

10M/100M Ethernet Transmission for IP Network Camera Connection

VDL4000 SERIES

Current IP camera security system installation uses standard Cat-6 as the link cable, transmitting only up to 100 meters far. Now our VDL4000 offers a more convenient and reliable solution for IP Network cameras. It transmits IP signals up to 800 meters to the Local side and also supplies DC power simply through one coaxial cable.

Features:

- IP addresses and other setups are not required. Protocol Free.
- Supports all types of (HD) IP cameras.
- An durable coaxial cable (RG-6/U) rather than a LAN cable (Cat-6) is used for transmission.
- Sends DC power (Safe-DC mode) and duplex (bi-directional) IP signals through a single coaxial cable.
- Network Connection : Ethernet 10M/100M, RJ45 (8P8C) connector.
- More than 800 meters of transmission distance from Local unit to Remote unit. (RG-6/U, 5C-2V or equivalent coax cable are recommended).
- Thick or heavy duty coaxial cables increase the transmission distance to be more than 1,000 meters.

The Features of the “Safe DC Power”

Remote modules are tested before the system sends power. When coaxial cable linked between the VDL4000 system has a short circuit or open circuit, the power supply is cut off immediately which shuts down the system to protect the system and the related camera equipment. The Viewer then activates the auto detection function, which tests the connection repeatedly. After the connection goes back to normal, the system will reactivate the power supply.

The Local side detects the connection status every 2.5 seconds until the disconnection problem is solved.

The system will shut down if any of the following situations occur:

1. **Open circuit**—System shuts down after open circuit of the coax cable lasts for more than 0.5 seconds.
2. **Short circuit**—System shuts down within 10 microseconds after short circuit.
3. **Over loaded**—System shuts down when the power is overloaded more than 10%.
4. **Signal loss**—System shuts down after IP signal is lost for more than 10 seconds.

If any of the above circumstances happen, the system will automatically try to reconnect recurringly. Once the condition is solved, the system will reconnect and supply power again.



Fig. 1 VDL4000 RU/ LU, and Power Adaptor

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Safe Power Transmission

- DC power output at Remote unit : from 5VDC to 24VDC depending on camera requirements.
- DC power input at Local unit : 48VDC with a power adaptor of 60W.
- With the short circuit and overload detector, when power exceeds the unit capacity, it will be shut down automatically.
- With the power detect function, when the link cable is disconnected, the power will shut off.
- In the initial stage, if there is an incorrect connection between the link cable and the BNC, the system will detect the problem without sending power.

- Built-in TVS and GDT inside the modules protect equipment against lightning-induced current and transient voltage.
- * TVS is Transient Voltage Suppressors.
- * GDT is Gas Discharge Arrester Tube.

Application Notes

Thanks to the high power consumption capacity, the VDL4000

- Supports various types of IP cameras.
- Supports various types of PTZ IP cameras.
- Supports single link or multi cameras via Hub switch link.

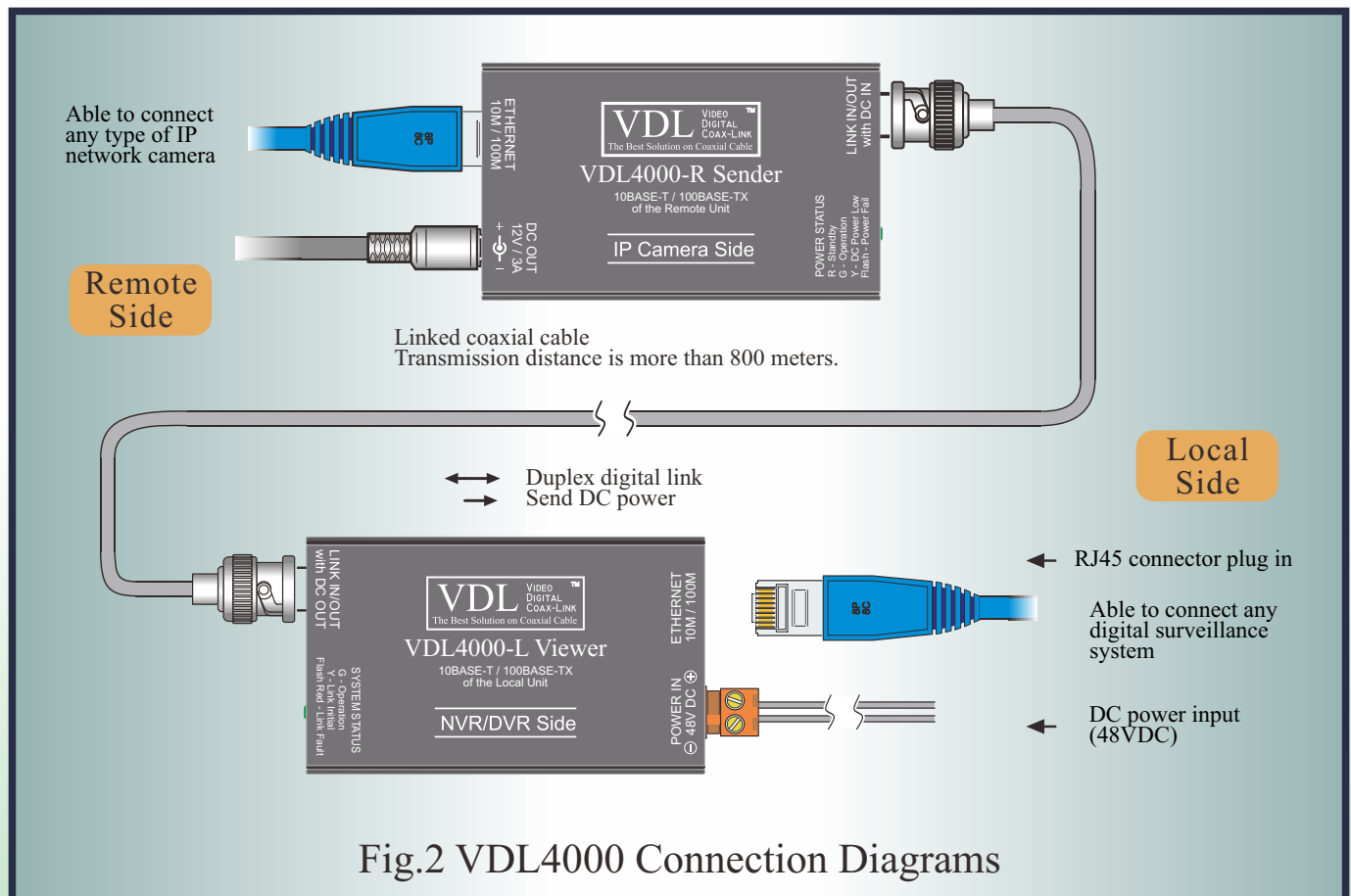


Fig.2 VDL4000 Connection Diagrams

Biwave Technologies offers the Best CCTV Solutions over Coaxial Cable.

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