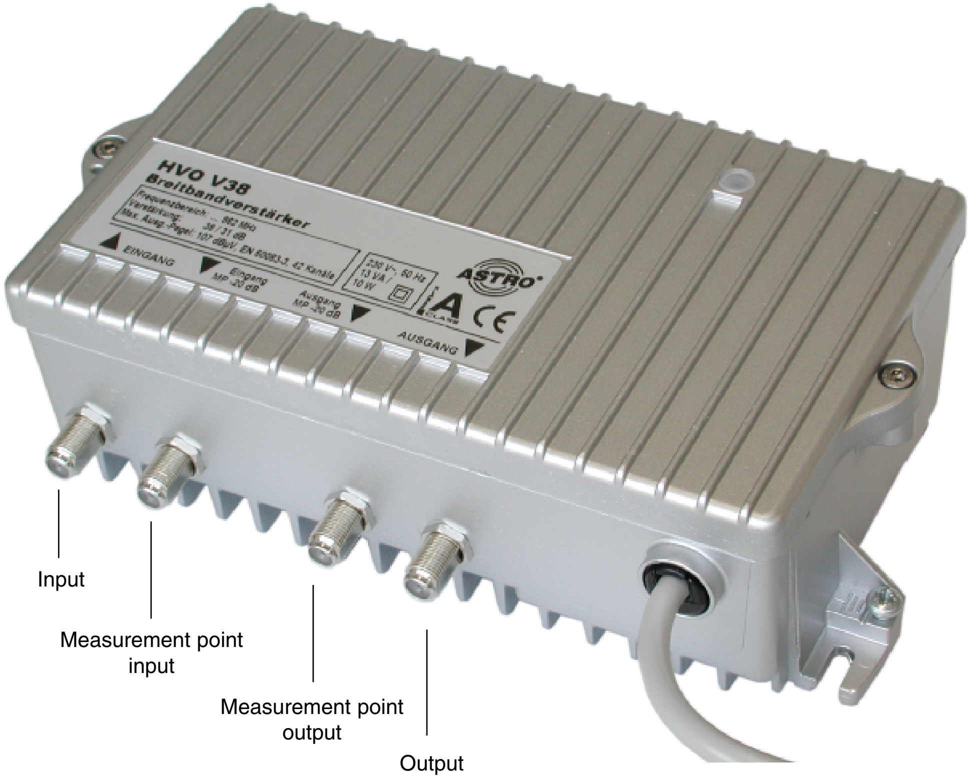
HV 330 / 331 / V38

Broadband Amplifier



The amplifiers of the HV... – Series are CE certified and comply with all relevant EN standards!
Changes and printing errors reserved. Version 12/2005

Pictographs and safety information

Pictographs are icons with specific meanings. The following pictographs are used in the installation and operating instructions:

Warns about situations in which there is danger of lethal injury due to hazardous electrical voltage and non-compliance with these instructions.

Recycling: All of our packaging materials (packaging, identification sheet, plastic foil and bag) are fully recyclable.

English: Electronic equipment is not household waste – in accordance with directive 2002/96/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL of 27th January 2003 on used electrical and electronic equipment, it must be disposed of properly. At the end of its service life, take this unit for disposal at a relevant official collection point.

Danger advices and mounting advices

Mains connection:

- Check the 230 V mains supply of the device with the presenmains voltage
- Run the cable in a way, that no one will stumble on it
- The connection of the device to the mains supply (230 V~) has to be placed out of atmospheric exposure according to IP xx.

Mounting:

- ambient temperature range: -15 - +55 °C
- The device must only be installed in dry rooms, which ensure that even with changing climatic conditions, the ambient temperature range is kept. (away from heat sources)
- The device must not be exposed to splashed or dripped water
- Mount the device only on vertical, not-combustible areas. Input and output have to show to the ground (leave 20 cm below and above the device)
- provide for good ventilation
- wait until condensed water has dried completely

Heat influence:

- If the device is exposed to heat or not ventilated as needed, the durability might be shortened

Security advices

Open housing of the device:

- There are electrical life parts even after disconnecting the mains supply – danger of life –
- Parts may be destroyed

Before opening the housing:

- Disconnect mains plug
- no service / maintaining during thunder storms

Please note:

- Follow all relevant security standards
- Opening the housing only by authorised persons
- Repair of the device only by authorised persons, or by sending them back to ASTRO with an exact description of the error
- The grounding of the network must not be interrupted after dismounting the device

For your own security:

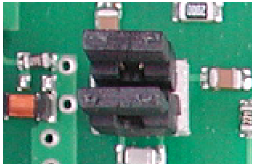
- Follow security standards and advices
- Follow standards regarding grounding and potential equalisation
- replaces fuses only with fuses of the same values and melting characteristics

Warning:

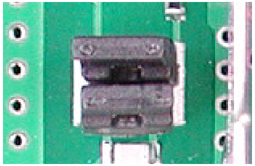
- If the device is built under a roof or in alcoves, you have to make sure, that the ambient temperature range is kept

Delivery state of the HV …-amplifier

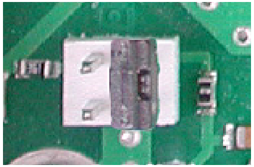
Gain, changeable

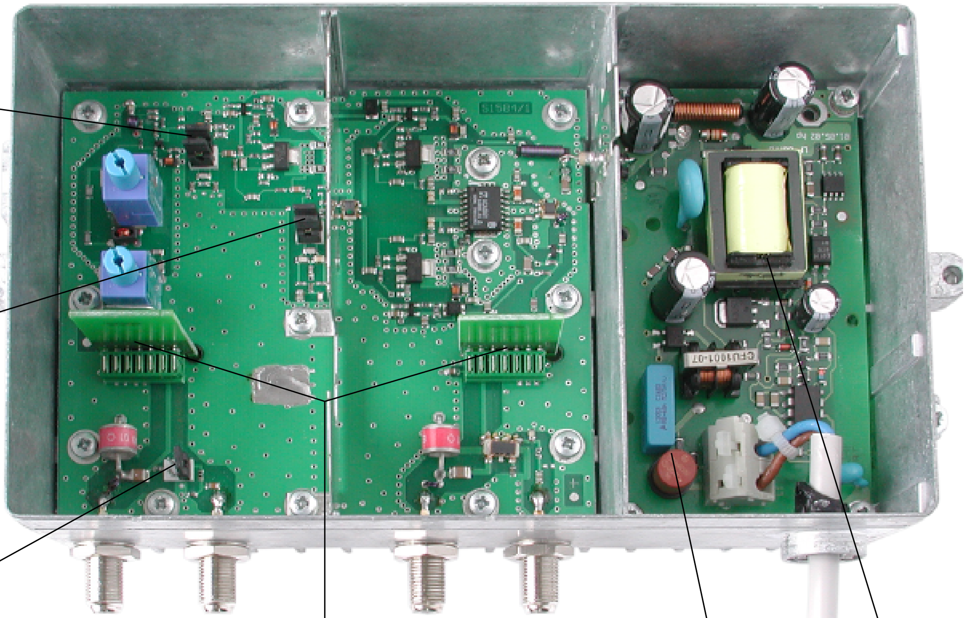


Slope, changeable



Masurement point (input), bidirectional (off)





Input

Masurement point

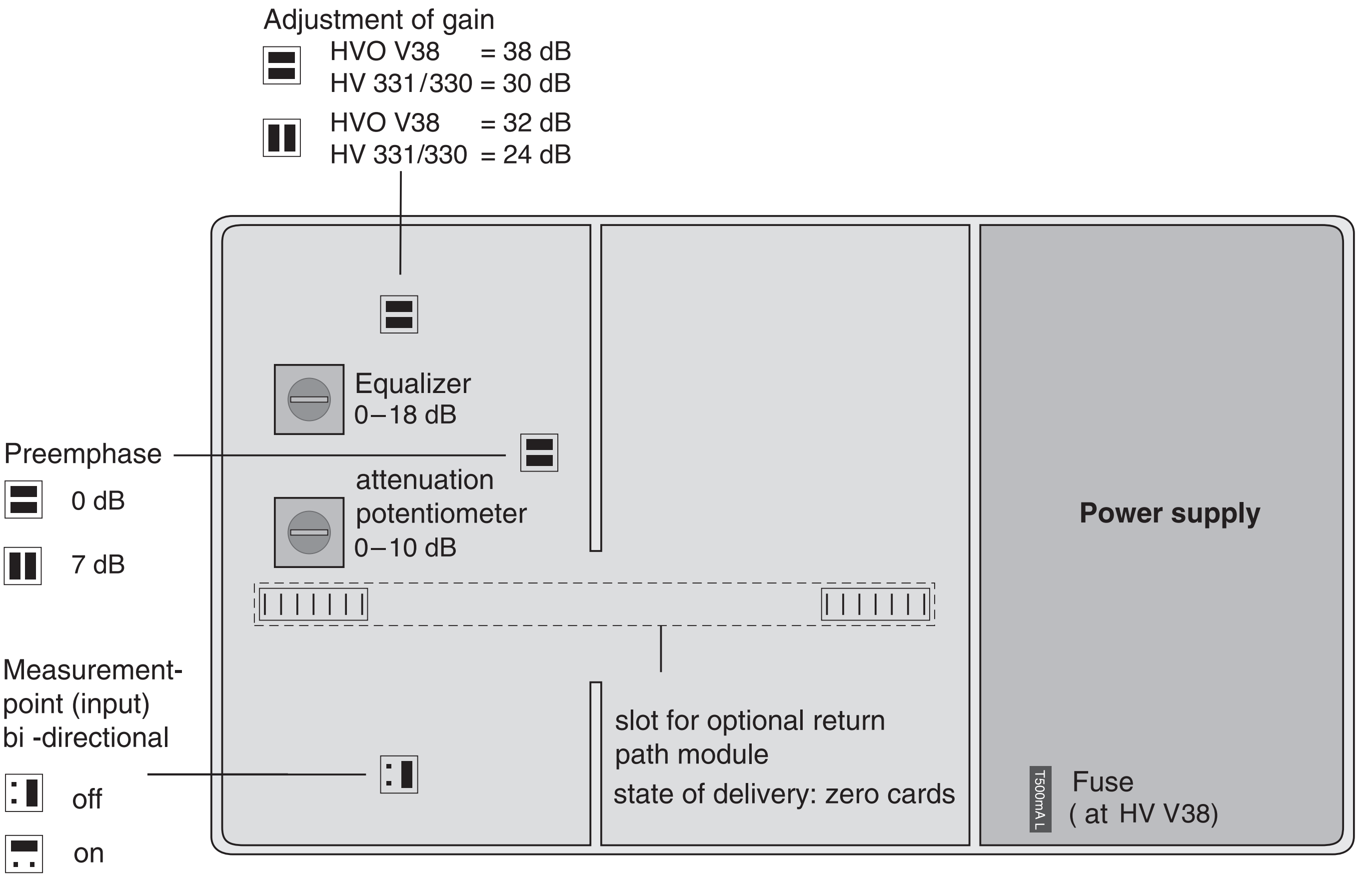
Output

Masurement point

Fuse

Power supply

Slot for optional return path modul
(Figure with zero cards)


Adjustment of gain
HVO V38 = 38 dB
HV 331/330 = 30 dB
HVO V38 = 32 dB
HV 331/330 = 24 dB
Equalizer
0–18 dB
Preemphase
0 dB
7 dB
attenuation
potentiometer
0–10 dB
Power supply
Measurement-
point (input)
bi -directional
off
on
slot for optional return
path module
state of delivery: zero cards
T500mA L
Fuse
(at HV V38)

Danger advices and mounting advices

Mains connection:

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Short description

The HV … is a flexible configurable amplifier-for future multimedia cable networks.

- gain adjustable internally
- adapting to local level situation by embed-ded attenuation potentiometer and equalizer in the input
- pre-emphasis of the outgoing cable attenuati-on possible by interstage slope
- in delivery state, the amplifier is equipped only with zero cards, this means the amplifier is configured for forward path applications
- if needed, the amplifier can be extended with different return path modules

Forward path

The HV … -amplifier is equipped in the input with a continuous level adjustment and a slope equalizer. Input and output are saved by an over voltage protection. The attenuation of the outgoing cable length can be compensa-ted by an interstage jumper (0 or 7 dB slope) as well as the gain.

Return path

For the transmission of return path signals the amplifier has to be equipped as follows:

- Changing the zero cards in input and output to an optional available return path module
- It is not necessary to adjust the forward level again after plugging in the return path module.

Measurement point

In the input there is a measurement point with 20 dB coupling attenuation. After activating the measurement point by a jumper (see figure) you have to

- determine the input level for the forward path
- determine the output level for the return path

In the output there is a measurement point with 20 dB coupling attenuation.

- determine the input level for the return path
- determine the output level for the forward path

Delivery state

In delivery state, the amplifier is only equipped for forward path applications:

- Zero cards on the slots for the return path module (Note: no selection of frequencies below 47 MHz)
- Max. gain plugged in
- 0 dB interstage slope plugged in

Placing into operation

To save the semiconductors of being destroyed, the amplifier is adjusted to maximum attenuation and slope by delivery state. After connecting the coax cables and the mains supply, the device is ready to operate and the level adjustment can be started.

Do not exceed the maximum operation level; max. input level = output level minus adjusted gain.

Level adjustment

- adjusting the requested gain and pre-emphasis (slope) by jumper setting
- adjusting the output level with attenuation potentiometer
- adjusting the slope with slope equalizer

Malfunction

If the device doesn't work as requested, we recommend the following controls:

- check the mains supply and fuses
- proper connection of the coax cables (no interruption or short-circuit)
- measuring the input level (too low / high input level can cause interferences)

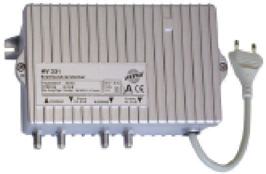
Maintaining

As far as the device is used proper, no maintaining is necessary.

Before opening the housing switch off mains supply!

Type		HVO V38	HV 331	HV 330
order no.:		217 381	217 331	217 330
gain:	[dB]	38 / 32 +/- 1	30 / 24 +/- 1	30 / 24 +/- 1
ripple:	[dB]	+/- 1	+/- 1	+/- 1
frequency range base unit	[MHz]	47 - 862	47 - 862	47 - 862
output level, EN 500-83:	[dBµV]	107	100	97
42 channels, CTBA/CSOA ≥ 60 dB	[dBµV]	109 (7dB interstage slope)		
noise figure	[dB]	6 - 7 (+1,4 bei 6 dB interstage attenuation)	6 - 7 (+1,4 bei 6 dB interstage attenuation)	6 - 7 (+1,4 bei 6 dB interstage attenuation)
gain adjustment input (variable) interstage (fixed)	 [dB] [dB]	 0 - 10 0 or 6 (pluggable)	 0 - 10 0 or 6 (pluggable)	 0 - 10 0 or 6 (pluggable)
interstage slope (fixed)	[dB]	0 or 7 (pluggable)	0 or 7 (pluggable)	0 or 7 (pluggable)
Equalizer input (variable) base of equalizer (fixed)	 [dB] [MHz]	 0 - 18 862	 0 - 18 862	 0 - 18 862
measurement points input (bi-directional, switchable) output (directional coupler)	 [dB] [dB]	 - 20 +/- 1,5 - 20 +/- 1	 - 20 +/- 1,5 - 20 +/- 1	 - 20 +/- 1,5 - 20 +/- 1
return loss input, output, measurement points	[dB] [dB]	Cat. B acc. EN 50083-3 18 (at 40 MHz - 1,5 dB/oct.	Cat. B acc. EN 50083-3 14 (at 40 MHz - 1,5 dB/oct. min. ≥ 10	Cat. B acc. EN 50083-3 14 (at 40 MHz - 1,5 dB/oct. min. ≥ 10
Common data				
spurious emission		acc. EN 50083-2	acc. EN 50083-2	acc. EN 50083-2
connectors	[W]	F-jacket, 75	F-jacket, 75	F-jacket, 75
mains supply	[V~]	230, 50 Hz	230, 50 Hz	230, 50 Hz
power consumption	[W/VA]	11 / 21	9 / 9,5	9 / 9,5
Fuse		T 500 mA L, EN 60127- 2/4	----	----
ambient temperature	[°C]	-15 … + 55 °C	-15 … + 55 °C	-15 … + 55 °C
dimensions	[mm]	210 x 120 x 66	210 x 120 x 66	210 x 120 x 66
weight	[kg]	~ 1,5	~ 1,6	~ 1,6
safety class		IP 54 acc EN 60529	IP 54 acc EN 60529	IP 54 acc EN 60529

HVO V38



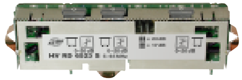
HV 331

HV 330

Modules for return path transmitting

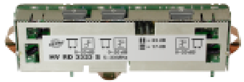
For the flexible and easy configuration of the return path there is the choice between several different modules, which consist of two diplex filters and a return path amplifier. All modules have in common the variable input attenuation of the return path amplifier and the variable attenuation and slope in the output of the amplifier.

HVRD 6523



HVRD 6523S

Type:		HV RD 6523	HV RD 6523 S	HV RD 3323	HV RD 3323 S
order no.:		216 261	216 271	216 281	216 291
frequency range return path	[MHz]	5 – 65	5 – 65	5 – 33	5 – 33
forward path	[MHz]	80 – 862	80 – 862	47 – 862	47 – 862
gain (pluggable)	[dB]	23 / 17	23 / 17	23 / 17	23 / 17
adjustment of attenuation slope by		Potentiometer	Pads	Potentiometer	Pads



HVRD 3323

HVRD 3323S

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