eLAN or Elite Panel will be temporarily out of service when installing the eView.
2. Remove the eView from its packaging and check its contents.
3. Mount the eView and connect cabling for power and communication.
4. Applying power to the eView.
5. Configure the eView using eSP Discovery when networking eLAN Panels on the VESNet or configure the eView using Loop Explorer when networking Elite Panels on the eNet.

Install this product in accordance with NFPA 72, the National Electrical Code and all local codes.

CAUTION !

The eView installation must be performed by qualified personnel familiar with electronic components. Electronic components within the eView are vulnerable to damage from electrostatic discharge. Ground straps must be worn by installers before handling eView circuit boards to prevent electrostatic discharge damage.

Before You Begin

Before you begin the installation, take a few minutes to review the installation information, gather the required items, and complete the tasks listed below to make the installation as quick and easy as possible.
Acquire the following items that are not included with the eView, but may be required for the installation:

Item	Quantity	Description
Communication Cabling	1	Specify required lengths of 14 through 24 AWG.
Power Cabling	1	Specify required lengths of 14 through 24 AWG.
Ground Strap	1	A ground strap is required for handling circuit boards. *The ground strap is not provided in the packaging of the eView.*

Mounting

Determine the best location for the eView before mounting it. Surface mounting devices should be mounted on a dry, flat surface. Position the device for mounting so that it is at eye height and level.

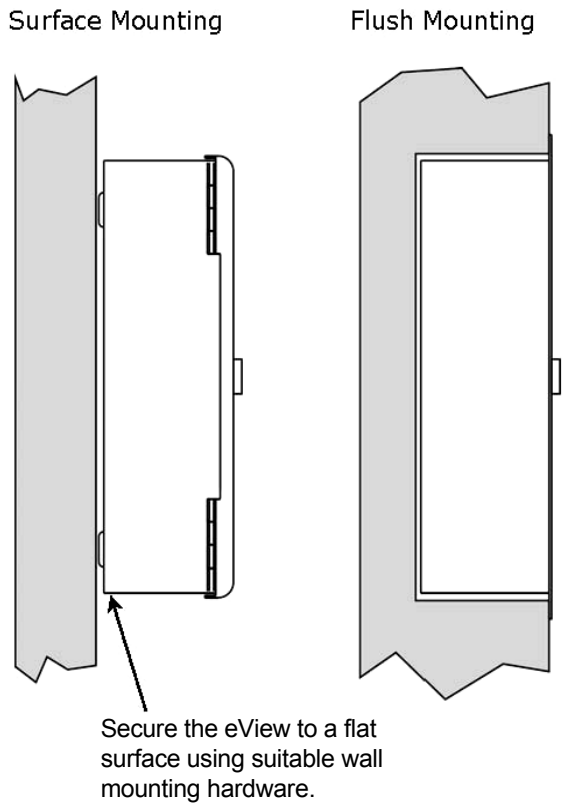
Secure the eView to a mounting location using four-screws that are 1/64” in diameter.

The eView should not be mounted in the proximity of heat sources or placed inside enclosures that do not have adequate ventilation.

Cables should be connected using suitable cable connections. If additional cable entry points are required, all debris caused by drilling of additional cable entries must be cleared before power is applied.

Figure 3-1 illustrates surface and flush-mounting positions of the eView:

Figure 3-1
Mounting Positions



Connecting the Circuit Board

Terminate all wiring connections at the single row of terminals located along the bottom of the eView circuit board. Shielded fire alarm cable such as FP200 and metal-cable-connectors must be used for all connections. The resistance of any conductor of the data cable must not exceed 25 ohms. The shield of the cable must be connected securely to the enclosure and to the metal-cable-connector.

Wiring

Wiring should enter the cabinet at the knockouts provided at the back and top of the enclosure. Wiring must not cross the front of the eView circuit board. Wiring must be dressed away from the eView circuit board when cabling enters the enclosure at locations other than the knockouts.

Data Termination

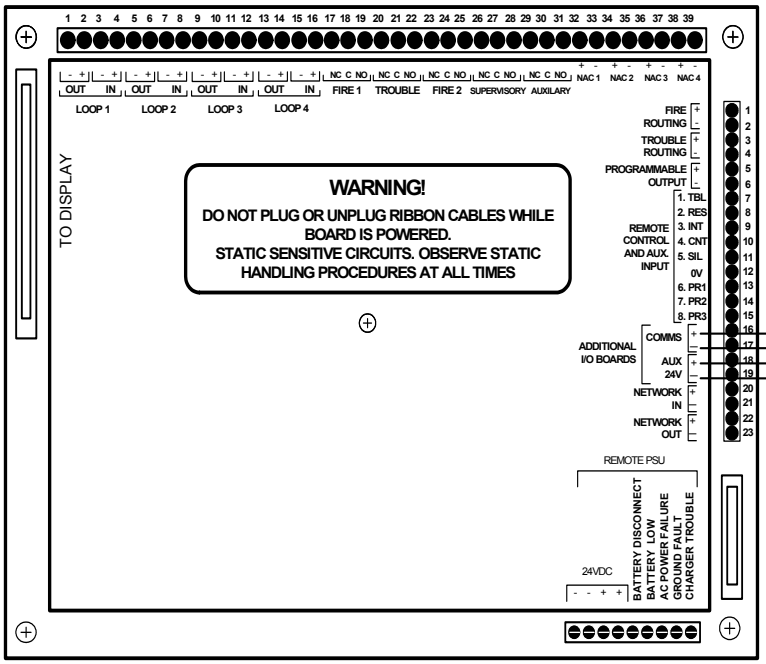
Up to 15 devices can be connected to an eLAN or Elite Panel. In and out terminals for data and 24V DC are provided on each device. All devices are supplied with a push-on-jumper at position J3 on the left of the PCB. This jumper connects a terminating resistor which needs to be in place for the last device on the data-line.
Remove all jumpers except the last device on the data-line if more than one device is connected.
If there is only one device connected then the jumper should be left in place.

The COMMS LED will flash quickly when a device is communicating with the eLAN or Elite Panel.
The COMMS LED will not illuminate when a device is disconnected on the eLAN or Elite Panel.

Connecting to the eLAN or Elite Panel

Figure 3-2 illustrates connections to the eLAN or Elite Panel:

Figure 3-2
eLAN or Elite Panel Connections

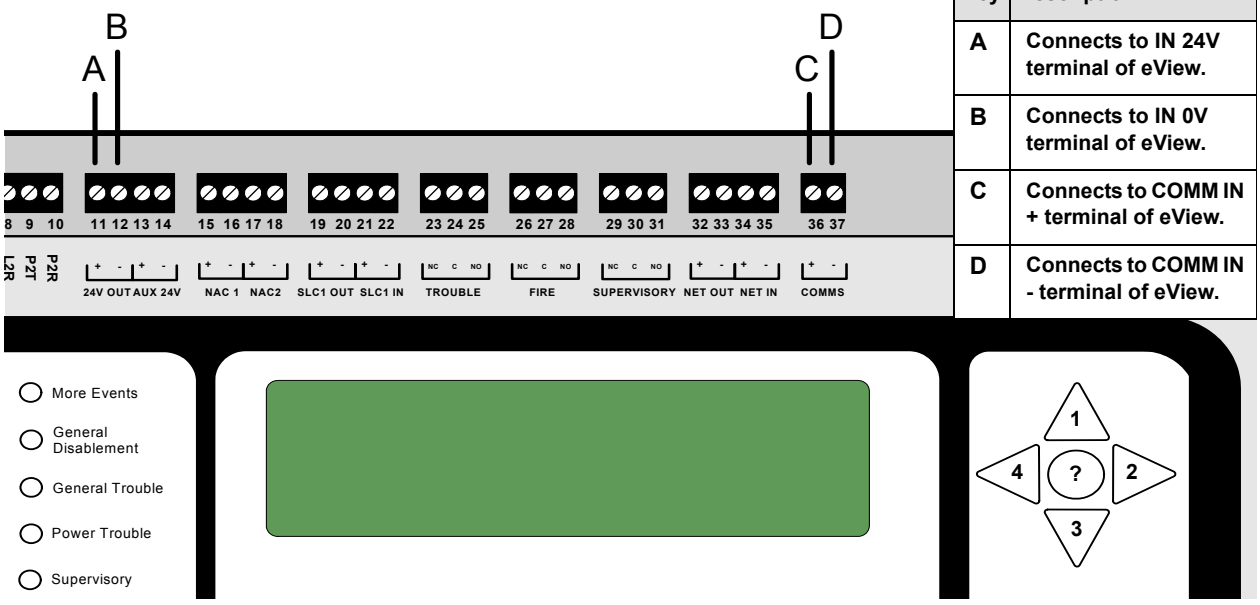


Key	Description
A	Connects to COMM IN + terminal of eView.
B	Connects to COMM IN - terminal of eView.
C	Connects to IN 24V terminal of eView.
D	Connects to IN 0V terminal of eView.

Connecting to the eLAN-RS or Elite-RS Panel

Figure 3-3 illustrates connections to the eLAN-RS or Elite-RS Panel:

Figure 3-3
eLAN-RS or Elite-RS Panel Connections



Key	Description
A	Connects to IN 24V terminal of eView.
B	Connects to IN 0V terminal of eView.
C	Connects to COMM IN + terminal of eView.
D	Connects to COMM IN - terminal of eView.

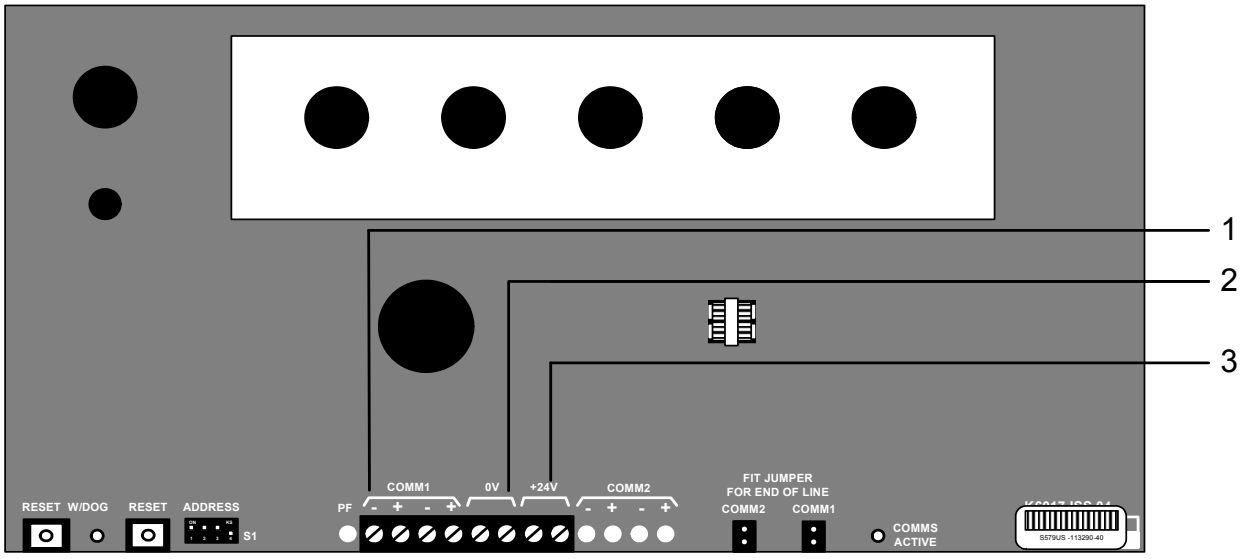
Connecting to the eView

The eView provides connections for RS485 communication and 24 VDC power.
To provide these connections on the eView:

1. Remove four screws from the front-panel of the eView.
2. Remove the rear cover.
3. Connect RS485 communication to the terminals of COMM1.
4. Connect 24 VDC power to terminals of 0V and +24V.

Figure 3-4 below illustrates eView terminal connections on the Control Unit Board:

Figure 3-1
Device Connections



Key	Name	Description
1	COMM1	Input terminals for RS485 serial bus communication.
2	0V	Negative power terminal (-) for 24 VDC return.
3	+24V	Positive power terminal (+) for 24 VDC.

Testing the Installation

Devices connected to the eLAN or Elite Panel must be allocated addresses so that the control panel can identify the integrity of the circuit path. *The address switch should never be set with all switches in the off position.*
Provide an address on the switch by setting a binary number from 1 to 15 on the 4 way, DIP switch located at the bottom of the PCB. The order of the addresses is not important but each device must be allocated a different address. The switch settings for each of the addresses are shown below.

Figure 3-5 illustrates binary addresses 1 to 15 on the eView:

Figure 3-5
Binary Addresses

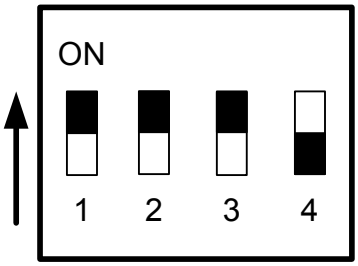
The black portion of the DIP identifies the switch actuator. An address of 7 is set when actuators of the DIP switch are "up" on positions 1, 2 and 3.
These settings identify:

- 2^0 for switch position 1, where $2^0 = 1$
- 2^1 for switch position 2, where $2^1 = 2$
- 2^2 for switch position 3, where $2^2 = 4$

The binary address for this DIP is 1 + 2 + 4 = 7

Figure 3-6 illustrates settings for an address of 7 on the DIP switch of the eView:

Figure 3-6
DIP Switch Settings



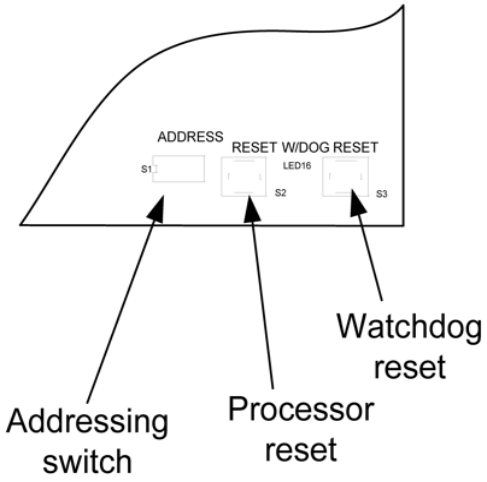
The arrow in the figure above identifies the on position of the DIP when the switch actuator is in the "up" position.

Processor and Watchdog Reset

The eView is controlled by a microprocessor, which will re-start itself and continue to run if it stops for any reason due to severe electrical interference such as an electrical storm.
A watchdog (W/DOG) LED indicator latches-on and a fault signal is provided to the eLAN or Elite Panel when the eView is being subjected to continuous interference.
Press the W//DOG RESET button on the bottom of the PCB if a processor re-start occurs. This resets the latched fault condition.A switch is also provided to manually re-start the processor PROC RESET.
This switch can be used to ensure that devices begin communicating with the eLAN or Elite Panel in a controlled manner.

Figure 3-7 illustrates switch settings for addressing, processor reset and watchdog reset:

Figure 3-7
Switch Settings



Appendix A
Specifications

This appendix provides specifications for the eView:

Electrical

MAXIMUM INPUT RATING	24 VDC @ 110 mA
STANDBY CURRENT	30 mA
CONNECTOR TERMINALS	Terminals accepts 14 - 24 AWG wire.
MAXIMUM NUMBER OF UNITS	The eLAN and Elite Panel can each power a maximum of four eViews from the Aux 24V terminals.

Communications

RS485 SERIAL BUS	RS485 two-wire Maximum distance from control panel: 3900 feet (1200 meters) Specify Belden 9271 cable.
MAXIMUM NUMBER OF UNITS	The eLAN and Elite can each support a maximum of 15 eViews on the 485 Serial Bus.

Operating Environment

LOW TEMPERATURE	32 +/- 3^{o}F (0 +/- 2^{o}C)	Dry indoor use only
HIGH TEMPERATURE	120+/- 3^{o}F (49 +/- 2^{o}C)	Dry indoor use only
RELATIVE HUMIDITY	93% +/- 2% @ 90 +/- 3^{o}F (32 +/- 2^{o}C)	This device functions in an atmosphere of relative humidity up to 93 percent, non-condensing.

Physical Specifications

ENCLOSURE DIMENSIONS	Shell: $18^{11/16}$ " x $14^{5/16}$ " x $3^{3/4}$ " Door: $18^{3/4}$ " x $14^{7/16}$ " x $^{11/16}$"
WEIGHT	11lbs. (5 Kg) maximum


FIRE
DETECTION
SYSTEMS