



RIGOL

Probe Adapter

BNC Adapter Input 50Ω

User Guide

Mar. 2025

Guaranty and Declaration

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Contact Us

If you have any problem or requirement when using our products or this manual, please contact RIGOL.

E-mail: service@rigol.com

Website: <http://www.rigol.com>

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1 Safety Notices and Symbols

Safety Notices in this Manual:



WARNING

Indicates a potentially hazardous situation or practice which, if not avoided, will result in serious injury or death.



CAUTION

Indicates a potentially hazardous situation or practice which, if not avoided, could result in damage to the product or loss of important data.

Safety Notices on the Product:

- **DANGER**
It calls attention to an operation, if not correctly performed, could result in injury or hazard immediately.
- **WARNING**
It calls attention to an operation, if not correctly performed, could result in potential injury or hazard.
- **CAUTION**
It calls attention to an operation, if not correctly performed, could result in damage to the product or other devices connected to the product.

Safety Symbols on the Product:



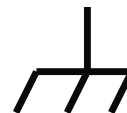
**Hazardous
Voltage**



Safety Warning



**Protective Earth
Terminal**



Chassis Ground



Test Ground

2 Document Overview

This manual is used to guide users to get a quick understanding of the BNC Adapter Input 50Ω and its using method. Besides, this manual gives care and cleaning information for the maintenance of the probe adapter.

The probe adapter includes the following models.

Model	Description
BNC Adapter Input 50Ω	3.5mm(F)-to-precision BNC connector (50Ω)
High Impedance Adapter	3.5mm(F)-to-BNC connector (1MΩ)

3 Probe Adapter Overview

3.1 Probe Adapter Introduction

The probe adapter enables the probe to be used on RIGOL DS80000 series oscilloscope by extending the interface and functionality of the DS80000 series. Its BNC connector can be recognized by RIGOL's various probes, making it easy to be used in different testing and measurement solutions.

The probe adapter is compatible with the interface of RIGOL's DS80000 series, and can be auto-recognized by the interface and configured.

3.2 General Inspection

1. Inspect the packaging

If the packaging has been damaged, do not dispose the damaged packaging or cushioning materials until the shipment has been checked for completeness and has passed both electrical and mechanical tests.

The consigner or carrier shall be liable for the damage to the instrument resulting from shipment. RIGOL would not be responsible for free maintenance/rework or replacement of the instrument.

2. Inspect the instrument

In case of any mechanical damage, missing parts, or failure in passing the electrical and mechanical tests, contact your RIGOL sales representative.

3. Check the accessories

Please check the accessories according to the packing lists. If the accessories are damaged or incomplete, please contact your RIGOL sales representative.

Recommended Calibration Interval

RIGOL suggests that the instrument should be calibrated every 18 months.

3.3 Probe Adapter Appearance

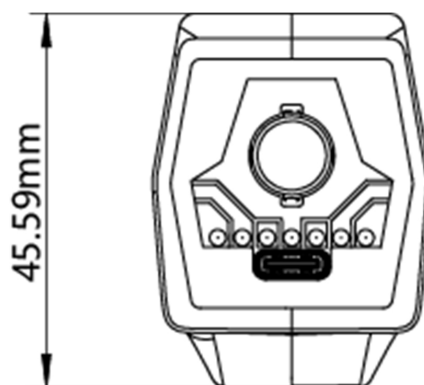


Figure 3.1 Front View

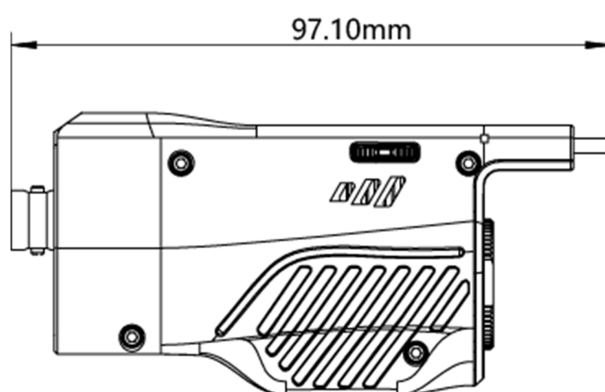


Figure 3.2 Side View

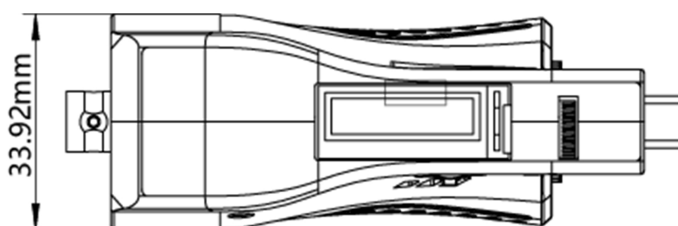


Figure 3.3 Vertical View

3.4 Specifications

Model	BNC Adapter Input 50 Ω
Analog Bandwidth (-3 dB) ^[1]	DC to 10 GHz
Input Impedance	50 Ω
Insertion Loss (Typ.) ^[2]	0.5 dB@5 GHz

Model	BNC Adapter Input 50 Ω
	1 dB@10 GHz
VSWR (Typ.) ^[2]	1.3@5 GHz 1.6@10 GHz
Maximum Input Voltage	Refer to the host instrument specification

**NOTE**

[1]: Host instrument (DS81304) + Adapter

[2]: Adapter only.

4 To Use the Probe Adapter

4.1 To Connect to the Oscilloscope

After the probe adapter is connected properly to RIGOL's DS80000 series oscilloscope, the oscilloscope recognizes the probe adapter automatically and provides power via the front panel to the probe adapter. At this time, you can set the parameters for the analog channel through the front-panel menu of the oscilloscope.

TIP

The probe adapter is connected to the oscilloscope via the Type-C interface. Note that the Type-C interface is compliant with the RIGOL's own protocol, rather than the standard USB protocol, thus do not use it to charge for other devices.

Please connect the probe to the oscilloscope following the steps below:

1. Connect the Probe Adapter to the Oscilloscope

Connect the other end of the probe adapter to the front-panel input terminal of the analog channel of the oscilloscope and the Type-C interface. Note that after the probe adapter is inserted into the front-panel Type-C interface of the oscilloscope, rotate the coaxial connector of the analog channel to tight it up.

2. Connect the Probe to the Probe Adapter

Take PVA8000 (active differential probe) as an example, connect the probe head of PVA8000 to one end of the probe adapter, as shown in [Figure 4.1](#).

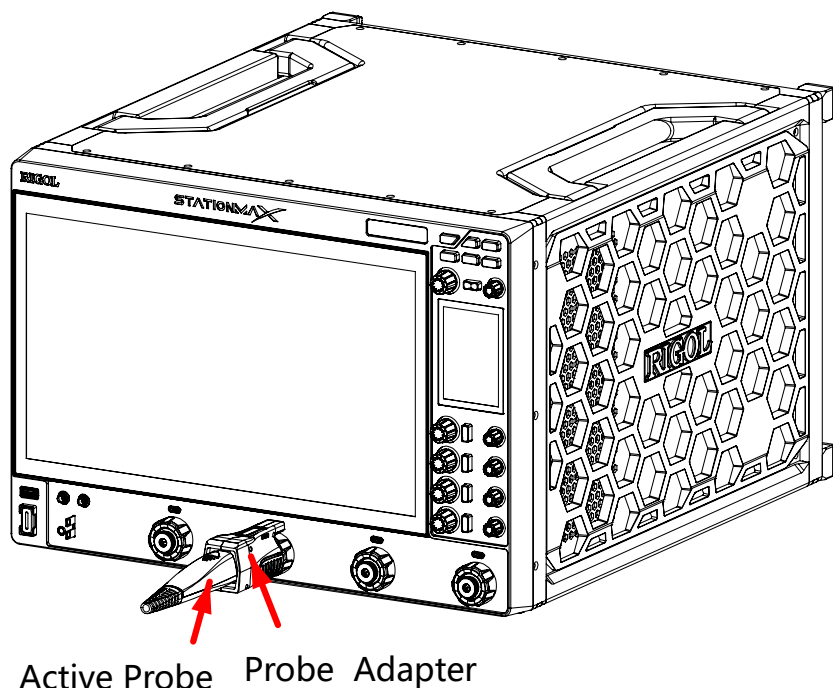


Figure 4.1 Connect the Active Probe

4.2 To Adjust the Analog Channel Setting

You can move the switch lever (as shown in the figure below) at one side of the probe adapter to control some functions of the adapter. For example, in the probe module, you can view the probe attenuation ratio, impedance and probe type. In the system module, you can perform self-check for the adapter, restart the adapter, work with the oscilloscope to use Auto key to perform Auto configuration and set the power-on status for the oscilloscope.



5 RIGOL Probes and Accessories Supported

This section lists the probes and accessories that match the probe adapter. All the products listed here can be purchased from RIGOL.

Probes available for 50 Ω adapter

Model	Type	Description
 PVA8700	Single-ended/ Differential Active Probe	- BW: DC to 7 GHz 30 V peak CAT I - Compatibility: DS70000/80000 series
 PVA8350	Single-ended/ Differential Active Probe	- BW: DC to 3.5 GHz 30 V peak CAT I - Compatibility: DS70000/80000 series
 PVA7250	Single-ended/ Differential Active Probe	- BW: DC to 2.5 GHz 30 V peak CAT I - Compatibility: MSO/DS7000, MSO8000/A, DHO4000, MHO/DHO5000, and DS70000/80000 series
 RP7150	Single-ended/ Differential Active Probe	- BW: DC to 1.5 GHz 30 V peak CAT I - Compatibility: MSO/DS7000, MSO8000/A, DHO4000, MHO/DHO5000, and DS70000/80000 series

Model	Type	Description
 RP7080	Single-ended/ Differential Active Probe	• BW: DC to 800 MHz • 30 V peak CAT I • Compatibility: MSO/DS7000, MSO8000/A, DHO4000, MHO/DHO5000, and DS70000/80000 series
 RP7150S	Single-ended Active Probe	• BW: DC to 1.5 GHz • 30 V peak CAT I • Compatibility: MSO/DS7000, MSO8000/A, DHO4000, MHO/DHO5000, and DS70000/80000 series
 RP7080S	Single-ended Active Probe	• BW: DC to 800 MHz • 30 V peak CAT I • Compatibility: MSO/DS7000, MSO8000/A, DHO4000, MHO/DHO5000, and DS70000/80000 series

6 Care and Cleaning

Care

Do not store or leave the instrument where it may be exposed to direct sunlight for long periods of time.



CAUTION

To avoid damage to the instrument, do not expose it to caustic liquids.

Cleaning

Clean the instrument regularly according to its operating conditions.

1. Disconnect the probe adapter from the oscilloscope or power source.
2. Clean the external surfaces of the probe adapter with a soft cloth dampened with mild detergent or water.



WARNING

To avoid short-circuit resulting from moisture or even personal injuries, ensure that the probe adapter is completely dry before use.

7 Warranty

RIGOL TECHNOLOGIES CO., LTD. (hereinafter referred to as RIGOL) warrants that the product mainframe and product accessories will be free from defects in materials and workmanship within the warranty period. If a product proves defective within the warranty period, RIGOL guarantees free replacement or repair for the defective product.

To get repair service, please contact your nearest RIGOL sales or service office.

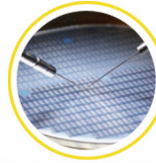
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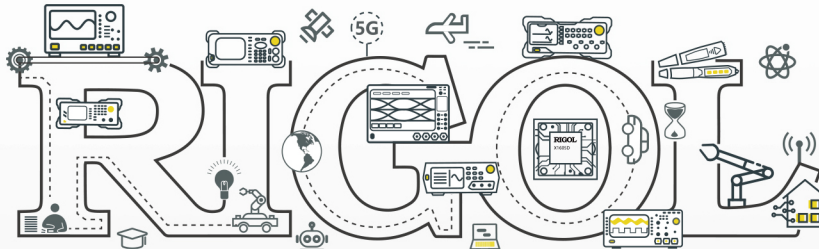
Industrial Intelligent
Manufacturing



Semiconductors

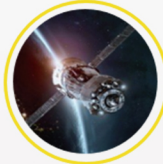


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