

**OVERVIEW**

The BL3325-PVD transmits high quality video up to 2000 feet\*. By combining power on the same UTP cable, it greatly simplifies the installation of security cameras. Video, Power and Data are routed through the RJ45 jack for a neat and efficient installation. Sending distance for power is indicated in the table below.

The BL3325-PVD also features two stage surge suppression and a high performance - advanced balun design. Extremely durable, it is backed by a Limited Lifetime Warranty.

**IMPORTANT:** If you are using existing telephone company wiring, it must be free of loading coils, metal oxide surge protectors and bridge taps. Punch-Down blocks are acceptable.

The cable run should not exceed the specified distances. In order to determine the distance of existing cable runs, connect the wires of a pair at one end and use an ohm meter to measure the loop resistance at the other end.

For 24 gauge wire, loop resistance is typically 51 ohms per 1000 feet, while 26 gauge has a resistance of 82 ohms per 1000 feet.

\* **PLEASE NOTE:** Performance and distance may be affected by the quality of the cable used. Better performance may be obtained with the use of Category 5e or Category 6.

**INSTRUCTIONS**



**INSTALL WIRE.**

Step 1: At the camera, connect the BL3325-PVD's male BNC to the camera baseband video output. Connect the 18 gauge power wires to the camera Power input. For camera's that support Pan Tilt Zoom telemetry using RS-422 or RS-485, connect the BL3315-PVD blue and white 24 gauge wires to the camera's data connectors. Maximum distance is indicated in table below.

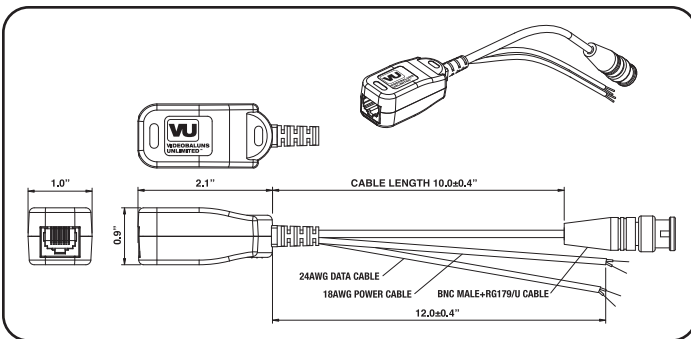


Step 2: Using the BL3325-PVD RJ45 connector, use a 4-pair category 5 or better UTP cable to connect to the monitor or DVR.



Step 3: At the monitor or DVR side, connect the BL3325-PVD's male BNC to the monitor or DVR video input. Connect the 18 gauge Power wires to a Class II power supply. Connect the 24 gauge Data wires to the control equipment data connectors.

**SPECIFICATIONS**



**BL3325-PVD** Distance and Power (feet)

	<b>24vac</b>	<b>28vac</b>
100mA	900	2000
300mA	300	700
1000mA	100	200

Additional 25% distance is possible using Category 6 23 gauge wire

<b>Video</b>	Bandwidth	DC to 8 MHz
	Maximum Input	1.1vp-p
	Format	NTSC, PAL, SECAM
	Insertion Loss	<1 dB
	Return Loss	-25 dB
<b>Distance</b>	Video	Up to 2000 feet*
	Power	See table
<b>Wire</b>	Unshielded Twisted Pair	Cat 2, 3 5 or better.
		24 gauge or lower solid copper twisted pair wire
<b>Impedance</b>	BNC Connector Side	75 ohms
	UTP Connector Side	100 ohms
<b>Environment</b>	Temperature Operating	0 to +55 C
	Temperature Storage	-20 to +85C
	Humidity (non condensing)	0 to 95%
<b>Mechanical</b>	Size without cable (LxWxH in inches)	2 1/8 x 1 x 1
	Cable length	10 inches
<b>Warranty</b>	Limited Lifetime	
<b>Regulatory</b>	RoHS	
	Flammability	94V-0

\* Distance will vary depending on cable quality

## TROUBLESHOOTING

### **No video**

- After ensuring that the CCTV equipment is functioning properly, verify that UTP and BNC connections are secure, use a continuity tester to test for shorts or breaks in the cable.

### **Image is faded, fuzzy or distorted**

- Use only unshielded twisted pair, preferably Category 5 or better rated cable.
- Do not exceed specified distance. Note that the higher the category rating of cable, the greater the distance possible.
- Make sure that polarity is not reversed, observe polarity on each balun, Punch-Down block or splice.
- Verify that both wires of the twisted pair are properly connected and that there are no shorts along the wire path.

### **Video does not sync and image is distorted**

- Check for the presence of a ground loop. (see below)
- Look for factors that can create crosstalk. Crosstalk is due to electromagnetic interference (EMI) and can occur when video signals are sent in opposite directions within the same jacketed cable. Try limiting this distance to under 1000 feet or using cable that is rated Category 5 or better.

### **Video does not sync and the image is severely distorted with large white sections**

- Try reversing the polarity of the twisted pair.

### **Horizontal bars traveling up or down the screen**

- This may indicate the presence of a ground loop. When different power sources are used for camera, monitor or other equipment, differing ground potentials can cause ground loops. This causes voltage to flow between the CCTV equipment and the video baluns. A voltage greater than 0.5 volts can damage the baluns.
- One solution is to leave the camera ungrounded, as long as this meets the manufacturers recommendations and local electrical code.
- If this is not possible, an isolation transformer can be installed between the video balun pairs.
- Ground loops can be prevented by using the same power source for all equipment. UTP provides a convenient way of running power from a central point when unused pairs remain. When using three pairs of 24 gauge wire to run 24 VAC, the voltage drop typically limits the run to 500 feet (for safety never use UTP cable for high voltage applications). For greater distances, a lower gauge cable is needed. Several cable manufacturers now offer a combined UTP and power cable for added convenience.

### **Ghost Images**

- In the cable run, check for bridge taps, untwisted sections of wire or split pairs. Bridge taps are unterminated sections of wire attached to the main cable loop. These should be removed because they can cause "ghosts" or faint versions of the original image to appear.
- Split pairs occur when one wire is taken from one pair and another wire is taken from another pair. This can severely degrade the performance of the cable. Use paired wires only.

### **No Power**

- Possible cause is incorrect pin configuration – Solution – correct the wiring configuration
- Possible cause is that You may have exceeded the maximum distance – Solution - increase voltage at supply side, move power supply closer to camera.

### **No Data**

- Insure that polarity is correct and that distance meets data control manufacturer specifications.

## LIMITED LIFETIME WARRANTY

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