Honeywell

ADEMCO VPLEX-VSI
V-Plex® SHORT ISOLATOR

INSTALLATION AND SETUP GUIDE

DESCRIPTION

The VPlex-VSI loop isolator provides complete short, resistive short, and overload circuit isolation for devices on the V-Plex® polling loop of a compatible control panel. When a short or overload occurs on a polling loop branch installed with a VPlex-VSI, the VPlex-VSI illuminates its Trouble LED and isolates the defective branch from the system, allowing normal operation of the remaining V-Plex devices on other branches.

The VPlex-VSI automatically returns to normal operation and the Trouble LED is extinguished when the trouble condition on the output side of the VPlex-VSI is rectified.

NOTES:

- A control panel normally reports a short on the polling loop as a trouble on zone 97 or 997. When using the VPlex-VSI in a properly configured polling loop, this trouble condition will not occur. Instead, the zones isolated by the VPlex-VSI will report in trouble.
- A few panels do not have any delay on reporting a loop short as a trouble. On these panels, a 97 or 997 trouble will be reported for a polling loop short. Otherwise, operation is as described above.
- For UL installations, troubles must be reported to the Central Station.

FEATURES

- Detects and isolates polling loop branches with complete or resistive shorts, and overload or defective V-Plex devices on initial power up, or after power and normal polling loop signaling has been switched to its output.
- Can be used on all qualified controls that support the ADEMCO V-Plex polling loop.
- Operates automatically on qualified controls without the need for changes to existing control hardware or software.
- Powered directly from the V-Plex 2-wire polling loop.
- Can be placed on any major or minor branch in any configuration on the loop.
- LED indication of an isolated defective branch.
- Low power consumption.
- Designed to meet appropriate Regulatory Agency requirements.

INSTALLATION LOCATIONS

To determine where VPlex-VSI units should be installed, observe the maximums provided in "Wiring Limits" and begin by locating a VPlex-VSI at the control panel for every major branch of the polling loop or immediately following a V-Plex polling loop extender. Then, locate a VPlex-VSI at the start of every minor branch containing devices to be isolated from the rest of the loop in the event of a short or overload condition occurring on that minor branch. Typical loop configurations are shown in Figure 1.

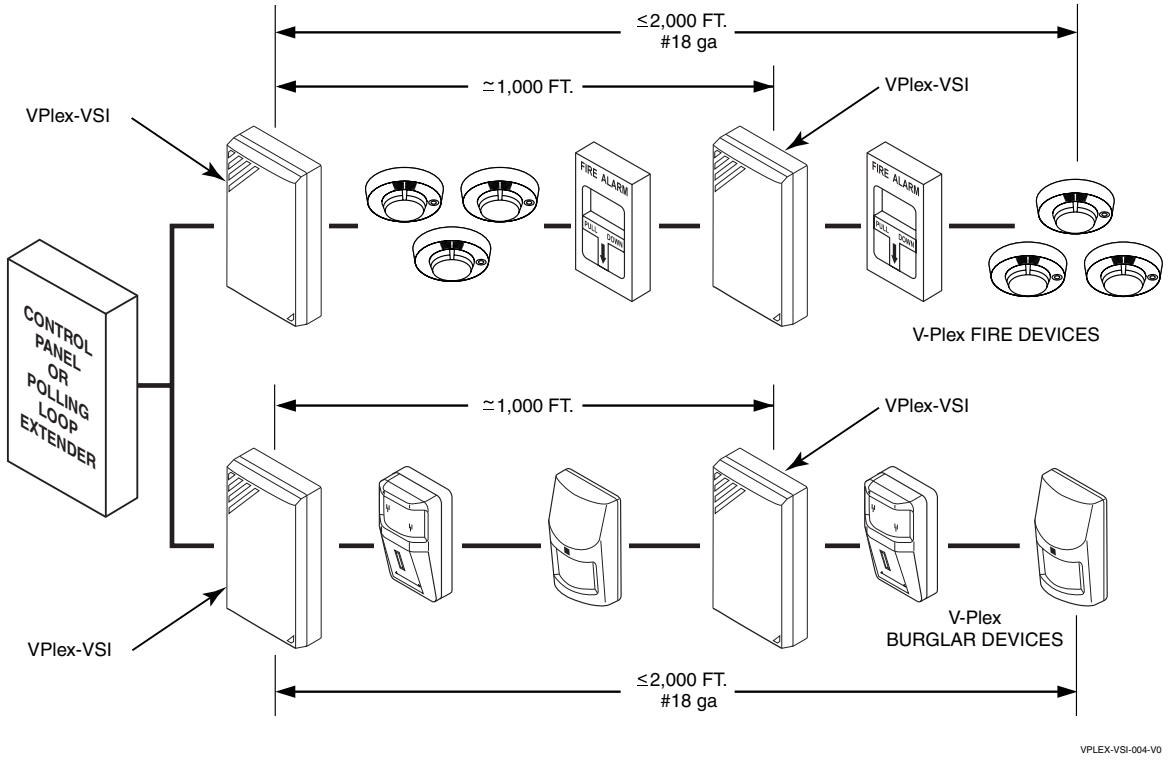


FIGURE 1: TYPICAL V-Plex POLLING LOOP CONFIGURATIONS

WIRING LIMITS

For best detection and isolation of powered-on shorts, defective devices, or overloads, the maximum distance between a VPlex-VSI and the V-Plex devices located farthest from the VPlex-VSI should be kept within the following wired limits:

Wire Gauge		Cable Length, maximum (Shielded or Unshielded)	
# 22	(0.64mm)	500 ft.	(152.40m)
# 20	(0.81mm)	800 ft.	(243.84m)
# 19	(0.91mm)	1,000 ft.	(304.80m)
# 18	(1.02mm)	1,200 ft.	(365.76m)
# 16	(1.29mm)	2,000 ft.	(609.60m)

NOTE: The VPlex-VSI does not add to the maximum length of any branch or the maximum sum length of all branches as listed in your control panel manual. When a conflict occurs, the shorter length should be considered as the maximum.

MOUNTING AND WIRING

The VPlex-VSI is designed to be surface mounted to a flat interior wall or to a single-gang electrical box. Wiring lengths should not exceed the values provided under "Wiring Limits."

UL

- All circuits are supervised and power-limited.
- All power-limited wiring must be separated from non-power limited and high-voltage wiring by 1/4" (6.4 mm).
- Refer to the control panel installation instructions for programming / installation requirements.

Follow the instructions below when mounting and wiring the VPlex-VSI.

1. Open the module's cover by inserting and twisting a screwdriver blade in the slot at the center of the cover's lower edge (see Figure 2).
2. Pass the two wires (coming from the direction of the control) through the opening in the case back and make connections to the module's + and – IN terminal block screws (see Figure 3).
3. Pass the two wires (extending out toward the end of the loop) through the opening in the case back and make connections to the module's + and – OUT terminal block screws (see Figure 3).
4. Mount the module to the wall or electrical box using self-tapping screws as shown in Figure 4. (Screws not supplied)
5. Close the module's cover.

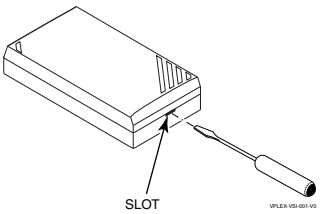


FIGURE 2: OPENING THE COVER

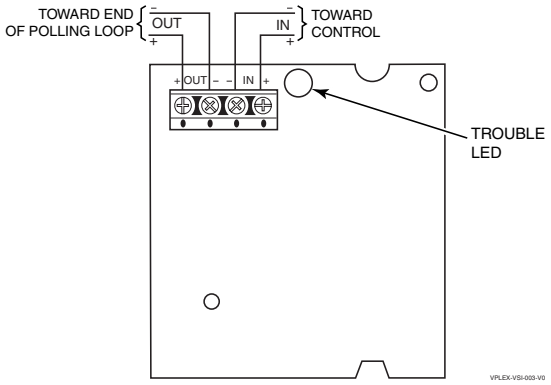


FIGURE 3: CONNECTING THE VPlex-VSI

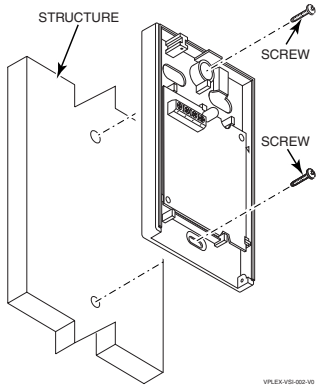


FIGURE 4: MOUNTING THE VPlex-VSI

SPECIFICATIONS

Operating Temperature	-10C to +55C
Operating Relative Humidity	0 – 95% non condensing
Voltage	8.0 - 11VDC
Current **Standby** **Active**	 1.2ma (LED off); 5.0ma (LED on).
Loop Current	Compatible with maximum V-Plex polling loop current for all VISTA panels.
Complete Short	< 10 ohms
Resistive Short Detection	(10 – 400) ohms during normal polling; (10 – 800) ohms at application of polling loop power
Overload Detection	Loop voltage level: < 6.0 VDC
Total VPlex-VSI modules (in tandem and/or parallel - per system)	No limit. However, allow 1.2ma per module.
Overall Dimensions	4.135" (10.5cm) long x 2.56" (6.5cm) wide x 0.87" (2.21cm) thick
NFPA-72 Compliant	

For the latest warranty information, please go to:
www.honeywell.com/security/hsc/resources/wa

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