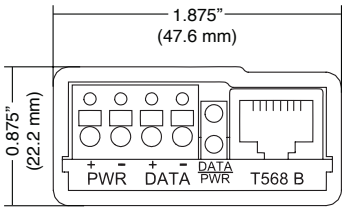
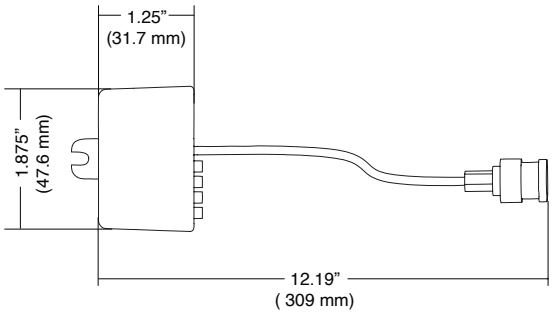
NITEK®
MADE IN THE U.S.A.

VB43ATF
Technical Datasheet

Video Balun Combiner for Twisted Pair

11/08





Description

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 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 cable are made via an RJ45 connector. The VB43ATF video balun provides the same 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 ABC flame retardant casing
- Lifetime warranty
- Built-in surge suppression
- Passive devices—do not require power
- Convenient connection to Category cable for video power and 2-wire control signals
- Easier to install than coax

REV. 02182025

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MADE IN USA

CE

RoHS COMPLIANT 2002/95/EC

TECHNICAL SPECIFICATION

Combiner Unit

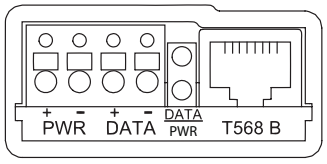
Size	.875” H x 1.875” W x 1.25” D
Power Pass Through	250mA @ 1,000 feet on 24 AWG wire 1 Amp @ 100 feet on 24 AWG wire
Input	1 Vpp composite video Monochrome or Color
Output	Balanced low voltage current loop
Modular Jack	Standard RJ45

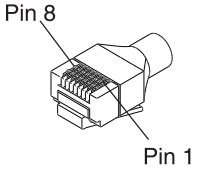
System (2 combiners required)

Video Format	PAL, SECAM, NTSC, RS170, CCIR (Color or B/W)
Video Input	1 Vpp composite video Monochrome or Color
Operating Frequency	DC to 10 MHz
Common Mode Rejection	>60 dB
Wire Size	26 to 18 AWG twisted pair
DC Loop Resistance	51 Ohms/1,000 ft (max)
Nominal Capacitance	17 pF/ft
Impedance	100 Ohms +- 20%
Category Wire	2 or better
Temperature Range	-10°C to +85°C
Humidity Range	0 to 98%, non-condensing
Twisted Pair Connection	RJ45 modular connector
Transient Immunity	Built-in
Shipping Weight	1 lb

Wire and Cable Recommendations

We recommend using unshielded twisted pair wiring. The systems will operate over wire 26 to 18 AWG but are optimized for 24 AWG. Category cables may be used. Individually shielded pairs should be avoided, as they drastically reduce the operating range of the systems. Multi-pair cable with an overall shield is 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.





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)