ENFORCER® VIDEO

MANUAL

EVT-PB1-L05Q

Video, Power and Data Balun with Voltage Converter



AC DC

DC DC

The ENFORCER EVT-PB1-L05Q Video, Power and Data (VPD) Balun with Voltage Converter combines the flexibility of a VPD Balun with the ability to convert AC or DC voltage for use in low voltage DC applications. The VPD balun with voltage converter changes 12/24VAC/VDC input voltage to a regulated 5/12/24VDC adjustable output voltage. Converted DC power is regulated to provide stable power suitable for voltage sensitive cameras.

- Transmit video up to 2,000' over Cat5
- Selectable 5/12/24VDC output via jumper
- Regulated and filtered output.
- Output current protection – 500mA
- Built-in overload protection.
- Dual-colored LED power output indicator:
  Red: 5/12VDC
  Blue: 24VDC
- Green power input LED indicator.
- Small size for easy installation.

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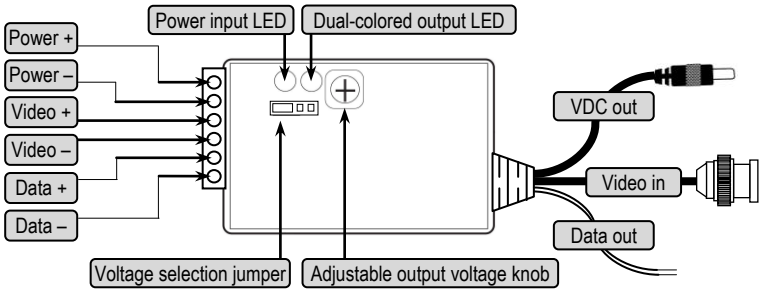
RoHS CE

NOTE: Products with a model number that ends with "Q" or have a round green "Q" sticker represent RoHs compliant products.

Specifications:

		EVT-PB1-L05Q		
Voltage Converter	Output voltage	5/12/24VDC selectable by jumper (default 12VDC)		
	Operating voltages	Input voltage		Regulated output voltage
		8 ~ 30VDC/VAC		5VDC
		15 ~ 30VDC/VAC		12VDC
		24 ~ 27VDC/VAC		24VDC
	Output current	500mA @ 5/12/24 VDC		
	Voltage input LED indicator	Green		
	Voltage output LED indicator	Red	5/12VDC	
		Blue	24VDC	
	Current protection	PTC 500mA		
Video	Range	2,000' (610m) B/W, 1,300' Color (400m)		
	Video format	RS170, NTSC, PAL, SECAM, CCIR		
	Maximum input	1vp~p		
	Insertion loss	< 2dB per pair from DC ~ 5 Mhz		
	Return loss	>-15dB from DC ~ 5 Mhz		
	Common mode rejection	60dB, 15KHz~5MHz		
	Frequency response	DC ~ 5 Mhz		
	Power	No power required for video		
Connections	Wire type	UTP (unshielded twisted pair)		
	Wire category	20 - 24 AWG @ screwless terminal blocks		
		CAT2 or better, CAT5 ideal, CAT6 improves range		
	Connectors	In		Removable terminal block
		Out	Video	Pigtail BNC
			Power	Pigtail DC plug (center pin positive)
			Data	Wire
	Attenuation	DC ~ 5 Mhz, 1.5 dB max		
	Impedance	Coax, male BNC: 75 Ohms@ 1 MHz		
		Terminal block: 100 Ohms @ 1 MHz		
Other	Dimensions	3 1/4" x 2 9/16" x 3/4" (81 x 65 x 20mm)		
	Humidity range	0 ~ 95%		
	Temperature Range	14°~165°F (-10°~74°C)		
	Case	ABS Plastic		

Figure 1: Video, Power and Data Balun with Voltage Converter Detail



Installation:

1. Run UTP cable to the camera where the VPD balun is being installed.
2. Remove the cover by simultaneously pressing down on the top cover, and lifting up on the side mounting tabs. This will release the tight seal between the top and bottom covers.
3. Set the desired output voltage using the selection jumper according to table 1 below.
4. Connect the output wires from the power supply to the power input terminal blocks on the VPD balun. Observe correct polarity.
5. Apply power and use table 2 and 3 below to check the status of the input and output voltages. **NOTE: To avoid potential damage, use a voltage meter to ensure proper voltage is present at the input and output terminal blocks. Observe correct polarity.**
6. Connect the camera to the DC plug on the balun.
7. If the output voltage is low, then turn the rotary knob clockwise to increase the voltage or counter-clockwise to decrease the voltage.
8. Connect the video input male BNC input in from the VPD Balun to the camera.
9. If using a RS-485 controlled camera, connect the data in wires to the camera.
10. Using the remaining terminal blocks, connect the data and video wires to the balun according to Figure 1.
    IMPORTANT: Correct polarity must be observed on all connections.
11. Replace the cover on the voltage converter.

Table 1: Adjustable Output Voltage

Input Voltage	Output Voltage	Adjustable Voltage Range	Jumper Settings
8~30VDC/VAC	5VDC	4.5 ± 5%VDC	
15~30VDC/VAC	12VDC	12.6 ± 5%VDC	
24~30VDC/VAC	24VDC	24.0 ± 5%VDC	

Table 2: Wiring Distance 12 VDC Voltage Drop

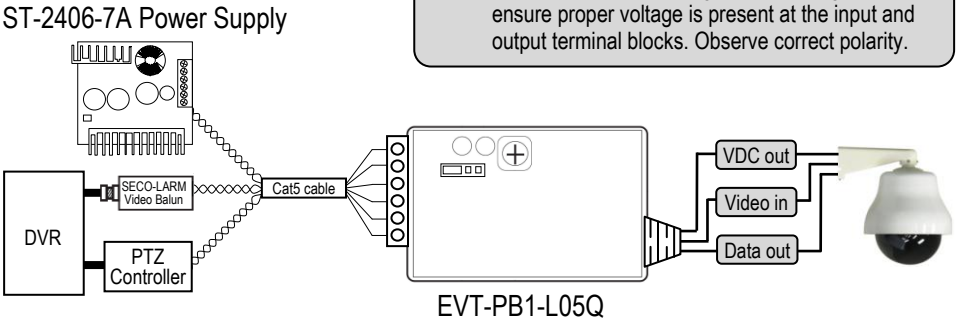
24 AWG Wire	1 Pair	2 Pairs	3 Pairs
250mA	90'	220'	550'
500mA	45'	110'	285'
750mA	30'	75'	190'
1A	20'	55'	140'

Table 3: LED Indicators

LED colors	Status
Green	Input power is connected
Red	Output voltage is 5 / 12VDC
Blue	Output voltage is 24VDC

Figure 1: Sample Application

NOTE: To avoid potential damage, use a voltage meter to ensure proper voltage is present at the input and output terminal blocks. Observe correct polarity.



Troubleshooting:

Output voltage is low/high	• Check output voltage jumper settings. • Check output voltage adjustment. • Check input voltage to make sure it meets the input requirements
Green input LED not on	• Check input power connections with multimeter to verify correct input voltage
Blue/red output LED not on	• Check to see if the load exceeds the maximum limit • Temporarily disconnect power input and output wires for 30 seconds before connecting

Also Available from SECO-LARM:

Passive VGA Balun



EVT-SBP-GQ

Passive & Active Video Baluns



EVT-PB1Q
(shown)

BNC-to-VGA Converter



VC-1BAQ

VPD Balun with Voltage Booster



EVT-PB1-H05Q

Voltage Booster



ST-HB105-TTQ

Voltage Converter



ST-LA110-TTQ

Video Amplifiers



VA-2101B-WQ

Video Distributors



VA-1104B-WQ

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