



Model NV-218A-PVD

Video Transceiver



Features:

- Power-Video-Data (PVD™) signals are routed via UTP and RJ45 or screwless terminal block for organized pass-through of inputs/outputs
- Mini-coax pigtail supports in-camera mounting in most dome cameras
- Use with NVT's PVD™ Power Supply Hubs and Cable Integrators
- Up to 3,000ft (1km) with a NVT DigitalEQ™ Hub or active receiver, (see Power Distance Chart)
- Up to 1,500ft (460m) with a NVT StubEQ™ Hub
- Frequency response DC to 10MHz (see Recommended Distance Chart)
- Exceptional interference rejection
- Built-in transient protection
- Limited lifetime warranty

The NVT Model NV-218A-PVD Video Transceiver with Power and Data is a passive (non-amplified) device that allows the transmission of real-time monochrome or color video over Unshielded Twisted-Pair (UTP) telephone wire. Baseband (composite) signals of any type are supported.

This new product incorporates the transceiver engine of NVT's popular NV-214A-M video transceiver with the added value of Power and Data connections to and from the camera. Power, Video and Data are routed via UTP and RJ45 or screwless terminal block inputs/outputs. Used at the camera, the passive NV-218A-PVD has a 9" mini-coax pigtail lead for direct video output connection from the camera. Along side this coax lead are two sets of screwless terminal blocks for quick pass through connections for your camera's Power and Data. On the "house" or output side of the product you have the option of using convenient screwless UTP connectors or the more efficient RJ45.

The unparalleled interference rejection and low emissions of the NV-218A-PVD allow video signals to co-exist in the same wire bundle as telephone, datacom, or low-voltage power circuits. This allows the use of a shared or existing cable plant. The NV-218A-PVD carries a limited lifetime warranty and is UL and cUL listed.

Network Video Technologies

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Technical Specifications

WIRE DISTANCE (Power Distance Chart)

Supply voltage, wire resistance and minimum camera operating voltage determine the maximum camera distance. Examples assume a minimum 21VAC at the camera:

| Fixed 24VAC Camera | | NV-216A-PV | |
|-------------------------------------|----------------|----------------|--|
| Power Supply Voltage | 24 VAC | 28 VAC | |
| Minimum Voltage at Camera | 21 VAC | 21 VAC | |
| B&W Camera 100 mA, 2.4 W | | | |
| 2-pair 24 AWG | 899ft (274m) | 1,840ft (561m) | |
| 2-pair 23 AWG | 1,134ft (346m) | 2,320ft (707m) | |
| Color Camera 200 mA, 4.8 W | | | |
| 2-pair 24 AWG | 450ft (137m) | 916ft (279m) | |
| 2-pair 23 AWG | 567ft (173m) | 1,155ft (352m) | |
| Color Camera 300 mA, 7.2 W | | | |
| 2-pair 24 AWG | 300ft (91m) | 612ft (186m) | |
| 2-pair 23 AWG | 378ft (115m) | 771ft (235m) | |

| Fixed Dual Voltage 24VAC/12VDC Camera with NV-216A-PV | | NV-216A-PV | |
|---|----------------|----------------|--|
| Power Supply Voltage | 24 VAC | 28 VAC | |
| Minimum Voltage at Camera | 14 VAC | 14 VAC | |
| B&W Camera 100 mA, 2.4 W | | | |
| 2-pair 24 AWG | 1,753ft (534m) | 2,454ft (748m) | |
| 2-pair 23 AWG | 2,210ft (674m) | 3,000ft (915m) | |
| Color Camera 200 mA, 4.8 W | | | |
| 2-pair 24 AWG | 874ft (266m) | 1,223ft (373m) | |
| 2-pair 23 AWG | 1,102ft (336m) | 1,542ft (470m) | |
| Color Camera 300 mA, 7.2 W | | | |
| 2-pair 24 AWG | 583ft (173m) | 815ft (250m) | |
| 2-pair 23 AWG | 735ft (224m) | 1,025ft (310m) | |

| P/T/Z 24VAC Camera | | NV-218A-PVD | |
|------------------------------------|-------------|-------------|--|
| Power Supply Voltage | 24 VAC | 28 VAC | |
| Minimum Voltage at Camera | 21 VAC | 21 VAC | |
| P/T/Z Camera 1,000 mA, 21 W | | | |
| 2-pair 24 AWG | 90ft (27m) | 210ft (64m) | |
| 2-pair 23 AWG | 113ft (35m) | 265ft (81m) | |

| Fixed 12VDC Camera used with NV-226J-PV | | NV-226J-PV | |
|---|----------------|----------------|--|
| Power Supply Voltage | 24 VAC | 28 VAC | |
| B&W Camera, 2.4 W | | | |
| 2-pair 24 AWG | 1,586ft (482m) | 2,220ft (677m) | |
| 2-pair 23 AWG | 1,999ft (609m) | 2,799ft (853m) | |
| Color Camera 4.8 W | | | |
| 2-pair 24 AWG | 795ft (242m) | 1,113ft (339m) | |
| 2-pair 23 AWG | 1,002ft (306m) | 1,403ft (428m) | |

Notes: Actual distance will depend on the camera's inrush and operating current, minimum operating voltage, and the wire's environmental temperature. Please consult NVT Customer Support for further information.

Wire should be category rated Unshielded Twisted-Pair (UTP) cable, Low voltage camera power, video, and RS-422 or RS-485 telemetry may be sent within the same wire bundle. Do not run 24VAC or 28VAC in the same wire bundle with analog telecom signals. However you may share the same wire/cable tray.

An online wire Power Distance Calculator is available at www.nvt.com under Product Support.

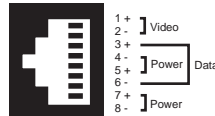
VIDEO

| | |
|---|--------------|
| Frequency response | DC to 10 MHz |
| Attenuation | 0.5 dB typ |
| Common-mode / Differential-mode rejection 50 KHz to 10 MHz | 60 dB typ |

Impedance

| | |
|-------------------------------|----------|
| Coax, male BNC | 75 ohms |
| UTP, Screwless terminal block | 100 ohms |
| UTP RJ45 Data Connector | 100 ohms |

RJ45 PINOUTS



WIRE TYPE

| | |
|--------------------------|---|
| Network Wiring | One Unshielded Twisted Pair Terminal Block 24-16 AWG (0.5-1,31mm) RJ45 24-22 AWG (0.5-0,64mm) |
| Category Type | 2 or better |
| Impedance | 100 ± 20 ohms |
| DC Loop Resistance | 52 ohms per 1,000ft (18 ohms per 100m) |
| Differential Capacitance | 19 pF/ft max (62 pF/m max) |

ENVIRONMENTAL

| | |
|---------------------------|-------------------------------|
| Temperature | -22 to +167°F (-30 to +75 °C) |
| Humidity (non-condensing) | 0 to 95% |
| Transient Immunity | per ANSI / IEEE 587 C62.41 |

MECHANICAL

| | |
|-----------------|---------------|
| Body Length | 1.50in (38mm) |
| Body Depth | 0.85in (22mm) |
| Body Height | 1.54in (39mm) |
| Pigtail Length | 9in (228mm) |
| Product Weight | 2.0oz (60g) |
| Packaged Weight | 0.18lb (82g) |

REGULATORY



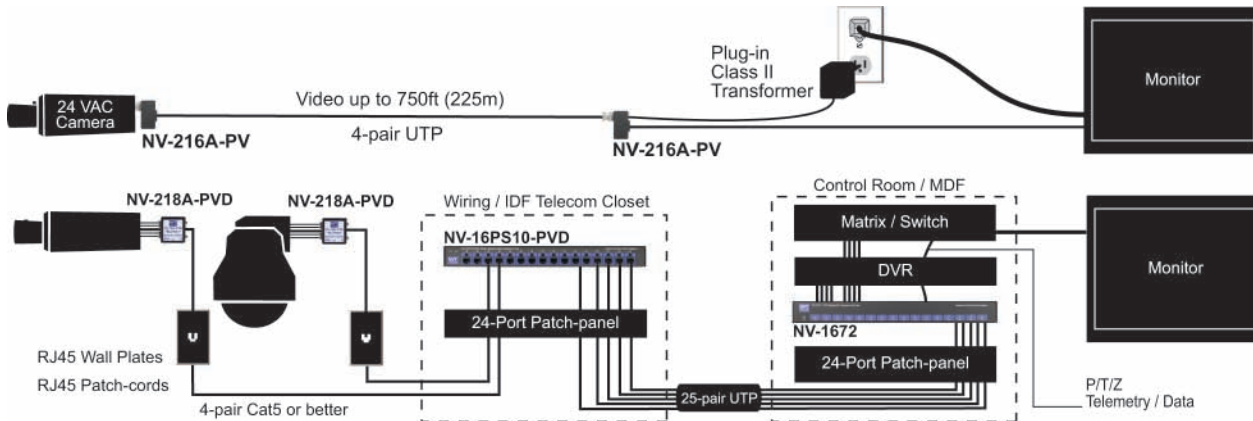
Specifications subject to change without notice.



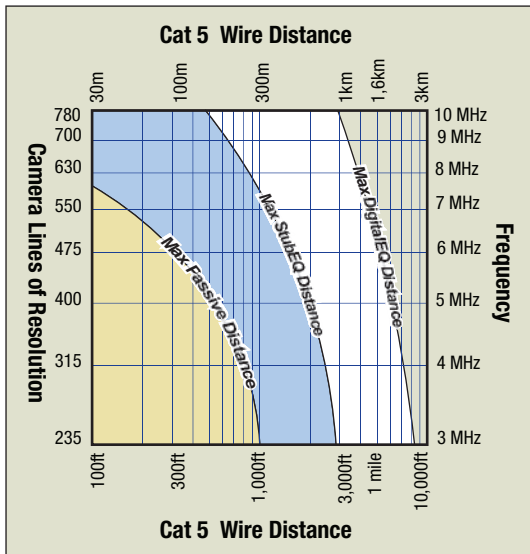
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Typical Application



Distance Recommendations



Good

Passive Transceivers & Hubs

- UTP transmission 0-750ft (225m)
- No power required
- Built in transient protection
- Lifetime warranty

Better

StubEQ Hubs

- UTP Transmission 0-1,500ft (460m)
- Fully automatic 2-band equalization
- Built-in ground lifting
- Built-in transient protection
- Compact rack mount design
- Lifetime warranty

Best

DigitalEQ Hubs

- UTP Transmission 0-3,000ft (1 Km)
- Fully automatic 4-band equalization
- Automatic polarity reversal
- 2 or 4 BNC outputs per channel (16- & 8-port models)
- Built-in "at-a-glance" diagnostics
- Built-in ground lifting
- Built-in transient protection
- 2ft (60cm) coax cables included
- Lifetime warranty

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