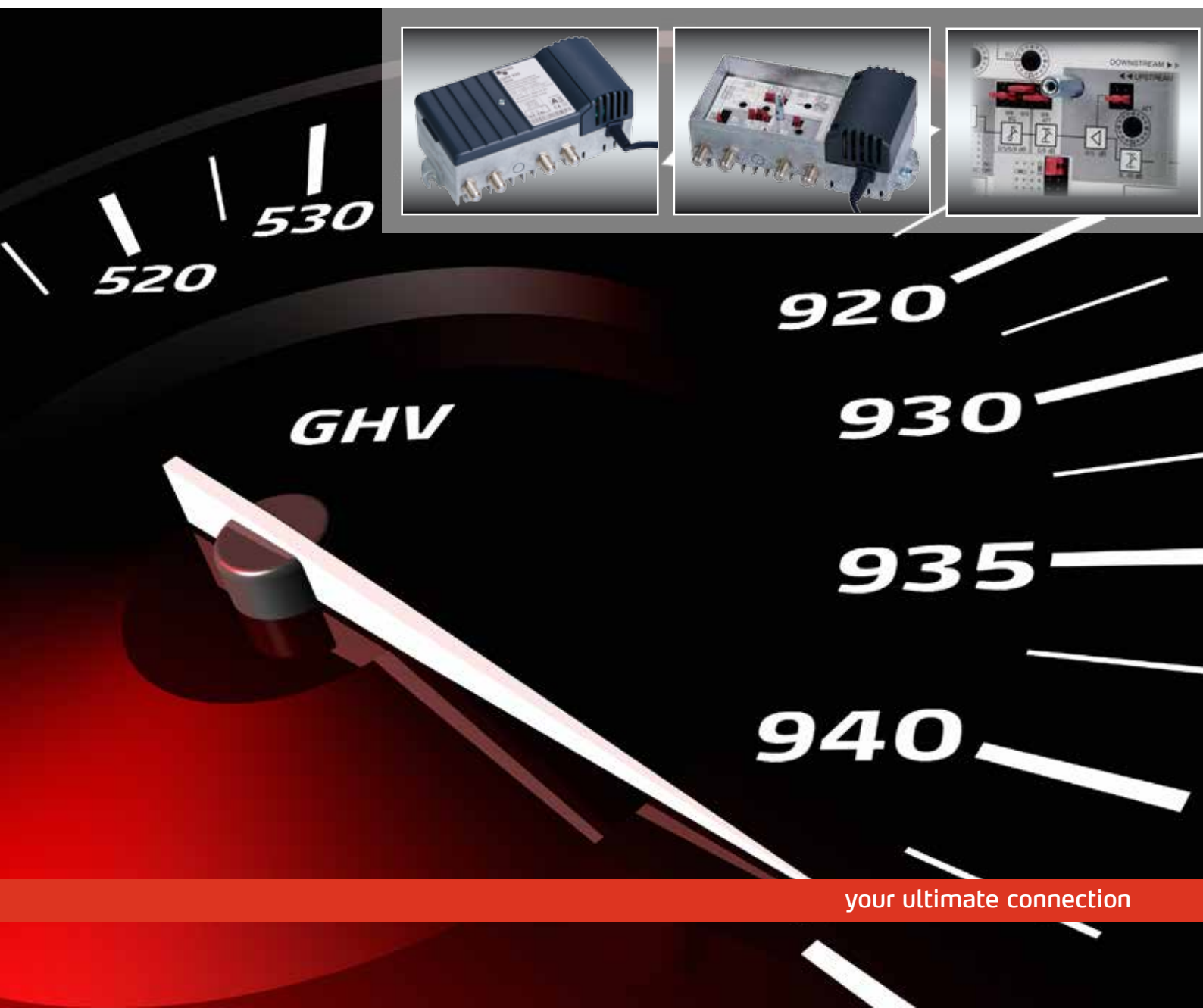




More Power for Your Distribution Team

| The New GHV Amplifier Series



your ultimate connection

New team members

House amplifiers for all applications



The perfect choice for everybody! The new house amplifier ranges by TRIAX.

The TRIAX GHV ranges offer great solutions for TV house distribution systems of almost every size. The products boast state-of-the-art technological design, excellent transmission qualities and an exceptionally high adjustability/variability. The readable adjusters allow the user to set up values calculated during the planning phase when placing the amplifier into operation. This also helps in case the amplifier should need to be

serviced as all adjustments previously made can easily be transferred to a replacement. As calibration of the distribution system thus will be quicker and easier you can save valuable time and money.

No matter which amplifier you choose - you will always profit by the excellent product quality and the good technical service TRIAX is known for.

	500 SERIE	900 SERIE
■ Optimised 1 GHz technology	■	■
■ 16 step rotary switch for attenuation	■	■
■ 16 step rotary switch for equalization		■
■ Interstage equalization fix 3 dB	■	
■ VHF-Band I	■	■ (switchable)
■ Selectable return path 5-65 MHz		■ (active/passive/off)
■ Reliable all-on-board return path technology		■
■ Measurement port -20 dB for input and output	■	■
■ Extensive ESD- and surge protection	■	■
■ Low power consumption	■	■



Finding the right amplifier is easy. You can choose from two series with different amplifications and corresponding additional characteristics. The GHV 500 series is designed as a low noise coaxial distribution amplifier for use in small headend-based communal installations (MATV/SMATV). The GHV 900 series can be used as a house amplifier in cable television distribution networks (CATV) with a multimedia-enabled return path. As the return path can optionally be switched off the amplifiers of the GHV 900 are also perfect for use with VHF band I. In case the network will later be upgraded by adding return path services like internet access the return path can easily be re-activated by replugging the jumpers.

TRIAX GHV 520

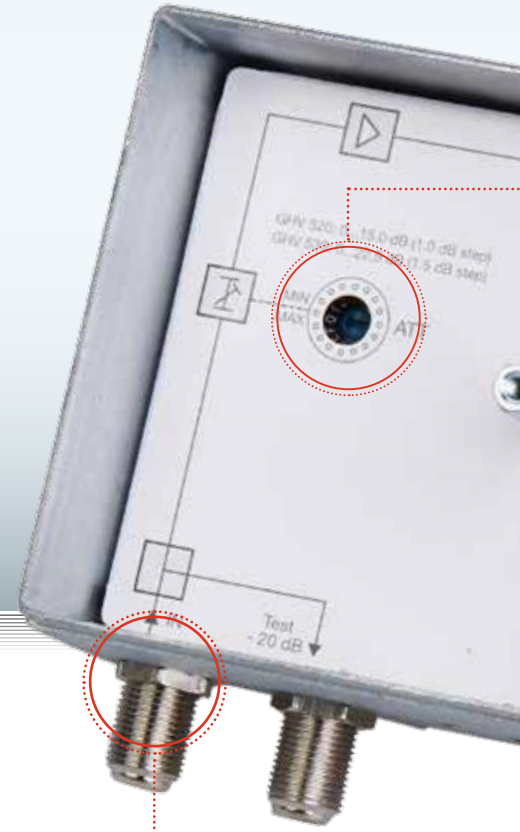
AMPLIFIER TYPE	SERIE	GAIN (in dB)	AMPLIFIER CLASSES	YOUR DEVICE
House amplifier	GHV	20 30 35 40	Cable network operator KDG	Type
MATV/SMATV - system without return path	500	■		TRIAX GHV 520
	500	■		TRIAX GHV 530
CATV TV - system with return path	900	■	B 1.1 / C 1.1	TRIAX GHV 920
	900	■	B 3.2 / C 3.2	TRIAX GHV 930
	900	■	B 3.2 / C 3.2	TRIAX GHV 935
	900	■	C 4.3 / D 4.3	TRIAX GHV 940

GHV 500 Series



House amplifier for small buildings

The GHV 500 amplifier series is designed as a low noise coaxial distribution amplifier for use in small headend-based communal installations where no return path is needed. Setting up the amplifier is made easy by the rotary switch and the interstage equalization of 3 dB. Measurement ports at input and output also help to level out the forward path.



High-quality F connectors
for secure contacting and thereby ingress and LTE protection

BENEFITS OF THE GHV AMPLIFIERS AT A GLANCE

COMMON FEATURES

- High output level
- F-connectors (female)
- Optimised 1 GHz technology
- Functional die-cast housing
- Built-in energy-saving mains-fed power supply
- Extensive ESD and surge protection

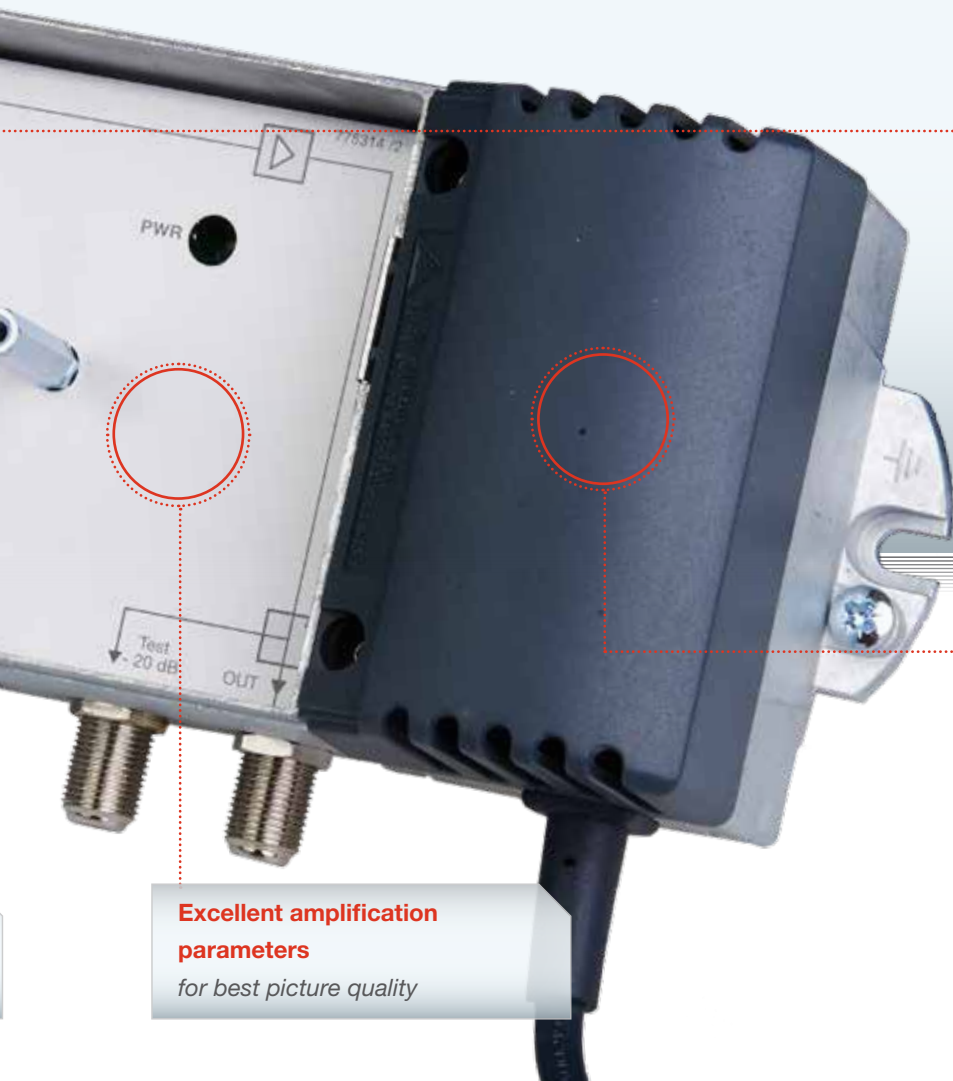
- Rotary switch for attenuation
- Interstage equalization fix 3 dB

Available versions:

- GHV 520 with 20dB amplification
- GHV 530 with 30dB amplification

900

500

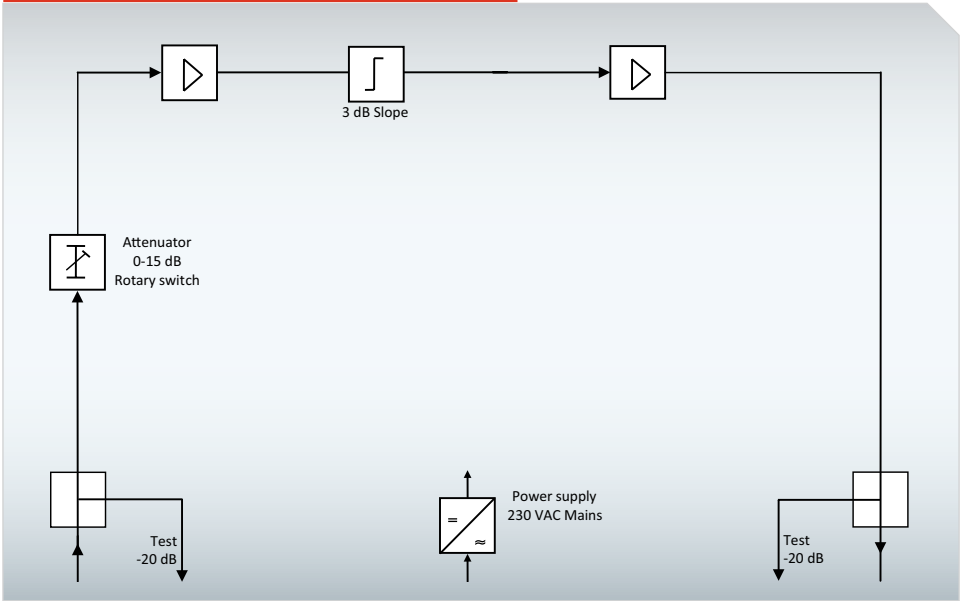


Rotary switch for attenuation settings
for reliable, uninterrupted and reproduceable settings

Highly efficient power supply unit
durable and energy-efficient

Excellent amplification parameters
for best picture quality

GHV 530 BLOCK DIAGRAM



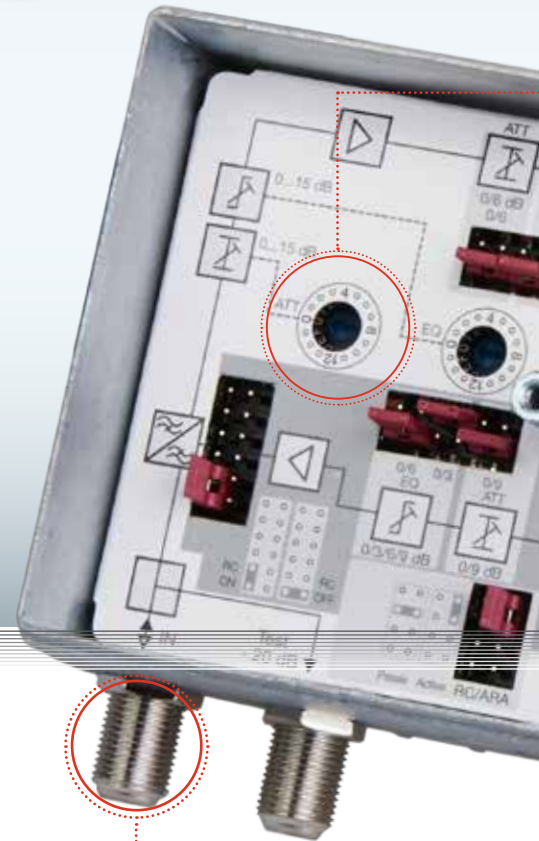
GHV 900 Series



High-performance amplifier for small to mid-sized buildings with active/passive return path

The GHV 900 amplifier series features flexibly configurable return paths. Upon delivery, the implemented return path amplifiers are activated at maximum gain but can be switched to “passive” or “off” via a jumper.

When the return path is switched off the transmission bandwidth in forward path is expanded by VHF band I. Return path basic gains are adjusted to the specific forward path gains of the different types. Additionally, a jumper in the pre-stage can be used to lowered the return path gain by 6 dB (except with GHV 920) without affecting the excellent transmission performance regarding noise and modulation capability. 16 step rotary switches, far superior to normal spindle controller regarding reliability and log-term stability, and jumpers allow for an easy, uninterrupted and reproducible setting of attenuation, equalization and cable simulation. Measurement ports at input and output also support an exact leveling of forward and return path.



High-quality F-connectors
(not molded into cabinet)
including measurement port

BENEFITS OF THE GHV AMPLIFIERS AT A GLANCE

- All-on-board: active/passive return path technology for 6 dB switching (GHV 920: 20 dB)
- no performance loss and no additional modules

- Active return channel

- Optional plug-in module to enable the automatic return path activation

Available versions:

- GHV 920 with 20dB amplification
- GHV 930 with 30dB amplification
- GHV 935 with 35dB amplification
- GHV 940 with 40dB amplification

COMMON FEATURES

- High output level
- Optimised 1 GHz technology
- Functional diecast housing
- Built-in energy-saving mains-fed power supply
- Extensive ESD and surge protection

500

Rotary switch for attenuation

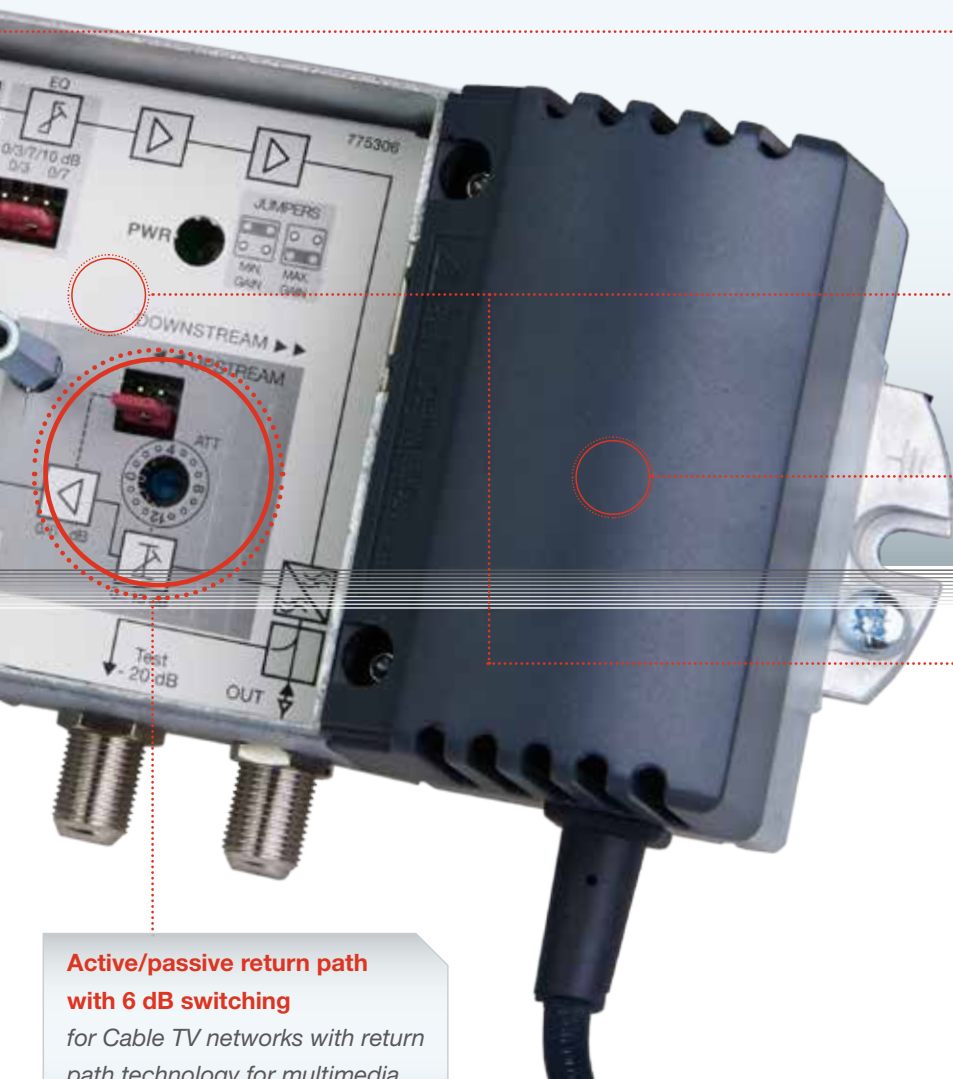
Interstage equalization
dB fic

Available versions:

ation

ation

900



Adjustable attenuation and equalization settings
in 1dB steps using rotary switches and jumpers for readable, easy, and reproducible settings

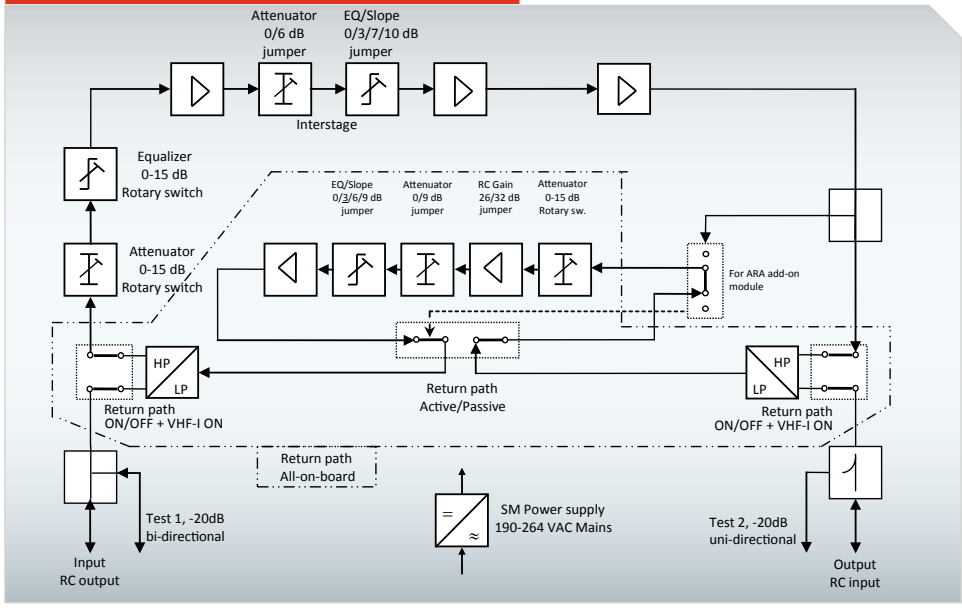
Excellent amplification parameters
for best picture quality

Highly efficient power supply unit
durable and energy-efficient

High linear MMIC output
offers high output levels at low power consumption

Active/passive return path with 6 dB switching
for Cable TV networks with return path technology for multimedia applications

GHV 930 BLOCK DIAGRAM



The Power at a Glance



Technical Specifications of all GHV Amplifiers

Type	SMATV/MATV		CATV				
Type	GHV 520	GHV 530	GHV 920	GHV 930	GHV 935	GHV 940	
Art No.	323138	323142	323150	323158	323162	323166	
Frequency range							
Forward path (switchable)	MHz	47-1006	47-1006	47-1006 85-1006	47-1006 85-1006	47-1006 85-1006	47-1006 85-1006
Return path (switchable)	MHz	-	-	5-65	5-65	5-65	5-65
Gain forward path							
Gain @ 1006 MHz	dB	21	30	20	30	35	40
Attenuation low/high jumper	dB	0-15	0-22.5	0-15	0-15	0-15	0-15
Input attenuator - 1dB step (rotary switch)	dB	-	-	0-15	0-15	0-15	0-15
Input equalizer - 1dB step (rotary switch)	dB	-	-	0-15	0-15	0-15	0-15
Interstage attenuator (jumper)	dB	-	-	0/6	0/6	0/6	0/6
Interstage equalizer/slope (jumper)	dB	3 fix	3 fix	0/3/7/10	0/3/7/10	0/3/7/10	0/3/7/10
Gain return path							
Gain @ 60 MHz (jumper)	dB	-	-	20	22/28	24/30	26/32
Input attenuation (rotary switch)	dB	-	-	0-15	0-15	0-15	0-15
Interstage equalizer/slope (jumper)	dB	-	-	0/3/6/9	0/3/6/9	0/3/6/9	0/3/6/9
Linearity frequency response							
@ 47...1006 MHz	dB	± 1.0	± 1.0	± 1.0	± 1.0	± 1.0	± 1.0
@ 5...65 MHz (return)	dB	-	-	± 1.0	± 1.0	± 1.0	± 1.0
Noise figure							
Forward (VHF I „on“)	dB	5.5	4.5	6.5	6.5	6.5	6.5
Return path (RP „active“)	dB	-	-	5.0	5.0	5.0	5.0
Return loss @ 40 MHz, -1.5 dB/octave min. Cat B							
Forward	dB	> 18	> 18	> 18	> 18	> 18	> 18
Return path	dB	-	-	> 18	> 18	> 18	> 18
Output level forward (max)							
CSO (42 ch. 862 MHz) Slope 0/7 dB	dBµV	101 ¹⁾	102 ¹⁾	98/100	103/105	103/105	107/109
CTB Cenelec 42 ch. 862 MHz, Slope 0/7 dB	dBµV	104 ¹⁾	105 ¹⁾	98/100	103/105	103/105	107/109
Output level return path							
16 QAM (KDG1TS140 - C)	dBµV	-	-	120	120	120	-
16 QAM (KDG1TS140 - D)	dBµV	-	-	-	-	-	120
RF connectors (75 Ohm)							
Input/Output		F-female	F-female	F-female	F-female	F-female	F-female
Test point input: bi-directional	dB	-20	-20	-20	-20	-20	-20
Test point output: uni-directional	dB	-20	-20	-20	-20	-20	-20
Operating conditions							
Power supply voltage (50-60 Hz)	V	190-264	190-264	190-264	190-264	190-264	190-264
Power consumption	W	< 3	< 3	< 5	< 7	< 9	< 11
Operating temperature	°C	-25...+55					
Protection class	KV	10/1					
Housing protection degree		II					
Dimensions W x H x D		IP 20					
Weight	mm	170 x 90 x 65					
Packing unit	kg	0.75					
Verpackungseinheit		1 pcs. carton box					
Reference standards							
Product standards/safety/EMC		EN 60728-3 Class 2 / EN 607728-11, EN 60065 / EN 50083-2					
RoHS 2002/95/EG compliant		Yes					
Classes Cable Network Operators							
Unitymedia/KBW UM TS 404 ²⁾					1-3 WE 4-6 WE	7 - 12 WE 13 - 16 WE	
KDG 1TS140			B 1.1 C 1.1	B 3.2 C 3.2	B3.2 C 3.2	C 4.3 D 4.3	

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¹ Slope 3 dB

² Listing in preparation