

# Installation Manual



## Passive Video Baluns

### Standard Baluns

#### EB-P501-01Q

- Standard

#### EB-P501-01SQ

- With surge protection



### Power or Data Pass-Through

#### EB-P501-02Q

- Standard

#### EB-P501-02SQ\*

- With surge protection



Patented

### 6" Pigtail

#### EB-P501-20Q

- Standard

#### EB-P501-20SQ\*

- With surge protection



### 6" Pigtail and Power or Data Pass-Through

#### EB-P501-21Q\*

- Standard

#### EB-P501-21SQ\*

- With surge protection



Patented

### RJ45 and DC Plug

#### EB-P501-22Q\*

- Video/Power (Red DC plug)

#### EB-P501-23Q\*

- Video/Power/Data (Black DC plug)



- Gold-plated BNC connector
- Transmits up to 1,300ft (400m) color video
- Passive operation – No external power required
- Uses low-cost Cat5e/6 cable instead of costly coaxial cable
- Terminal blocks – No crimping required\*\*
- High immunity from interference
- Small size allows mounting of multiple baluns behind a DVR

\* Special order item. Please contact SECO-LARM.

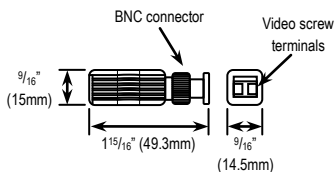
\*\*EB-P501-22Q and EB-P501-23Q use RJ45 connectors.

# SECO-LARM® SLI

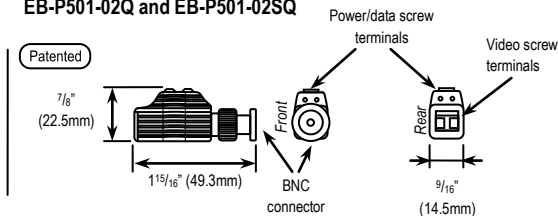


## Overview:

### EB-P501-01Q and EB-P501-01SQ

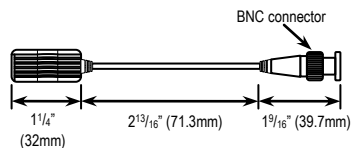


### EB-P501-02Q and EB-P501-02SQ



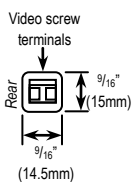
### EB-P501-20Q, EB-P501-20SQ

### EB-P501-21Q, and EB-P501-21SQ

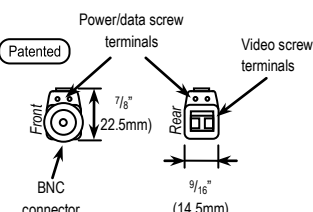


EB-P501-20Q shown.

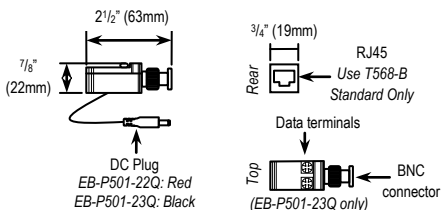
EB-P501-20Q and EB-P501-20SQ



EB-P501-21Q and EB-P501-21SQ



### EB-P501-22Q and EB-P501-23Q (Use T568-B Wiring Standard for RJ45)



EB-P501-23Q shown.

#### T568-B Wiring Specification

Pair	Wire	Pin	EB-P501-22Q	EB-P501-23Q
1	Blue/White	5	Power -	Power -
	Blue	4	Power +	Power +
2	Orange/White	1	Power -	Data -
	Orange	2	Power +	Data -
3	Green/White	3	Power -	Power -
	Green	6	Power +	Power +
4	Brown/White	7	Video +	Video +
	Brown	8	Video -	Video -

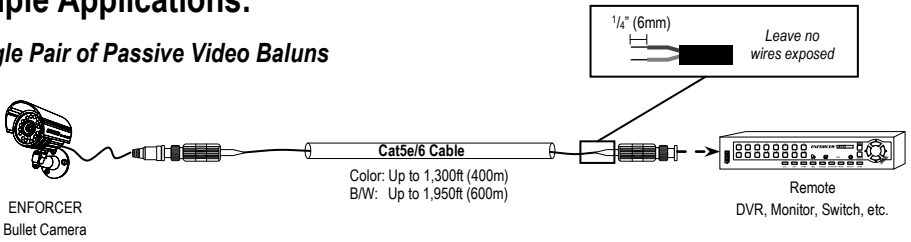
## Installation:

**IMPORTANT:** If using a balun to run power, make sure the terminals are connected to power at both ends. **Connecting a power supply to a camera's data will cause damage to the camera. Double-check all connections before powering units.**

- Video baluns are connected in pairs. Connect one balun to the CCTV camera's BNC connector, and connect another to the BNC connector of a DVR or other remote device.
- Make sure the distance between the camera and the remote video device does not exceed 1,950ft (600m) for black and white video or 1,300ft (400m) for color.
- Run Cat 5e/6 cable (UTP) from the remote video device to the camera.  
**NOTE:** Use T568-B wiring specification for RJ45 connections with EB-P501-22Q and EB-P501-23Q. See above.
- Connect the Cat 5e/6 cable to both baluns. **NOTE:** Video baluns are polarity-sensitive.
  - Strip approximately 1/4" (6mm) of insulation from the same two wires at both ends of a Cat 5e/6 cable.
  - Use a small screwdriver to loosen the video screw terminals on each balun. Insert one wire into each terminal at both ends of the cable. After the wires have been inserted into the terminals, there should be no bare wire showing.
  - For models with power or data pass-through:** Repeat steps 4a and 4b for the Power/Data terminals in order to run either power or data through the balun.  
**NOTE:** EB-P501-22Q and EB-P501-23Q are not compatible with any other baluns.
  - For EB-P501-22Q and EB-P501-23Q only:** Connect the balun at one end to the camera's DC jack. Connect the balun at the other end to the power supply's DC jack. Do not use these baluns with any other video/power/data balun.
- Connect the video baluns into the BNC connector of the CCTV camera and the remote video device.
- Test the connection by powering up the CCTV camera and remote video device to make sure they operate as expected.

## Sample Applications:

### Single Pair of Passive Video Baluns

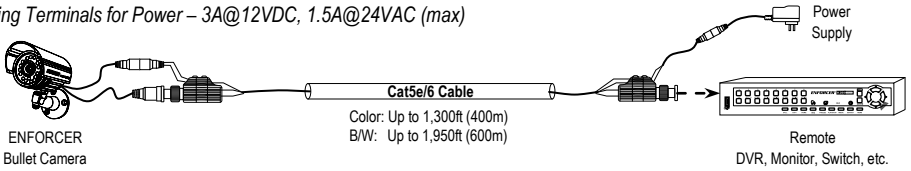


### Single Pair of Passive Video Baluns with Power or Data Pass-Through

**IMPORTANT:** Terminals must be used for power or data. Do not use for both.

Patented design for easy installation

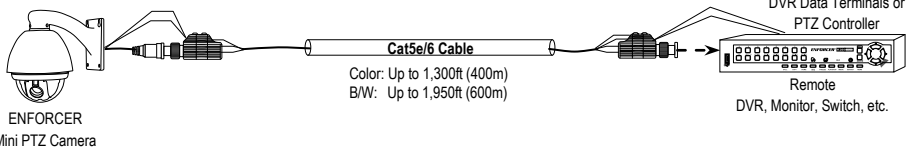
Using Terminals for Power – 3A@12VDC, 1.5A@24VAC (max)



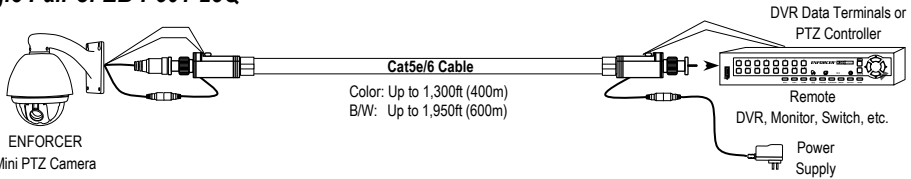
**Note:** Be sure to compensate for voltage drops.

**OR**

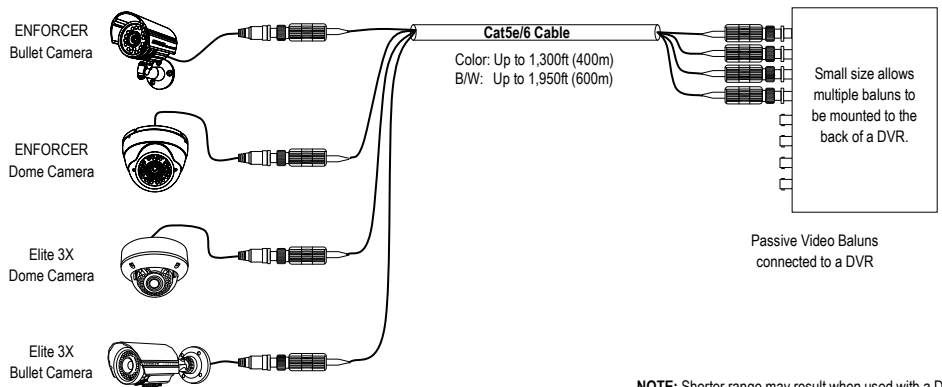
Using Terminals for Data



### Single Pair of EB-P501-23Q



### Multiple CCTV Cameras Over a Single Cat5e/6 Cable



**NOTE:** Shorter range may result when used with a DVR.

## Specifications:

Video	Range*	B/W	1,950' (600m)	
		Color	1,300' (400m)	
	Video format		PAL, NTSC, SECAM	
	Maximum input		1Vp-p	
	Insertion loss		<2dB per pair from DC~6MHz	
	Return loss		>18dB from DC~6MHz	
	Frequency response		DC~6MHz	
Connections	Common mode rejection		60dB, 15kHz~6MHz	
	Wire type		UTP (Unshielded Twisted Pair) 24~16 AWG	
	Wire category		Cat2 min.	
	UTP Connection		Gold plated	
	Attenuation		DC~6MHz, 2dB max.	
	Impedance	Coax, male BNC		75Ω@1MHz
Terminal block			100Ω@1MHz	
Other	DC Loop resistance		52Ω/1000' (18Ω/100m)	
	Differential capacitance		19pF/ft max. (62pF/m max.)	
	Power		No power required	
	Max. amperage		3A@12VDC, 1.5A@24VAC	
	EB-P501-02Q, EB-P501-02SQ, EB-P501-21Q, and EB-P501-21SQ Only			
	Operating temperature		32 ~131 F (0 ~55 C)	
	Storage temperature		-4 ~185 F (-20 ~85 C)	
	Humidity range		0~95% (Non-condensing)	
Case		ABS Plastic		

\*Shorter range may result when used with a DVR.

## Troubleshooting:

The image is wavy, shakes, or ghosts.

- Reduce cable length.
- Replace cable with higher grade cable.
- Install an ENFORCER Ground Loop Isolator (VG-1C12AQ).
- Install an ENFORCER Video Amplifier (VA-2101B-WQ).

There is no image.

- Check the power supplies of all devices connected.
- Double-check that the cable was connected properly.
- Connect a test monitor directly to the camera. If there is still no video, troubleshoot the camera and its power supply.

### 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. The SECO-LARM UL Listed Baluns with surge protection are to be used with other UL Listed Audio/Video product.

### 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 the life of the product from the date of sale to the original 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 the 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 damage of any kind to the purchaser or anyone else.

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