Technical documentation
Last changed on: 2025-10-01

Ripple Test Adapter

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Document history

Version	Date	Major changes
1.0	2021-06-09	Initial version

Disclaimer / Copyrights

The information in this manual is subject to change without notice. We take no responsibility for any mistake in the document. We reserve the right to make changes in the product design without reservation and without notification to the users. We decline all responsibility for damages and injuries caused by an improper use of the device.

Safety

This section contains important security information for the installation and operation of the device. Failure to follow safety instructions and warnings can result in serious injury or death and property damage.

Safety and operating instructions must be read carefully before starting any operation.

We decline all responsibility for damages and injuries caused which may arise from improper use of our equipment.

Depiction of safety instructions

DANGER!

"Danger!" indicates a severe injury hazard. The non-observance of safety instructions marked as "Danger!" will lead to possible injury or death.

WARNING!

"Warning!" indicates an injury hazard. The non-observance of safety instructions marked as "Warning!" could lead to possible injury or death.

CAUTION!

Advices marked as "Caution!" describe actions to avoid possible damages to property

INFORMATION

Advices marked as "Information" give important information.

Description of the symbols in the manual

Warning of dangerous high voltage

Read the manual.

Warning of danger spots

Important information.

The crossed bin symbol indicates that the device shall not be disposed with regular.

Intended use

The device may only be operated within the limits specified in the data sheet. The permissible ambient conditions (temperature, humidity) must be observed. The device is designed exclusively to control and communicate with iseg high voltage devices as specified in the data sheet. Any other use not specified by the manufacturer is not intended. The manufacturer is not liable for any damage resulting from improper use.

Qualification of personnel

A qualified person is someone who is able to assess the work assigned to him, recognize possible dangers and take suitable safety measures on the basis of his technical training, his knowledge and experience as well as his knowledge of the relevant regulations.

General safety instructions

- Observe the valid regulations for accident prevention and environmental protection.
- Observe the safety regulations of the country in which the product is used.
- Observe the technical data and environmental conditions specified in the product documentation.
- You may only put the product into operation after it has been established that the device complies with the country-specific regulations, safety regulations and standards of the application.
- The high-voltage power supply unit may only be installed by qualified personnel.

1. General description

This test equipment is intended for testing end evaluating HV-sources up to 8kV for voltage and current stability and the precision of the measurement.

2. Technical Data

SPECIFICATIONS	
Maximum input voltage	8 kV
Frequency transfer range of the Ripple Box	10 Hz – 10 MHz
HV connector	SHV, see Figure 3
Ripple output (Ripple Box)	BNC, see Figure 4
Operating temperature	0 – 40 °C
Storage temperature	-20 – 60 °C

Table 1: Technical data: Specifications

CONFIGURATIONS				
Type	**Maximum input voltage**	**HV connector**	**Ripple output**	**Item code**
Ripple Box				
Ripple Box 8kV for SHV	8 kV	SHV	BNC	Z586136

Table 2: Technical data: Configurations

3. Usage

CAUTION!

A capacitor of approx. 15nF is connected to the HV-input of the ripple box. Always discharge before unplugging from a HV-device.
If unsure about the charge condition discharge before connecting to a HV device.

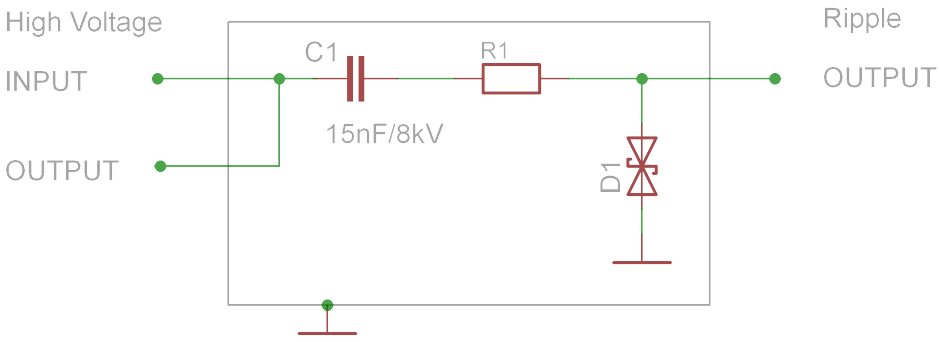


Figure 1: Schematics

The BNC output connector of the Ripple Box can be connected directly with an oscilloscope. An integrated protection circuit limits the output voltage towards the oscilloscope to approx. 40V.

The following configuration is recommended:

Input Impedance: **1MOhm**
Coupling: **DC**
Probe: **1x**

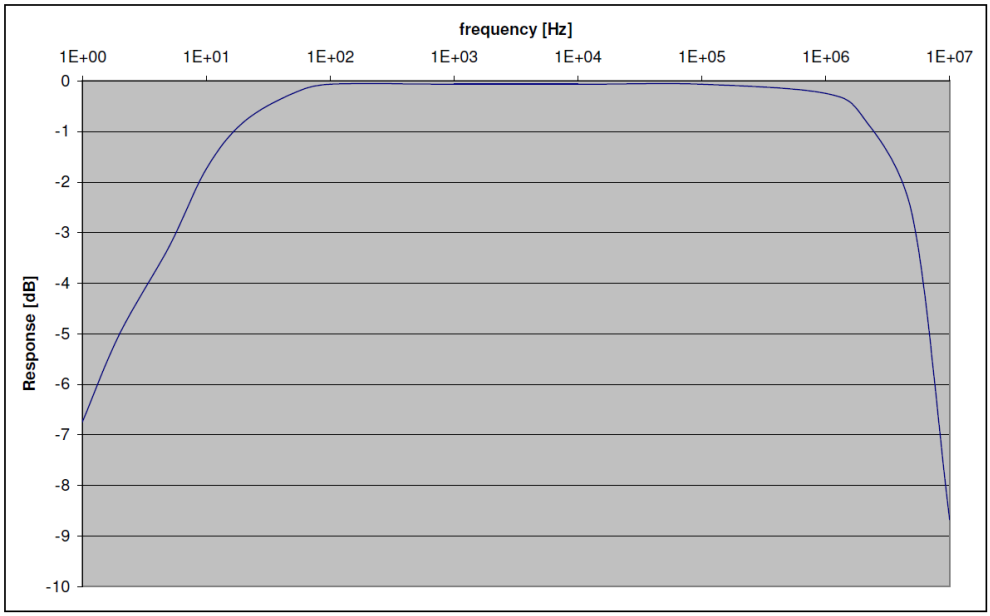
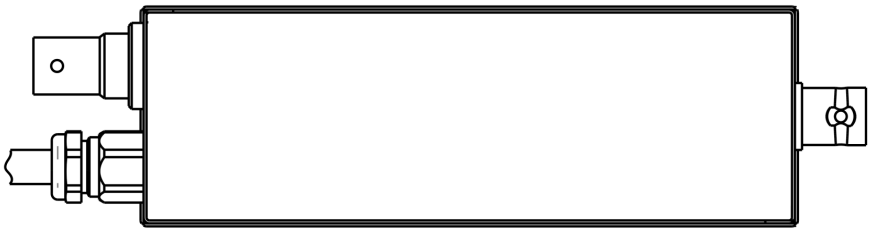


Figure 2: Typical frequency response of the Ripple Box

4. PIN assignments

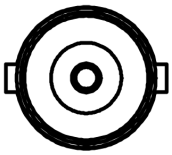
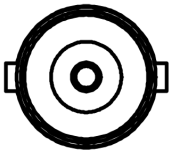
INPUT
High Voltage
(SHV)

OUTPUT
High Voltage
(cable)



OUTPUT
Ripple

5. Connectors and Part numbers

HV CONNECTOR	PART NUMBERS (manufacturer code / iseg accessory parts item code)			
SHV				
 *Figure 3*	POWER SUPPLY SIDE		CABLE SIDE	
	Socket	R317.580.000	Connector iseg	57K101-006N3 Z590162
BNC				
 *Figure 4*	POWER SUPPLY SIDE		CABLE SIDE	
	Socket	BNC connector, 50Ω	Connector iseg	BNC connector, 50Ω Z201120

6. Dimensional Drawings

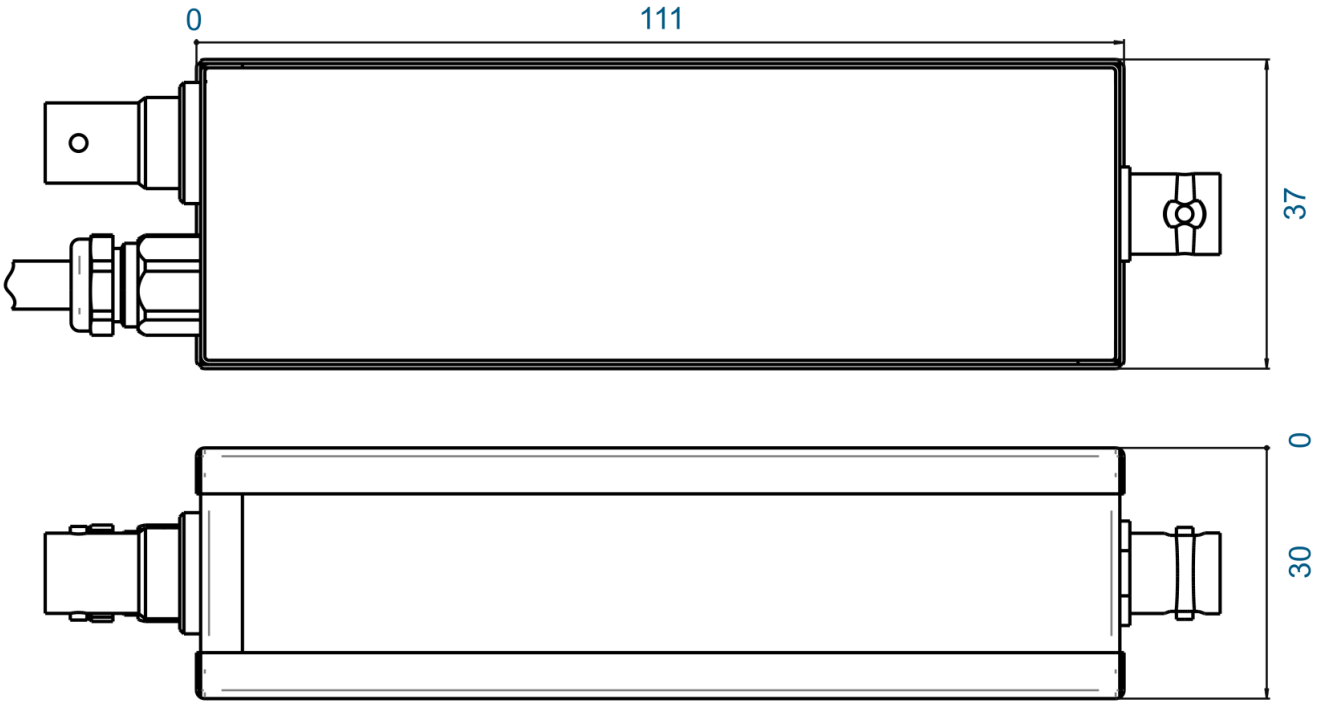


Figure 5

7. Appendix

For more information please use the following download links:

This document
https://www.iseg-hv.com/accessories

8. Warranty & service

This device is made with high care and quality assurance methods. The standard factory warranty is 36 months. Please contact the iseg sales department if you wish to extend the warranty.

CAUTION!

Repair and maintenance may only be performed by trained and authorized personnel.
For repair please follow the RMA instructions on our website: www.iseg-hv.com/en/support/rma

9. Disposal

INFORMATION

All high-voltage equipment and integrated components are largely made of recyclable materials. Do not dispose the device with regular residual waste. Please use the recycling and disposal facilities for electrical and electronic equipment available in your country.

This device is only intended for professional use or as an built-in component for devices in the research/development sector and is sold exclusively B2B (only to commercial end customers). The device may only be disposed of properly and not in normal household waste.

As an alternative to proper self-disposal, we offer a free disposal option for the device. Before sending in the device, please send an email to recycling@iseg-hv.de stating the device article and serial number to receive further information on the process.

Further information can be found at https://iseg-hv.com/en/support/recycling.

10. Manufacturer contact

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