

Technical Description

8 x GPS Power Splitter
4449



Safety information

The safety regulations and technical data are important for the smooth running of the devices and the protection of people and equipment. Strict compliance with these regulations is required. In case of non-compliance with these regulations the guarantee and warranty claims for the device and possible consequential damage expire.

Safety of the Devices

The production of this device follows the latest technological standards and safety regulations.

The device must not be assembled by anyone but trained personnel. Please make sure that all the connected cables are laid and fixed properly. The device is to be run with the supply voltage stated on the identification plate only.

Only trained personnel or specialists may operate the device.

Repair on opened devices must not be carried out by anyone but specially trained staff or by the **hopf** company.

If the maintenance work requires the opening of a device or if a fuse needs changing the device must be separated from all voltage supplies.

If there are reasons to believe that the operational safety can no longer be guaranteed the device must be taken out of service and labelled accordingly. The safety may be impaired when the device does not operate properly or if it is obviously damaged.

hopf Elektronik

Nottebohmstr. 41 58511 Lüdenscheid
Postfach 1847 58468 Lüdenscheid

Tel.: ++49 (0)2351 / 9386-86

Fax: ++49 (0)2351 / 9386-93

Internet: <http://www.hopf.com>

e-mail: info@hopf.com

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1 General

The **hopf** company has developed a device to split the signal power (a signal power splitter) so that several GPS systems can be supplied with the GPS signal by one installed antenna.

2 Structure

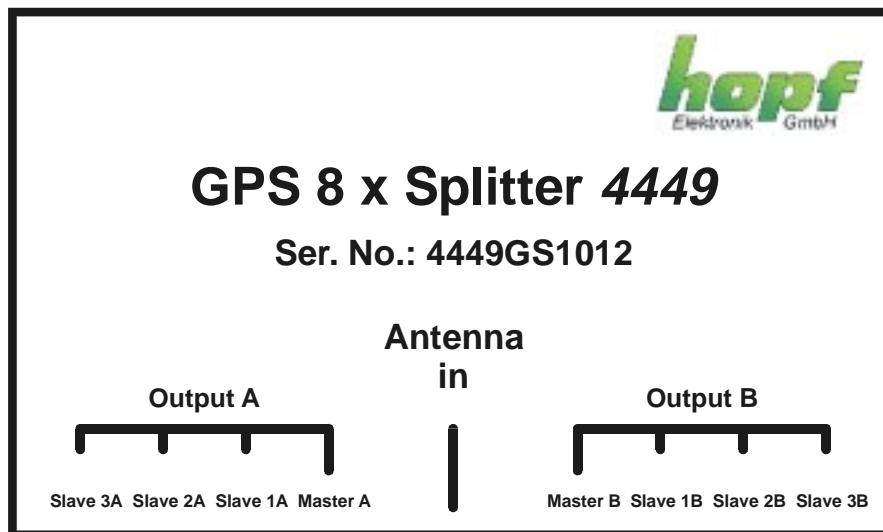
The signal power splitter is built into a HF-proof housing with an insulated base. Therefore the device is easily fixed to a wall near the GPS system.

The antenna cable is connected to the middle BNC-connector and divided passively by a 2x divider into two groups (A / B). After that the antenna signal of every group is sent to a power amplifier. Behind this power amplifier there are again two passive 2x divider each. The signal outputs are to the left and the right of the antenna input (Output A / Output B).

3 Voltage Supply

The 8x splitter does not require an external voltage supply. It is supplied like the antenna by the connected GPS-decoder system via the coaxial cable.

The signal outputs (Master A / Master B) next to the antenna input take over the supply of the divider group. The other 3 signal outputs on each side are capacitively uncoupled.



PLEASE NOTE : IT IS THEREFORE ESSENTIAL TO CONNECT THE GPS SYSTEMS TO THE DIVIDER FROM THE INSIDE TO THE OUTSIDE.

4 Terminal Resistors

To avoid reflections and cross-talk we recommend using a 50 Ohm HF-resistor to lock unused signal outputs. If a whole signal group (Output A / Output B) is not used terminal resistance is not required for this group.

5 Length of Cable

The length of the cable between antenna and divider and between divider and the GPS decoding depends on the type of cable that is used. Normally the 20 dB of line loss are levelled out by the power amplifier.

6 Technical Data

	min.	typ.	max.	Unit:	Remarks:
Center frequency:		1575,42		MHz	GPS L2-Band
Gain (S21 - S91):	18	20	22	dB	
Input reflexion (S11):		10		dB	
VSWR (Input):		1:2			
Output reflexion (S22 - S99):	14	18	20	dB	
Isolation between two adjacent outputs (S34):		20		dB	
Isolation between two separated outputs:	30		35	dB	
Isolation between any output and input:	30	40	45	dB	
Bypassed Bias current for act. Antenna, LNA			50	mA	Coupling through output 4 or 5, outputs DC-isolated
Current Consumption	15	20	25	mA	Phantom supplied
Input- Output-Impedance		50		Ohm	
IP3-Point		-14		dBm	
Noise			2	dB	