ENFORCER®

EB-P101-24GQ

Passive Video Balun with Ground Loop Isolator

Installation Manual

- Transmits up to 1,300ft (400m) color video or up to 1,950ft (600m) B/W video
- High immunity from interference
- Passive operation – No external power required
- Screwless terminals for quick installation
- 5" Pigtail for flexible installation
- Built-in surge protection

SECO-LARM® SLI

FC CE RoHS

Note: Products with model numbers that end with "Q" or that have a round green "Q" sticker are RoHS compliant.

Specifications:

Video	Range*	B/W	1,950' (600m)
		Color	1,300' (400m)
	Video format		NTSC, PAL, SECAM
	Maximum input		1.1Vp-p
	Insertion loss		<2dB per pair from DC~6MHz
	Return loss		>15dB from DC~6MHz
	Frequency response		DC~6MHz
	Common mode rejection		>40dB, 15kHz~6MHz
Connections	Wire type		UTP (Unshielded Twisted Pair) 24~16 AWG
	Wire category		Cat2 min.
	UTP Connection		Silver plated
	Attenuation		DC~6MHz, 6.6dB max.
	Impedence	Coax, male BNC	75Ω@1MHz
		Screwless terminal	100Ω@1MHz
Protection	Surge protection		Renewable solid state surge protection
	Isolation voltage		800V (min.)
	Insulation resistance		100MΩ
	Reaction time		<1ns
	Maximum clamping voltage		8V
Other	DC Loop resistance		52Ω/1,000' (52Ω/305m)
	Differential capacitance		19pF/ft max. (62pF/m max.)
	Power		No power required
	Operating temperature		32°~131° F (0°~55° C)
	Storage temperature		-4°~158° F (-20°~70° C)
	Humidity range		0~95 % (Non-condensing)
	Case		ABS Plastic
	Weight		2.1-oz (60g)
	Cable length		5" (153mm)
	Dimensions		$2^{3}/_{8}$"x$1^{1}/_{8}$"x$^{13}/_{16}$" (61x30x21 mm)

*Shorter range may result when used with a DVR.

Overview:
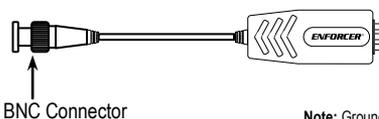
Screwless Terminals		
Gray	White	Black
Video +	Video -	Surge Ground

Surge Ground

Video +   Video -
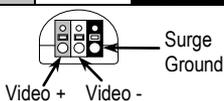
Note: Grounding wire is only needed for optional surge protection.

BNC Connector

Parts List:

1x Passive Video Balun with Ground Loop Isolator

1x Manual

Dimensions:

$1^{1}/_{8}$" (30mm)

2" (51mm)

4" (102mm)

$2^{3}/_{8}$" (61mm)

$^{13}/_{16}$" (21mm)
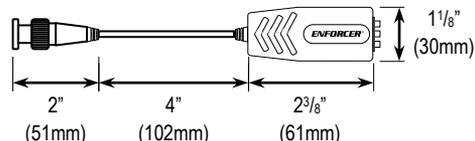
Installation:

1. Video baluns are connected in pairs. Connect one balun to the CCTV camera's BNC connector. Connect another balun to the BNC connector of a DVR or other remote device. **NOTE:** Only one of the baluns will be the EB-P101-24GQ. Please use another ENFORCER passive video balun, such as the EB-P101-01Q for the other side.
2. 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 video.
3. Run a Cat5e/6 cable (UTP) from the remote video device to the camera.
4. Connect the Cat5e/6 cable to both baluns. **NOTE:** Video baluns are polarity-sensitive.
   a. Strip approximately $^{1}/_{4}$" (6mm) of insulation from the same wires at both ends of Cat5e/6 cable.
   b. Push down the small tabs above the terminals. Insert the wires into the corresponding terminals. See "Overview" above for more information. After the wires have been inserted into the terminals, there should be no bare wire showing.
5. Connect the black terminal to an earth ground using a grounding wire (not included) if extra surge protection is desired.
6. Connect the video baluns into the BNC connectors of the CCTV camera and the remote video device.
7. Test the connection by powering up the CCTV camera and remote video device to make sure they operate as expected.

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Sample Installations:

Installing the EB-P101-24GQ on the Camera Side
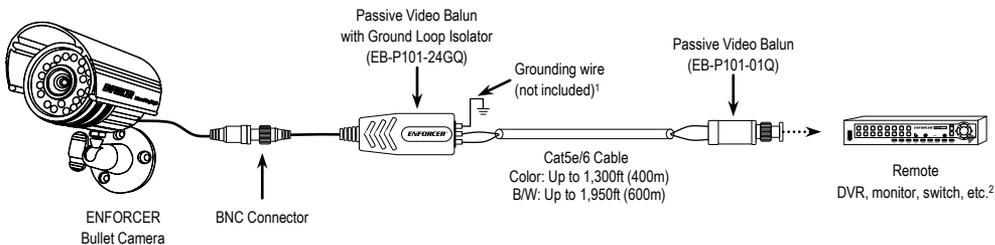
Passive Video Balun
with Ground Loop Isolator
(EB-P101-24GQ)

Grounding wire
(not included)[1]

Passive Video Balun
(EB-P101-01Q)

Cat5e/6 Cable
Color: Up to 1,300ft (400m)
B/W: Up to 1,950ft (600m)

Remote
DVR, monitor, switch, etc.[2]

ENFORCER
Bullet Camera

BNC Connector

[1]For surge protection use. Connect to earth ground for best results. Do not connect to the ground terminal of the camera's power supply.
[2]Shorter range may result when used with a DVR.

Installing the EB-P101-24GQ on the DVR Side
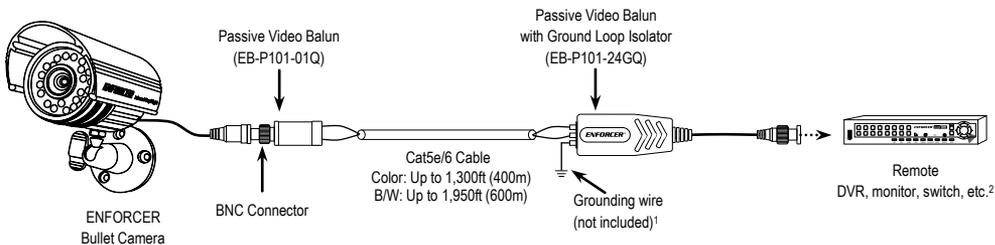
Passive Video Balun
with Ground Loop Isolator
(EB-P101-24GQ)

Passive Video Balun
(EB-P101-01Q)

Cat5e/6 Cable
Color: Up to 1,300ft (400m)
B/W: Up to 1,950ft (600m)

Grounding wire
(not included)[1]

Remote
DVR, monitor, switch, etc.[2]

ENFORCER
Bullet Camera

BNC Connector

[1]For surge protection use. Connect to earth ground for best results. Do not connect to the ground terminal of the camera's power supply.
[2]Shorter range may result when used with a DVR.

Troubleshooting:

Wavy or ghost image if connected to image processor (e.g., multiplexer or DVR), but not if directly to monitor.	• Move the Cat5e/6 cable away from possible sources of interference. • Ensure that the same twisted pair connects to a balun at both ends of the cable. • Replace the cable with a new Cat5e/6 cable.
Image background flutters between dark and light.	• Remove a local power source, or adjust the monitor's brightness and contrast.
Image is wavy and shakes.	• Try reversing polarity of the two wires at one end of the Cat5e/6 cable.
Image is weak or faded.	• Reduce the Cat5e/6 cable length. • Replace with a higher-grade cable. Cat5e cable meets the specifications in the manual. Cat6 cable allows longer range.
No image.	• Double-check that the Cat5e/6 and BNC cables are connected properly. • Run a continuity test on all wires in the cable. • Check that the camera and monitor are powered up.

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Also Available from SECO-LARM:

Passive Video Balun

Weatherproof Passive Video Balun

Passive Video, Power, and Data Balun

Passive Video Balun with 6" Pigtail

4-Port Passive Video Transceiver

16-Port Passive Video Transceiver

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 two (2) years 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 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.

NOTICE: The information and specifications printed in this manual are current at the time of publication. However, the SECO-LARM policy is one of continual development and improvement. For this reason, SECO-LARM reserves the right to change specifications without notice. SECO-LARM is also not responsible for misprints or typographical errors.

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