

Code: VHD-15

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

Net: **25.14 EUR** Gross: **30.92 EUR**

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 - 5 Mpx, 12 fps,</li><li>• HD-CVI - 1080p, 25 fps,</li><li>• HD-TVI - 5 Mpx, 12 fps,</li><li>• CVBS - PAL / NTSC</li></ul>
Device type:	Active
The ability of signal regeneration:	150 m - Twisted-pair cable , 300 m - RG59 , 500 m - Triset113
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

Front panel:

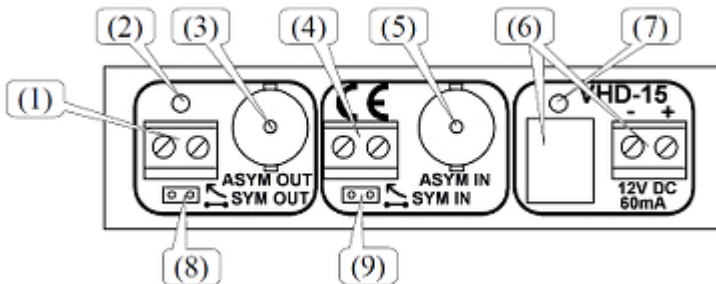
DELTA-OPTI Monika Matysiak; <https://www.delta.poznan.pl>  
POL; 60-713 Poznań; Graniczna 10  
e-mail: [delta-opti@delta.poznan.pl](mailto:delta-opti@delta.poznan.pl); tel: +(48) 61 864 69 60



Top view:



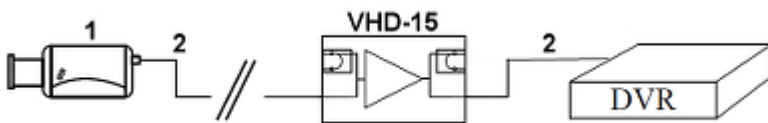
Front panel description:



1. Symmetrical output (UTP)
2. Video signal indicator
3. Asymmetrical output (COAX)
4. Symmetrical input (UTP)
5. Asymmetrical input (COAX)
6. Power supply
7. Power indicator
8. Output transformer switch
9. Input transformer switch

Configuration with application of a single repeater:

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



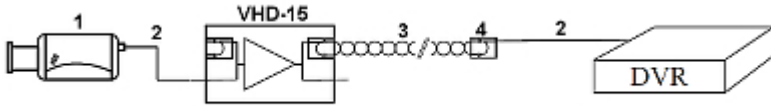
1. Camera
2. Coaxial cable

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



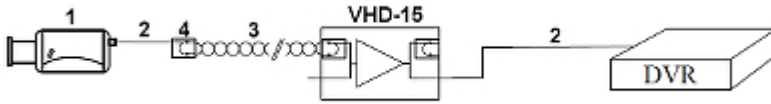
1. Camera
2. Coaxial cable
3. Video Balun
4. Twisted-pair cable

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



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

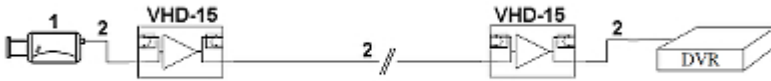
Due to the amplification of heavily suppressed signal obtained worst signal-to-noise ratio:



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

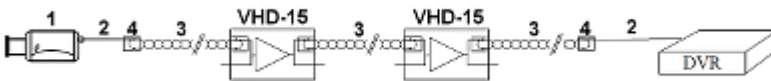
Configurations with application of two repeaters. The performed tests show that the maximum distance segments connecting device for twisted pair cable should not exceed 300 m due to deteriorating the signal-to-noise ratio. For a coaxial cable, this distance is approx. 600 m ... 1000 m depending on cable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

Example configuration with application of two repeaters and coaxial cable:



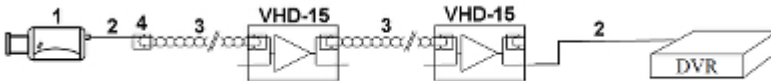
1. Camera
2. Coaxial cable

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



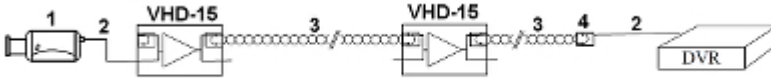
1. Camera
2. Coaxial cable
3. Twisted-pair cable
4. Video Balun

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



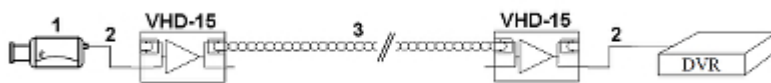
1. Camera
2. Coaxial cable
3. Twisted-pair cable
4. Video Balun

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



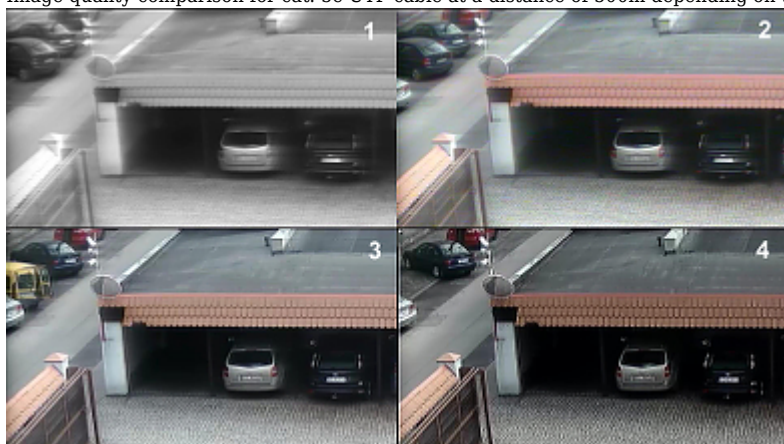
1. Camera
2. Coaxial cable
3. Twisted-pair cable
4. Video Balun

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:



