

PRODUCT SPECIFICATION

DOCUMENT NUMBER

VB0043

MODEL

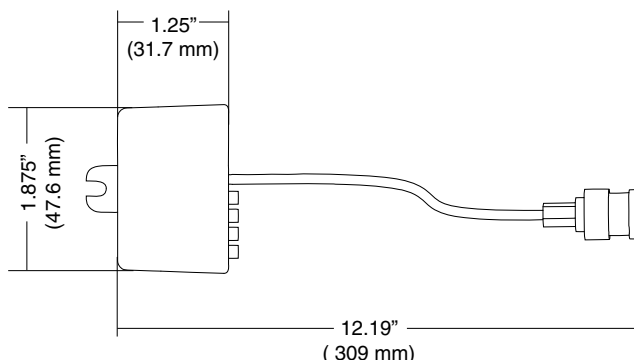
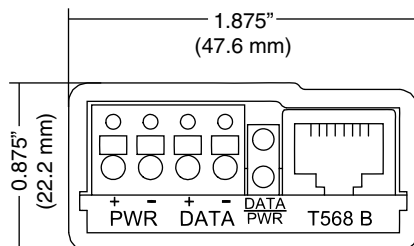
VB43ATF

REVISION NUMBER

042406

Video Balun Combiner for Twisted Pair up to 750 feet (228 meters)
(Combine Video, Power and Data over a Single Category 5 Cable)

Component of the **UTPLinks™** System



Description

Video Balun Combiner for twisted pair up to 750 feet (228 meters) in conventional UTP applications, 100 meters in TIA/EIA 568 applications.

The VB43ATF is a unique transmission device which provides an economical means of sending video, camera power and 2-wire control signals over a standard Category 5 cable. Video is sent over one pair, 2-wire control signals over a second pair and camera power is sent over the two remaining pairs. A mini-coax pigtail with male BNC is used on the VB43ATF. Two pair of screwless terminals are provided to connect 2-wire control signals and power (wires are provided for these connections). Connections to the Category 5 cable are made via an RJ45 connector. The VB43ATF Video Balun provides the same high immunity to noise and interference as all of the Nitek baluns.

This simplified wiring scheme provides a convenient method of powering the camera, allowing for quicker and easier installations. The RJ45 modular jack uses standard 568B wiring so spare network cables can be used. The VB43ATF also offers indication lights for the presence of power and data.

Features

- Intelligent light link indication
- Superior video over ordinary twisted pair cable
- Quick connect screwless terminals
- Immunity to noise and interference
- Rugged ABS flame-retardant casing
- UL listed
- CE approved
- Lifetime warranty
- Built-in surge suppression
- Passive devices - do not require power
- Convenient connection to Category 5 cable for video power and 2-wire control signals
- Easier to install than coax

Applications

- Intra-building CCTV installations (instead of coaxial cable)
- Structured cabling environments
- Multi-camera applications through conduit (more cameras through a smaller diameter)

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VB43ATF

TECHNICAL SPECIFICATION

Transceiver Unit

Size	0.87"H x 1.87"W x 1.25"D
Power Requirements	NONE REQUIRED
Power Pass Through	250mA @ 1,000 feet on 24 AWG 1 Amp @ 100 feet on 24 AWG
Video Input	1 vpp composite video Monochrome or Color
Output	Balanced low voltage current loop
Modular Jack	Standard RJ45

System (2 combiners required)

Video Format	RS170, NTSC, PAL, SECAM, CCIR (Color or B/W)
Video Input	1 Vpp composite video Monochrome or Color
Operating Frequency	DC to 10 MHz
Common Mode	>60 dB typ.
Rejection	
Wire Spec	26 to 12 AWG Unshielded Twisted Pair (UTP)
DC Loop Resistance	51 Ohms/1,000 ft (max)
Nominal Capacitance	17pF/ft.
Impedance	100 Ohms +/- 20%
UTP Category	2 or better
Temperature Range	0 degrees C to +85 degrees C
Humidity Range	0 to 98%, non-condensing
Twisted Pair Connection	RJ45 modular connector
Transient Immunity	Built-in

Ordering Information

PART	DESCRIPTION
VB43ATF	Video Balun-Combiner™ w/surge suppression; up to 750 feet (228 meters) Connection to Category 5 cable - RJ45 connector
VB43 also works with	
VB43F	Video Balun-Combiner™ w/surge suppression; up to 750 feet (228 meters) Connection to Category 5 cable - RJ45 connector
VB43FPD	Video Balun-Combiner™ w/surge suppression; up to 750 feet (228 meters) Connection to Category 5 cable - punchdown terminals
WB42	Video Balun-Combiner™ & Wallplate w/surge suppression; up to 750 feet (228 meters)
WB42S	Video Balun-Combiner™ & Security Wallplate w/surge suppression; up to 750 feet (228 meters)

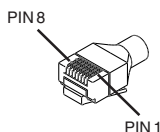
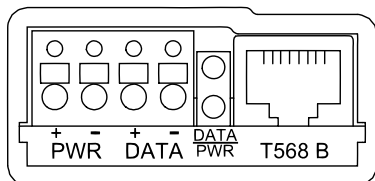
SYSTEM COMPONENTS

Two video balun combiner devices (VB43 or WB42 - in any combination) are required for transmission over a Category 5 cable to provide video, RS422 and power using the RJ45 modular connectors.

Wire and Cable Recommendations

The VB43 is recommended for use with **unshielded twisted pair** (UTP) wiring. The system will operate over wire gauges from 24 AWG through 22 AWG. The VB43F connects most conveniently to a Category 5, 4-pair cable, but any Category cabling may be used. Individually shielded pairs should be avoided, as they drastically reduce the operating range of the systems. Multi-pair cable (25-pair or more) with an overall shield are acceptable. Video can be operated in the same communication cable coexistent with telephone, computer, control signals, power voltages and other video signals. While video may be routed through telephone punch-down block terminals, any bridge-taps, also called T-taps and any resistive, capacitive or inductive devices **MUST BE** removed from the pair. For more specific information regarding wire types, gauges and proper installation techniques, please call (800) 528-4343 for technical assistance.

Recommended Wiring: 568B



PIN	Color Code	Signal
1	WHT/ORG	VIDEO +
2	ORG/WHT	VIDEO -
3	WHT/GRN	24V COM (1)
4	BLU/WHT	RS422 -
5	WHT/BLU	RS422 +
6	GRN/WHT	24V LINE (1)
7	WHT/BRN	24V COM (2)
8	BRN/WHT	24V LINE (2)

