

Code: VHD-15

## REPEATER **VHD-15** AHD, HD-CVI, HD-TVI SIGNAL AMPLIFIER

Net: **29.66 USD** Gross: **36.48 USD**

The VHD-15 repeater is designed to amplification of the video signal transmitted via twisted-pair cable or coaxial cable, what enables high resolution video transmission of (AHD, HD-CVI, HD-TVI) signals for long distance.

A single repeater allows to correct attenuation of approx. 150 m UTP cable and approx. 300 m - 500 m coaxial cable (depending on the type of cable used). The using of single repeater ensures good quality of image for twisted-pair cable at a distance up to 300 m. At a distance up to 450 m two repeaters are required, and at a distance up to 600 m you should use three repeaters. For coaxial cable, depending on type, these distances will be correspondingly longer.



### SPECIFICATION

Standard:	<ul style="list-style-type: none"><li>• AHD - 4 Mpx,</li><li>• HD-CVI - 1080p,</li><li>• HD-TVI - 5 Mpx,</li><li>• CVBS - PAL / NTSC</li></ul>
Device type:	Active
The ability of signal regeneration:	150 m - Twisted-pair cable , 300 m - RG-59 , 500 m - Triset-113
Power supply:	<ul style="list-style-type: none"><li>• 8 V ... 24 V DC (power adapter not included)</li><li>• The possibility of remote powering through the unused pairs of twisted-pair cable</li></ul>
Current consumption:	< 50 mA
Coaxial socket impedance:	75 Ω
Symmetrical socket impedance:	100 Ω
Number of inputs:	1
Number of outputs:	1
Coaxial socket type:	BNC socket
Symmetrical socket type:	terminals
Weight:	0.080 kg
Dimensions:	103 x 62 x 29 mm
Manufacturer / Brand:	DELTA
Guarantee:	<b>3 years</b>

### PRESENTATION

DELTA-OPTI Monika Matysiak; <https://www.delta.poznan.pl>  
POL; 60-713 Poznań; Graniczna 10  
e-mail: [delta-opti@delta.poznan.pl](mailto:delta-opti@delta.poznan.pl); tel: +(48) 61 864 69 60

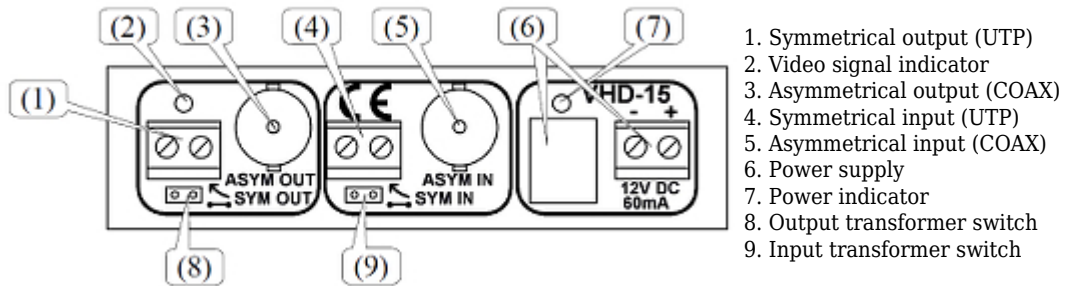
Front panel:



Top view:

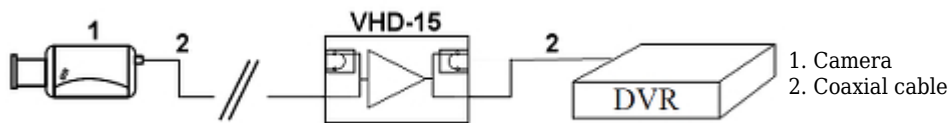


Front panel description:

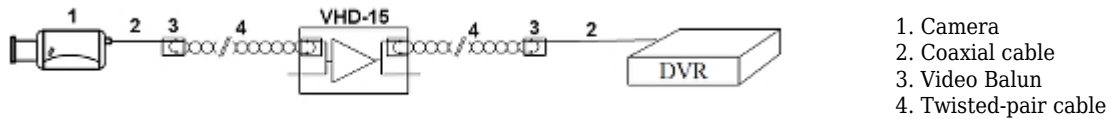


Configuration with application of a single repeater:

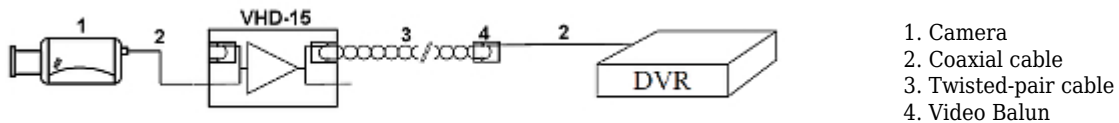
Example configuration with application of a single repeater and coaxial cable:



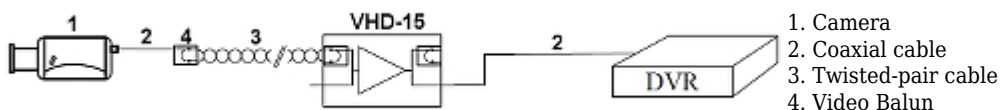
The most preferred configuration for reasons of noise. Repeater at a distance of approx. 50% - 70% of the cable length:



The risk of overdriving of the repeater by a strong signal from the close placed camera. The discoloration may be visible:



Due to the amplification of heavily suppressed signal obtained worst signal-to-noise ratio:



- 1. Camera
- 2. Coaxial cable
- 3. Twisted-pair cable
- 4. Video Balun

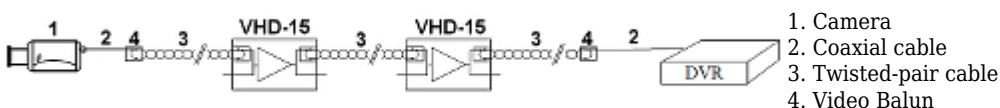
Configurations with application of two repeaters. The performed tests show that the maximum distance segments connecting device for twisted pair cable should not exceed 300 m due to deteriorating the signal-to-noise ratio. For a coaxial cable, this distance is approx. 600 m ... 1000 m depending on cable type:

Example configuration with application of two repeaters and coaxial cable:



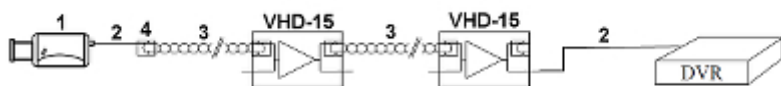
- 1. Camera
- 2. Coaxial cable

For best results, place the devices at similar distances from each other:



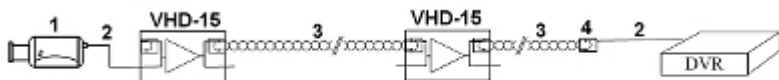
- 1. Camera
- 2. Coaxial cable
- 3. Twisted-pair cable
- 4. Video Balun

Signal amplification in the end results in a worse signal-to-noise ratio, because the amplified signal is strongly suppressed:



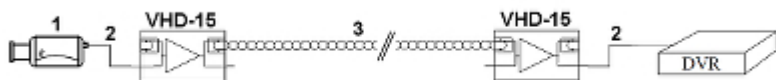
- 1. Camera
- 2. Coaxial cable
- 3. Twisted-pair cable
- 4. Video Balun

Increasing the distance between the devices causes a worse signal-to-noise ratio and increases the risk of distortion of the repeater:



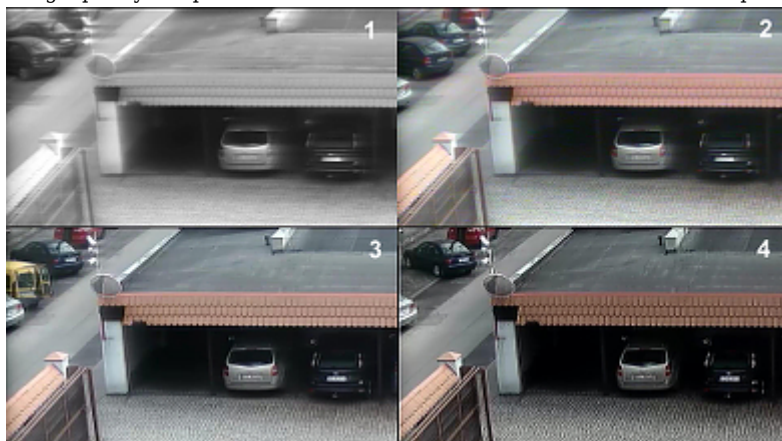
- 1. Camera
- 2. Coaxial cable
- 3. Twisted-pair cable
- 4. Video Balun

The least recommended configuration (although the easiest to do); large distance between the devices results in a low signal-to-noise ratio and a repeater placed close to the camera increases the risk of overdriving:



- 1. Camera
- 2. Coaxial cable
- 3. Twisted-pair cable

Image quality comparison for cat. 5e UTP cable at a distance of 500m depending on the number of repeaters used:



- 1) Image without the repeater
- 2) 1 x VHD-15
- 3) 2 x VHD-15
- 4) 3 x VHD-15

Image quality comparison for RG-59 cable at a distance of 800 m depending on the number of repeaters used:



- 1) Image without the repeater
- 2) 1 x VHD-15
- 3) 2 x VHD-15
- 4) 3 x VHD-15

Image quality comparison for Triset-113 cable at a distance of 1100 m depending on the number of repeaters used:



- 1) Image without the repeater
- 2) 1 x VHD-15
- 3) 2 x VHD-15

Connection method of the VHD-15 with video transformers:

