

R&S®HE400 HANDHELD DIRECTIONAL ANTENNA

8 kHz to 8 GHz
For locating transmitters and interference sources



The R&S®HE400 handheld directional antenna is used to locate transmitters and interference sources. Bearings are found by manually pointing the antenna in the direction where the signal is strongest.

The antenna is optimized to be used with the R&S®PR200 portable monitoring receiver, the R&S®PR100 portable receiver or the R&S®FSH and the R&S®Spectrum Rider FPH handheld spectrum analyzers as well as R&S®Cable Rider ZPH cable and antenna analyzer.

It consists of an antenna handle, receiver-customized cable sets and different antenna modules that can easily be attached using a locking ring. Seven different antenna modules are available, allowing the reception of vertically or horizontally polarized signals. The type of module and its orientation is detected by the antenna handle.

A built-in low-noise amplifier (LNA) can be activated in order to increase system sensitivity. In passive mode, the amplifier is bypassed and the antenna can also be used in the vicinity of strong transmitters.

The integrated electronic compass delivers exact azimuth and elevation data. Together with the sensitive GNSS receiver in the antenna handle, precise location accuracy is provided by triangulation.

The integrated trigger button can be used to externally trigger a receiver-configurable action.

Key facts

- ▶ Distinct directional pattern
- ▶ Wide dynamic range due to switchable active and passive mode (LNA on/off)
- ▶ Very wide frequency range in a compact size
- ▶ Automatic antenna module and polarization detection
- ▶ Trigger button for external triggering of the receiver
- ▶ Fatigue-free operation due to antenna design and materials used, which keep weight to a minimum
- ▶ GNSS receiver and electronic compass included
- ▶ Tripod thread and adapter thread for smartphone/tablet cradle
- ▶ Exchangeable cable set between antenna and receiver



R&S®HE400CEL



R&S®HE400SCB



R&S®HE400UWB



R&S®HE400LP



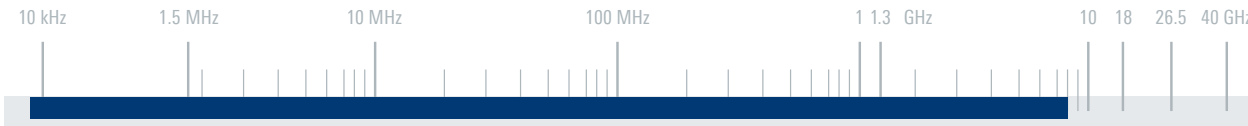
R&S®HE400HF



R&S®HE400SHF



R&S®HE400VHF



Specifications

RF specification of antenna handle

Frequency range	8 kHz to 8 GHz
Nominal impedance	50 Ω
VSWR (1 MHz to 8 GHz)	< 2.5; 2 (typ.)

RF specification of antenna modules

Frequency range	<ul style="list-style-type: none"> ▶ R&S®HE400HF ▶ R&S®HE400VHF ▶ R&S®HE400UWB ▶ R&S®HE400LP ▶ R&S®HE400CEL ▶ R&S®HE400SCB ▶ R&S®HE400SHF 	<ul style="list-style-type: none"> ▶ 8 kHz to 30 MHz ▶ 20 MHz to 200 MHz ▶ 30 MHz to 6 GHz ▶ 450 MHz to 8 GHz ▶ 700 MHz to 2500 MHz ▶ 1.7 GHz to 6 GHz ▶ 5 GHz to 20 GHz¹⁾
Polarization	adjustable, linear horizontal or vertical	
Nominal impedance	50 Ω	
VSWR	< 3.5; 2.0 (typ.) except R&S®HE400HF module	
Dimensions	with R&S®HE400UWB antenna module	approx. 600 × 285 × 60 mm (24 × 11 × 2 in)
Weight	approx. 1.0 kg (2 lb)	

¹⁾ Can be used up to 8 GHz with R&S®HE400 antenna handle.

Ordering information

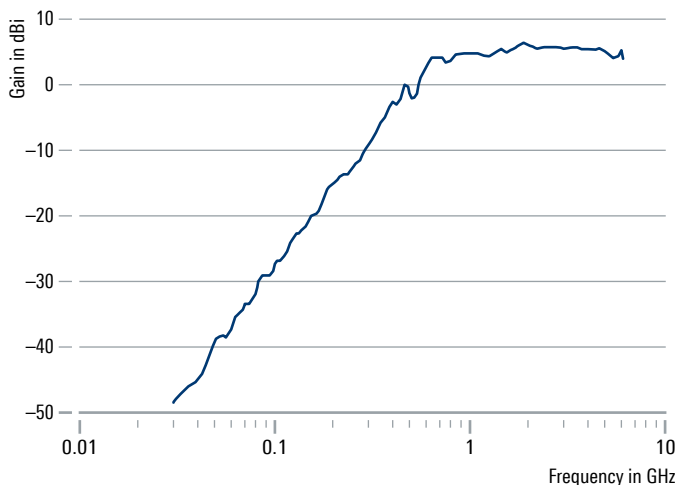
	Type	Order No.
Handheld directional antenna (antenna handle)	R&S®HE400	4104.6000.02
HF antenna module, 8.3 kHz to 30 MHz	R&S®HE400HF	4104.8002.02
VHF antenna module, 20 MHz to 200 MHz	R&S®HE400VHF	4104.8202.02
UWB antenna module, 30 MHz to 6 GHz	R&S®HE400UWB	4104.6900.02
Log-periodic antenna module, 450 MHz to 8 GHz	R&S®HE400LP	4104.8402.02
Cellular antenna module, 700 MHz to 2500 MHz	R&S®HE400CEL	4104.7306.02
S/C band antenna module, 1.7 GHz to 6 GHz	R&S®HE400SCB	4104.7606.02
SHF antenna module, 5 GHz to 20 GHz	R&S®HE400SHF	4104.8602.02
Cable set, for connecting R&S®HE400/R&S®HE400MW to R&S®PR100/FSH/FPH/ZPH	R&S®HE400-K	4104.7770.02
Serial to USB adapter, for connecting R&S®HE400/R&S®HE400MW to R&S®FPH	R&S®HE300USB	4080.9440.02
Cable set, for connecting R&S®HE400 to R&S®PR200	R&S®HE400-K	4104.7770.03

Recommended extras

Transport bags/cases are available for different configurations.

Tripod, for R&S®HE400 antenna family	R&S®HE400Z4	4104.9109.02
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Measured realized gain of the R&S®HE400UWB



Meas. field patterns of the R&S®HE400UWB in the H plane

