

## ENFORCER IP Surge Protector

### Troubleshooting:

Wavy or ghost video image if connected to an image processor (e.g., multiplexer or DVR), but not if connected directly to the monitor.	<ul style="list-style-type: none"><li>• Move the cable away from possible sources of interference.</li><li>• Replace the cable with a new cable.</li><li>• Ensure that the protected cable is as short as possible</li></ul>
Video image background flutters between dark and light.	<ul style="list-style-type: none"><li>• Remove a local power source, or adjust the monitor's brightness and contrast.</li></ul>
Video image is weak or faded.	<ul style="list-style-type: none"><li>• Reduce the cable length.</li><li>• Replace with a higher-grade cable. Cat5 cable meets the specifications in the manual. Cat6 cable allows longer range.</li></ul>
No video image.	<ul style="list-style-type: none"><li>• Double-check that the cables were connected properly.</li><li>• Run a continuity test on all wires in the cable.</li></ul>

### Also Available from SECO-LARM:

Video Surge Protector  
VS-1V12BQ



PoE Surge Protector  
IPV-P188Q



HD-SDI Surge Protector  
VS-1V22AQ



**IMPORTANT:** Users and installers of this product are responsible for ensuring this product complies with all national, state, and local laws and statutes related to monitoring and recording audio and video signals. SECO-LARM will not be held responsible for the use of this product in violation of any current laws or statutes.

**WARNING:** Incorrect mounting which leads to exposure to rain or moisture inside the enclosure could cause a dangerous electric shock, damage the device, and void the warranty. Do not open the case of this device, as there are no field-serviceable components inside.

**WARRANTY:** This SECO-LARM product is warranted against defects in material and workmanship while used in normal service for a period of one (1) year from the date of sale to the original consumer customer. SECO-LARM's obligation is limited to the repair or replacement of any defective part if the unit is returned, transportation prepaid, to SECO-LARM. This Warranty is void if damage is caused by or attributed to acts of God, physical or electrical misuse or abuse, neglect, repair, or alteration, improper or abnormal usage, or faulty installation, or if for any other reason SECO-LARM determines that such equipment is not operating properly as a result of causes other than defects in material and workmanship. The sole obligation of SECO-LARM, and the purchaser's exclusive remedy, shall be limited to replacement or repair only, at SECO-LARM's option. In no event shall SECO-LARM be liable for any special, collateral, incidental, or consequential personal or property damages of any kind to the purchaser or anyone else.

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SECO-LARM U.S.A., Inc.



## IPV-PD88Q IP Surge Protector

### Manual



- Helps prevent damage to sensitive computer or CCTV equipment such as cameras, monitors, digital video recorders, video splitters, PCs, servers or networking hubs
- Intercepts repeated surges and spikes that could damage network equipment
- Installs on Cat5e/6 4-pair UTP cable with RJ45 jacks
- Passive operation – no external power required
- Includes a grounding post

SECO-LARM® SLI



**Introduction:**

The ENFORCER IP Surge Protector is a passive device that helps protect sensitive networking equipment from power surges. The device can be deployed in new installations or added to existing ones.

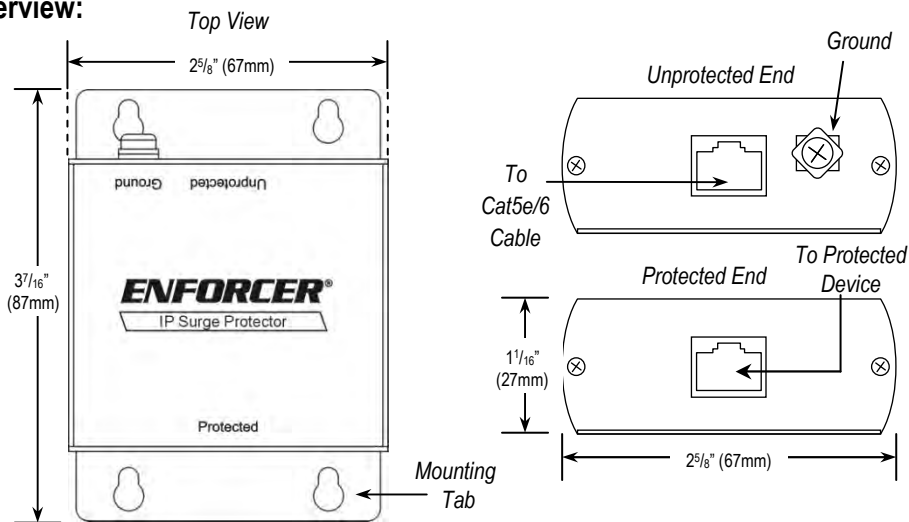
The IPV-PD88Q IP Surge Protector should be installed between devices connected by Cat5e/6 4-pair UTP cable to protect against surges that could damage computer or video equipment.

**NOTE:** For the best protection, installing two surge protectors is recommended: one at each end of the network cable.

**Specifications:**

Bandwidth	Up to 1GHz	
Maximum input	7.6Vp-p	
Insertion loss	<0.2dB	
Return loss	16dB@100Ω	
Frequency response	Up to 3dB@113MHz	
Insulation resistance	10,000MΩ	
Maximum surge voltage	4 kV	
Discharging current	100A	
Surge life	300 surges@100A	
Surge protection time	1ns	
Surge resistance	0Ω	
Signal passing capability	Breakdown voltage	7.6V
	Clamping voltage	10.0V
Connector	In	RJ45
	Out	RJ45
Impedance	42Ω	
Dimensions	3 <sup>7</sup> / <sub>16</sub> "x2 <sup>5</sup> / <sub>8</sub> "x1 <sup>1</sup> / <sub>16</sub> " (87x67x27 mm)	
Weight	4.4-oz (126g)	
Material	Aluminum	
Operating temperature	-40°~194° F (-40°~90° C)	

**Overview:**



**Parts List:**

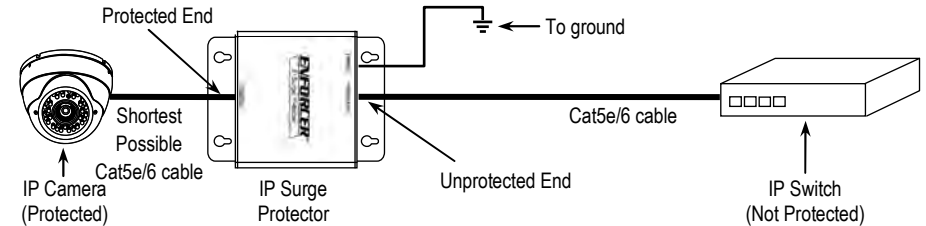
- 1x IP Surge Protector
- 1x 12" (305mm) Ground Cable
- 4x Mounting Screws
- 4x Plastic Wall Anchors

**Installation:**

**NOTE:** These instructions assume that 2 IP devices have already been connected together.

**Protecting a Single Device:**

1. Mount the IP Surge Protector as close as possible to the device to be protected.
2. Detach the Cat5e/6 cable from the device to be protected and attach to the "Unprotected" port of the IP Surge Protector.
3. Attach an additional short Cat5e/6 cable between the device to be protected and the "Protected" port of the IP Surge Protector. This cable should be as short as possible to connect the two devices. In addition the protected cables should not cross unprotected cables.
4. Use supplied ground cable to connect the ground (GND) terminal to earth ground. The system should use a single ground point and the protected device should be isolated from ground.



**Protecting Multiple Devices:**

1. Mount the two IP Surge Protectors as close as possible to each device to be protected.
2. Detach the Cat5e/6 cable from each device to be protected (such as an IP switch or IP camera) and attach to the "Unprotected" port on its respective IP Surge Protector.
3. Using additional short Cat5e/6 cables, connect each device to be protected to the "Protected" end of its respective IP Surge Protector. These cables should be as short as possible to connect each device to its respective surge protector. In addition the protected cables should not cross unprotected cables.
4. Use supplied ground cable to connect each IP Surge Protector's ground (GND) terminal to earth ground. The system should use a single ground point and the protected device should be isolated from ground.

