

# R&S®HFH2-Z2E ACTIVE LOOP ANTENNA

8.3 kHz to 30 MHz

Broadband active loop antenna for measuring magnetic field-strength components



The R&S®HFH2-Z2E active loop antenna measures the magnetic field strength in the LF, MF and HF range. It can be used for EMI measurements in line with various standards (i.e. CISPR, MIL, FCC, ANSI, ETSI).

Each antenna is individually calibrated.

It is characterized by an almost frequency-independent antenna factor and very high sensitivity.

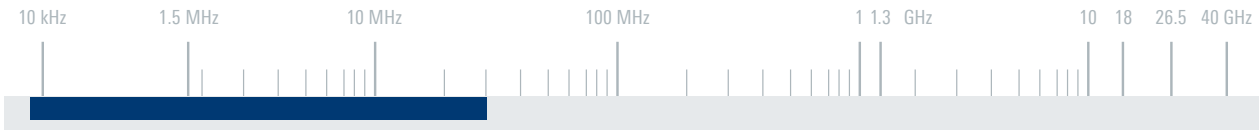
In strong field environments, an attenuator can be activated to reduce distortion. An integrated RF detector with a threshold circuit reports overload of the antenna.

The antenna is supplied via a coaxial cable using the optional R&S®IN600 bias unit.

## Key facts

- ▶ Wide frequency range
- ▶ High sensitivity
- ▶ Wide dynamic range
- ▶ Compact design
- ▶ Integrated overload warning
- ▶ R&S®IN600 bias unit for power supply via coaxial cable available
- ▶ No batteries needed
- ▶ Individual calibration certificate supplied with antenna
- ▶ Virtually constant antenna factor





Specifications		
Frequency range		8.3 kHz to 30 MHz
Polarization		linear
Nominal impedance		50 Ω
VSWR	8.3 kHz to 20 kHz	< 1.8
	> 20 kHz to 30 MHz	< 1.6
Antenna connector		N female
Antenna factor		
Normal mode	8.3 kHz to 20 kHz	20 dB (1/m) ± 2 dB
	> 20 kHz to 30 MHz	20 dB (1/m) ± 1.5 dB
Attenuation mode	8.3 kHz to 20 kHz	30 dB (1/m) ± 2 dB
	> 20 kHz to 30 MHz	30 dB (1/m) ± 1.5 dB
Lower limit magnetic field strength in normal mode	8.3 kHz to 1.5 MHz	see diagram
	> 1.5 MHz to 30 MHz	< -70 dB(μA/m/Hz) (meas.)
Upper limit magnetic field strength	normal mode	85 dB(μA/m) (typ.)
	attenuation mode	95 dB(μA/m) (typ.)
Destructive field strength	8.3 kHz to 30 MHz	> 30 V/m
	> 30 MHz to 2 GHz	> 10 V/m
MTBF		> 250 000 h
Power supply (via coaxial cable)		+24 V DC -3 V/+1 V (max. 150 mA)
Operating temperature range		+5°C to +40°C
Dimensions	W × D × H	approx. 596 mm × 90 mm × 822 mm (24 in × 4 in × 32 in)
	loop diameter	approx. 600 mm (24 in)
Weight		approx. 3 kg (7 lb)

Ordering information	Type	Order No.
Active loop antenna	R&S®HFH2-Z2E	4110.2002.02
<b>Recommended extras</b>		
Bias unit	R&S®IN600	4094.3004.13
Transport case	R&S®HFH2-Z7	4110.2925.02
Tripod	R&S®HFH2-Z8	4110.2902.02
3D adapter for X, Y, Z plane measurements on R&S®HFH2-Z8	R&S®HFH2-Z9	4110.2919.02
Height adaptation set	R&S®HFH2-Z11	4110.2948.02

**Lower limit field strength level (for SNR = 1) in normal mode (meas.)**

