R&S®Cable Rider ZPH 2-port model

Power, optical power and pulse measurements (R&S®ZPH-K9/-K19/-K29)

The perfect choice for

Precisely measuring RF power

Measuring optical power

Basic analysis of pulse characteristics

Key specifications	
Frequency range	5 kHz to 3/4 GHz in spectrum mode
Resolution bandwidth	1 Hz to 3 MHz
DANL at 3 GHz (preamp on)	< –163 dBm
Battery operation	> 6.5 hours
Weight	2.5 kg

Your benefit	Features
Additional measurement capabilities	Power, optical power and pulse measurements (R&S®ZPH-K9/-K19/-K29)
Easily upgradeable functions	User upgradeable software keycodes
Power measurements up to 110 GHz with simple setup	▮ R&S®ZPH-K9 power sensor support ▮ R&S®NRP power sensor

Pulse measurement

The R&S®ZPH-K29 option enables precise pulse and peak power measurements using the R&S®Cable Rider ZPH together with the Rohde & Schwarz wideband power sensor family. The wideband power sensors measure pulses with a resolution of up to 50 ns and support frequencies up to 44 GHz.

Transform the cable and antenna tester into a power meter

The R&S®ZPH-K19 channel power meter option converts the analyzer into a portable power meter with a level measurement accuracy of typ. 0.5 dB. This option makes it possible to achieve power measurement results quickly and easily without needing a power sensor. The R&S®ZPH-K9 option with a power sensor such as the R&S®NRPxxT can perform precise power measurements with uncertainty as low as 0.01 dB (relative).

Optical power measurement

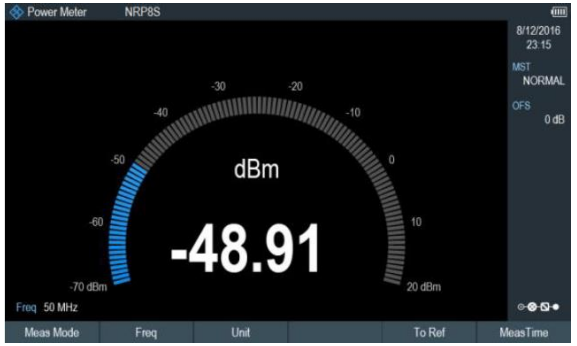
When used with a USB optical power meter (R&S®HA-Z360/-Z361), the R&S®ZPH-K9 option reads out optical absolute power in dBm as well as relative power in dB.

R&S®HA-Z360 / R&S®HA-Z361 OEM USB optical power meter for optical power measurement

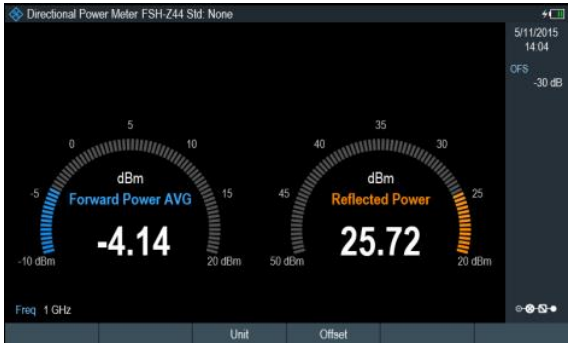
▷ For more information, see www.rohde-schwarz.com/product/zph

Precision RF measurement with power sensor support (R&S®ZPH-K9)

For applications requiring very high accuracy to measure and align transmitter RF power levels, the R&S®ZPH-K9 option allows the R&S®Cable Rider ZPH to be used together with Rohde & Schwarz power sensors for precise power measurements.

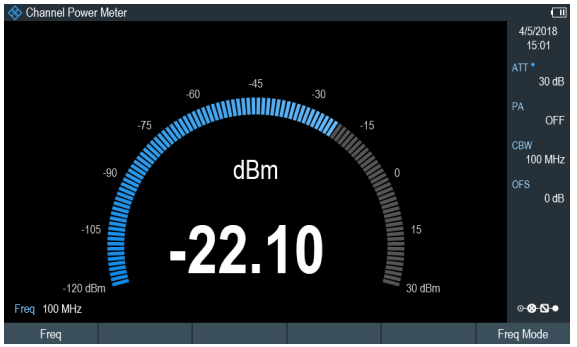


Power measurement with the R&S®NRP8S power sensor



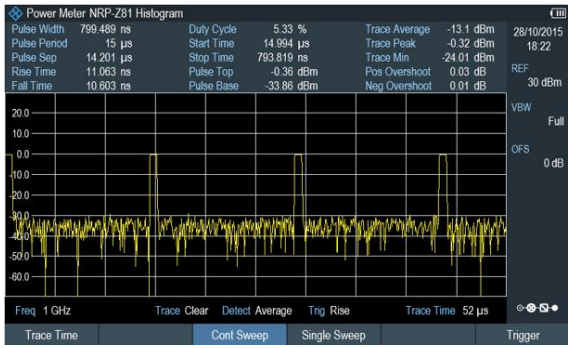
Forward power and reflected power measurement with the R&S®FSH-Z44 directional power sensor

Internal channel power meter (R&S®ZPH-K19)



Power measurement using the internal power meter

Pulse measurement (R&S®ZPH-K29)



Pulse measurement with the R&S®NRP-Z81 power sensor

Related options

Type	Description
R&S®ZPH-K9	Power sensor support
R&S®ZPH-K19	Channel power meter
R&S®ZPH-K29	Pulse measurements with power sensor

Optical power sensors supported by R&S®ZPH-K9

Type	Description
R&S®HA-Z360	OEM USB optical power meter (Germanium)
R&S®HA-Z361	OEM USB optical power meter (filtered InGaAs)

Power sensor supported by R&S®ZPH-K9

Directional power sensors	
R&S®FSH-Z14	25 MHz to 1 GHz
R&S®FSH-Z44	200 MHz to 4 GHz
Universal power sensors	
R&S®NRP-Z211 [1)]	10 MHz to 8 GHz, 100 mW, two-path
R&S®NRP-Z221 [1)]	10 MHz to 18 GHz, 100 mW, two-path
Three-path diode power sensors	
R&S®NRP8S [2)]	100 pW to 200 mW, 10 MHz to 8 GHz
R&S®NRP18S [2)]	100 pW to 200 mW, 10 MHz to 18 GHz
R&S®NRP33S [2)]	100 pW to 200 mW, 10 MHz to 33 GHz
R&S®NRP40S [2)]	100 pW to 200 mW, 50 MHz to 40 GHz
R&S®NRP50S [2)]	100 pW to 200 mW, 50 MHz to 50 GHz
High-power three-path diode power sensors	
R&S®NRP18S-10 [2)]	1 nW to 2 W, 10 MHz to 18 GHz
R&S®NRP18S-20 [2)]	10 nW to 15 W, 10 MHz to 18 GHz
R&S®NRP18S-25 [2)]	30 nW to 30 W, 10 MHz to 18 GHz
Thermal power sensors	
R&S®NRP18T [2)]	300 nW to 100 mW, DC to 18 GHz
R&S®NRP33T [2)]	300 nW to 100 mW, DC to 33 GHz
R&S®NRP40T [2)]	300 nW to 100 mW, DC to 40 GHz
R&S®NRP50T [2)]	300 nW to 100 mW, DC to 50 GHz
R&S®NRP67T [2)]	300 nW to 100 mW, DC to 67 GHz
R&S®NRP110T [2)]	300 nW to 100 mW, DC to 110 GHz
Average power sensors	
R&S®NRP6A [2)]	100 pW to 200 mW, 8 kHz to 6 GHz
R&S®NRP18A [2)]	100 pW to 200 mW, 8 kHz to 18 GHz

Wideband power sensors supported by R&S®FPH-K29

R&S®NRP-Z81 [1)]	50 MHz to 18 GHz, 100 mW
R&S®NRP-Z85 [1)]	50 MHz to 40 GHz, 100 mW (2.92 mm)
R&S®NRP-Z86 [1)]	50 MHz to 40 GHz, 100 mW (2.40 mm)
R&S®NRP-Z86 [1)]	50 MHz to 44 GHz, 100 mW (2.40 mm)

[1)] Requires R&S®NRP-Z4 USB adapter cable.
[2)] Requires R&S®NRP-ZKU USB interface cable.

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