

Code: TR-16/DC-RACK

VIDEO BALUN TR-16/DC-RACK

Net: 213.83 EUR Gross: 213.83 EUR

The TR-16/DC-RACK is designed to video signals transmission and power supplying via twisted-pair cable (UTP, FTP). The device adapts the impedance of coaxial cable 75Ω to the impedance of symmetrical line, ensuring transmission of video signal up to 400m (twisted-pair cable category 5) and eliminates asymmetric interferences. Video signal is sent over one pair of a twisted-pair cable, the remaining three pairs are used for supplying power. The TR-16/DC-RACK can be powered from one or two outer power adaptors (A or B).

Each of power line is protected by the polymer fuse and has a green LED indicator, which informs about its operation (the LED light is off when the power is off). When one of the outputs is overloaded the resistance and polymer fuse temperature are increasing ($>100^{\circ}\text{C}$), and the LED indicator light is off. When the fuse is warmed up, the flowing current has small value. If the overloaded reasons are stopped, the fuse returns to the previous state.

In device, depending on current consumption there is a voltage drop on polymer fuses: 160mV at $I=0.5\text{A}$; 300mV at $I=0.7\text{A}$; 340mV at $I=1\text{A}$.



SPECIFICATION

Standard:	• AHD - 5 Mpx, • HD-CVI - 8 Mpx 4K UHD, • HD-TVI - 8 Mpx 4K UHD, • CVBS - PAL, NTSC
Input voltage:	max. 40 V DC max. 10 A Power connector "A" max. 10 A Power connector "B"
Device type:	Passive / Receiver
Number of channels:	16 Video + DC
Coaxial socket voltage range 75Ω (CVBS):	1 Vpp
Output current:	1 A @ 1 ... 16
Video transmission range:	• 250 m @ 720p - UTP cat. 5e • 150 m @ 1080p - UTP cat. 5e • 400 m @ CVBS - PAL, NTSC - UTP cat. 5e
Output voltage:	max. 40 V
Attenuation:	• 4.43 MHz @ 0.73 dB • 11 MHz @ 1.24 dB • 21 MHz @ 2.16 dB • 38 MHz @ 3.35 dB • 42 MHz @ 3.54 dB • 67.5 MHz @ 3.72 dB
Main features:	Each of 16 power outputs can be assigned to "A" or "B" power adapter, using jumpers placed inside the device housing
Symmetrical socket impedance:	100 Ω
Connectors type:	16 x BNC Socket Video 2 x Cable terminals DC 2.1 / 5.5 mm Socket DC
Symmetrical socket type:	16 x RJ-45 (8-pin, 4 pairs) Socket
Housing type:	RACK 19", 1U
Permissible relative humidity:	< 95 %
Operation temp:	-40 °C ... 55 °C

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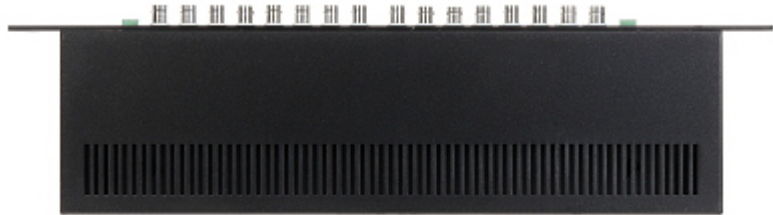
Power supply distance:	• Power supply 12V DC 353 m @ 50 mA 235 m @ 75 mA 176 m @ 100 mA 141 m @ 125 mA 117 m @ 150 mA 88 m @ 200 mA 70 m @ 250 mA 58 m @ 300 mA 50 m @ 350 mA 44 m @ 400 mA 39 m @ 450 mA 35 m @ 500 mA 29 m @ 600 mA 25 m @ 700 mA 22 m @ 800 mA 19 m @ 900 mA 17 m @ 1000 mA
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PRESENTATION

Front panel view:



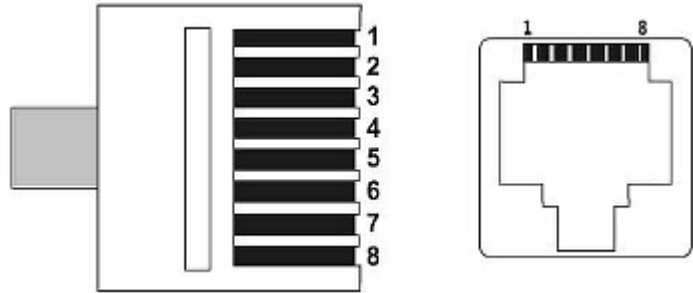
Top view (the cable terminals are visible):



Rear view:



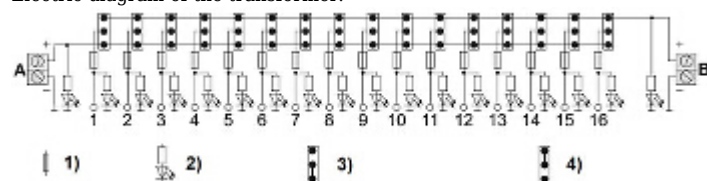
Wiring sequence inside the RJ-45 plug:



- 1) white/orange - power "+"
- 2) orange - power "-"
- 3) white/green - power "+"
- 4) blue - power "-"
- 5) White/Blue - power supply (+)

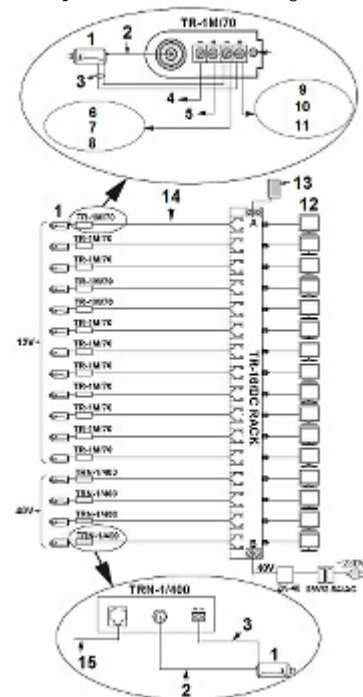
- 6) green - power "-"
- 7) white/brown - camera signal (+)
- 8) brown - camera ground (-)

Electric diagram of the transformer:



- 1) Polymer fuse
- 2) LED with resistor
- 3) Output jumper setting to the A power adapter
- 4) Output jumper setting to the B power adapter

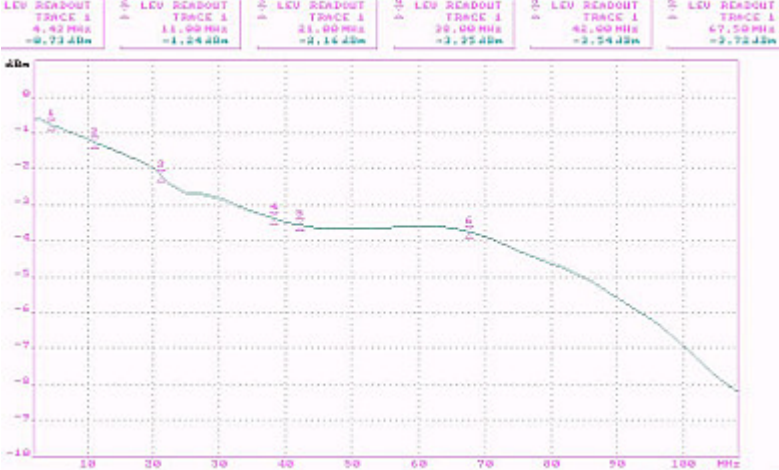
Example of the connection diagram (12 cameras powered with DC 12V, 4 cameras powered with DC 40V):



- 1) Cameras
- 2) Signal from camera
- 3) 12V DC camera powering
- 4) brown
- 5) white/brown
- 6) orange
- 7) green
- 8) Blue
- 9) white/orange
- 10) white/green
- 11) white/blue
- 12) Monitors
- 13) DC 12V power adapter
- 14) 16x twisted-pair cable
- 15) Twisted-pair cable

OUR TESTS

Amplitude - frequency response - 2 transformers connected briefly (RF PWR OUT = 0 dBm):



PACKAGE

Dimensions (L x W x H): 0x0x0 mm	Gross Weight: 0 kg
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