

# R&S<sup>®</sup>RT-ZA51

## Probe to 3.5 mm Adapter

### Manual



1803540702

Version 01

**ROHDE & SCHWARZ**

Make ideas real



# 1 Product description

The R&S RT-ZA51 is a probe adapter with R&S probe interface 1 and standard connectors USB-C, 3.5 mm and DC jack. Using this adapter, you can power and control your Rohde & Schwarz probe even without an appropriate Rohde & Schwarz oscilloscope.

You can plug any compatible Rohde & Schwarz probe to the R&S RT-ZA51 adapter, and connect the adapter to any measuring instrument with an input impedance of 50  $\Omega$ , e.g. a sampling oscilloscope, network analyzer or a spectrum analyzer. The probe can be powered and controlled from any USB host via the USB-C interface of the adapter.

Using the R&S RT-ZA51 probe to 3.5 mm adapter together with the R&S RT-ZA50 probe interface extender moves the Rohde & Schwarz probe interface 1 closer to your test setup. Thus, you can extend the distance between the DUT and your Rohde & Schwarz oscilloscope.

**Table 1-1: Supported Rohde & Schwarz probes**

Probe		Comment
R&S RT-ZS10	1410.4080.02	
R&S RT-ZS10E	1418.7007.02	
R&S RT-ZS20	1410.3502.02	
R&S RT-ZS30	1410.4309.02	
R&S RT-ZS60	1418.7307.02	
R&S RT-ZD10	1410.4715.02	
R&S RT-ZD20	1410.4409.02	
R&S RT-ZD30	1410.4609.02	
R&S RT-ZD40	1410.5205.02	
R&S RT-ZPR20	1800.5006.02	
R&S RT-ZPR40	1800.5406.02	
R&S RT-ZM15	1800.4700.02	Using the termination voltage feature requires an auxiliary 12 V DC power supply.
R&S RT-ZM30	1419.3005.02	
R&S RT-ZM60	1419.3105.02	
R&S RT-ZM90	1419.3205.02	
R&S RT-ZM130	1800.4500.02	
R&S RT-ZM160	1800.4600.02	

## Deliveries

The delivery of the R&S RT-ZA51 (1803.5365.02) includes the following items:

R&S RT-ZA51 probe to 3.5 mm adapter	1803.5371.02
USB 3.1 cable A/C 2.0 m	3689.9288.00
Data sheet	5215.8370.22
Manual	1803.5407.02

The R&S RT-ZA50 is a separate product (1803.5265.02) and not included in the delivery.

## Optional accessories

DC power supply 12 V, 30 W	3587.3946.00
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# 2 Connecting the adapter

For your safety, follow the safety instructions delivered with your Rohde & Schwarz oscilloscope and probe, and the instructions given in the manuals of your measurement equipment.

Observe the voltage limits and ratings of the adapter and the measuring instrument. Limits and ratings are marked on the products and listed in the data sheets.

### To connect the R&S RT-ZA51 to the measuring instrument

1. Connect the adapter's 3.5 mm port to the instrument's input port. If necessary, use a suitable SMA/3.5 mm/2.92 mm coaxial adapter in addition.
2. Connect the adapter to a USB port of the instrument or a separate USB hub using the USB cable.
3. If necessary, connect an auxiliary supply voltage via the DC jack. See comments in [Table 1-1](#).
4. Set the jumper to AGND/DGND to connect power supply ground and analog ground of your Rohde & Schwarz probe.

**To use R&S RT-ZA50 together with R&S RT-ZA51**

1. Plug the R&S RT-ZA50 to a channel input connector of your oscilloscope.
2. Connect a Rohde & Schwarz active probe to the R&S RT-ZA51. The probe must have the Rohde & Schwarz probe interface 1, and 50 Ω input impedance.
3. Connect both adapters using the USB and SMA cables, and optional DC power cable. The cables are delivered with R&S RT-ZA50.

With this configuration, the probe is powered and controlled from your Rohde & Schwarz oscilloscope. No additional power supply is necessary. You can also use user-defined cables up to 3 m for measurement setups further away from your oscilloscope.

4. On the R&S RT-ZA51, set the jumper to DGND/NC to avoid ground offset currents.
5. If you use high-bandwidth probes or user-defined SMA extension cables, we recommend an additional frequency alignment. Therefore, you can use the proven probe feature, which is part of the R&S RTO/RTP-K121 deembedding option.

For further information, see the manuals of the R&S RT-ZA50 adapter, the probe and the oscilloscope used in your measurement setup.

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