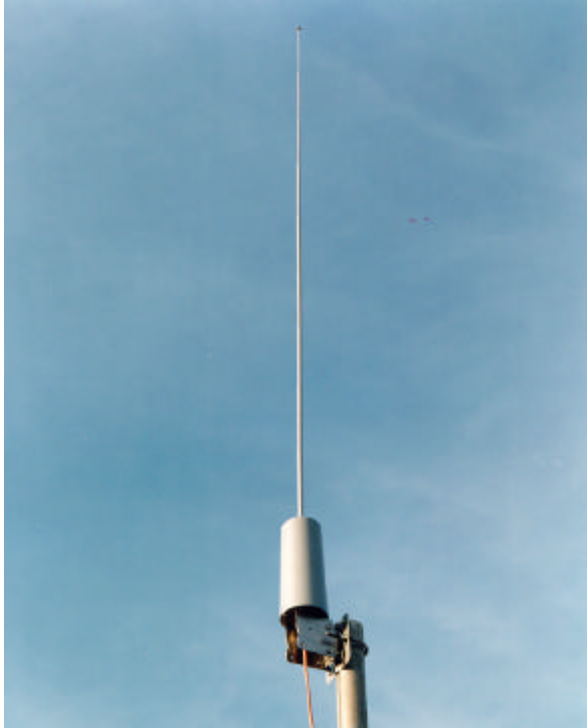


Active Rod Antenna HE011



Brief description

The excellent characteristics of active receiving antennas are a result of carefully matching the passive antenna structure to the active circuitry.

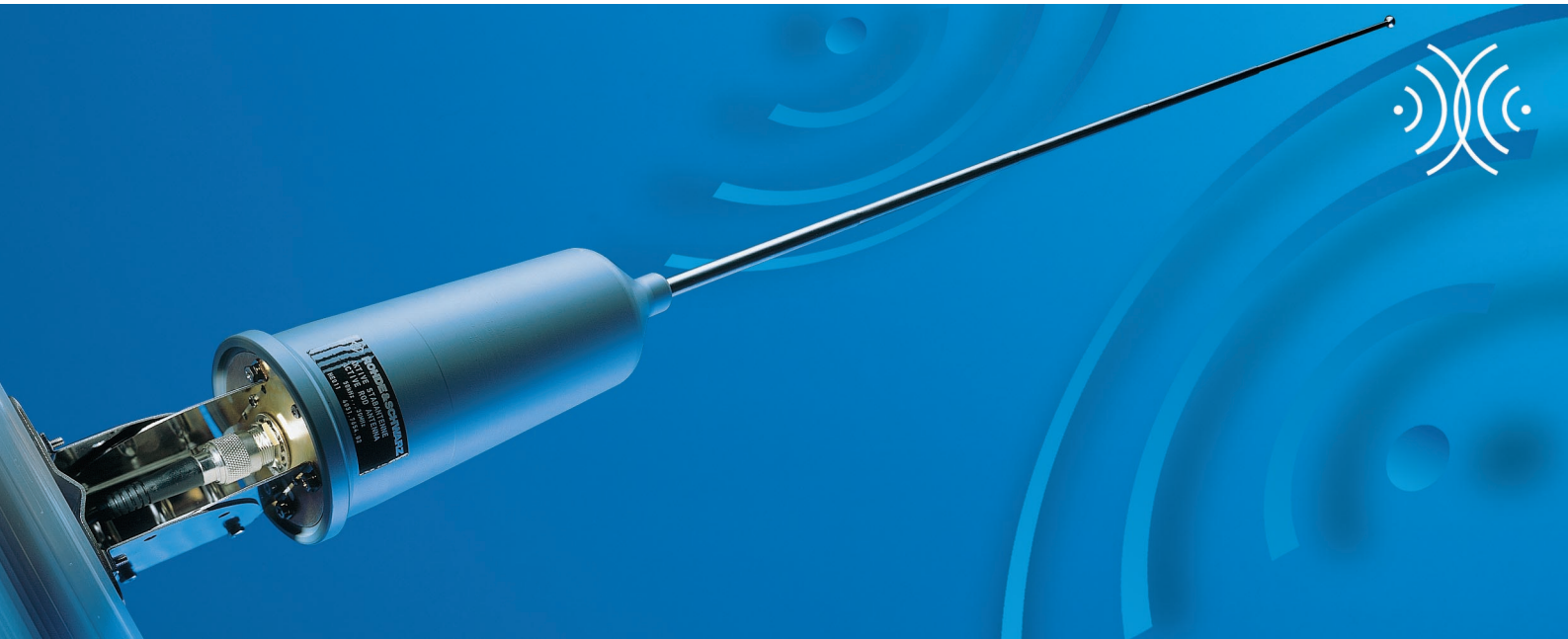
- Wide frequency range 50 kHz to 30 MHz (operational up to 200 Mhz)
- Optimized for maximum dynamic range (high sensitivity, excellent large-signal characteristics)
- Short length
- High immunity to nearby lightning strikes
- Adjustable length of radiator

Specifications

Frequency range	50 kHz to 30 MHz (up to 200 MHz without specification)
Polarization	vertical
VSWR	< 2
Antenna factor	15 dB
Intercept point	
2nd order	55 dBm (typ.)
3rd order	32 dBm (typ.)
Crossmodulation limit	> 10 V/m
Power supply	via RF cable 24 V DC \pm 15%(190mA)
Operating temperature	-40 to +70°C
Connector	N female
Max. wind speed	130 km/h
Dimensions	
Max. length with radiator	1700 mm,
Antenna electronic	90 mm x 228 mm (dia. x H)
Weight	0.9 kg

Recommended extras

Power Supply Unit HE011Z (only suitable for HE011) with 15 m coaxial cable



Active Rod Antenna HE011

Receiving range 50 kHz to 30 MHz and VHF

- Frequency range 50 kHz to 30 MHz, operational up to 200 MHz
- Nominal impedance 50 Ω
- 2nd-order intercept point ≥ 50 dBm (60 dBm typ.)
- 3rd-order intercept point ≥ 30 dBm
- Frequency-independent radiation pattern
- Power supply via RF connector

The Active Rod Antenna HE011 is designed for the reception of signals in the longwave, medium-wave, shortwave and VHF bands and mainly for vertically polarized waves. Great importance has been attached to obtain a high signal-to-noise ratio rather than a high output voltage. The

antenna electronics in the form of a three-stage push-pull amplifier is accommodated in an UV-resistant plastic housing. State-of-the art protective circuits prevent the electronic components from being damaged by atmospheric and electrostatic discharges or nearby lightning strokes.



ROHDE & SCHWARZ

The optimally matched antenna electronics in the form of a three-stage push-pull amplifier operates as a low-noise, highly linear impedance converter and provides maximum immunity to interference signals. The practically frequency-independent antenna factor makes the HE011 suitable for use as a measurement antenna.

The length of the telescopic antenna can be varied to match the receiving conditions, the sensitivity of the HE011 increasing with its length. On the other hand, a shorter length yields a higher S/N ratio which may be an advantage particularly in the presence of powerful transmitters, in electromagnetically unfavourable environments or for the reception of higher frequencies.

The practical gain of an active antenna is the sum of the directivity of the passive antenna section and the electronic gain of the amplifier. Independent of the frequency, the directivity of the passive radiator is 4.7 dB if the antenna is set up on a ground with good conductivity.

The Active Rod Antenna HE011 is fed via the RF connector, which is an N female type. Coaxial cables are used for the connections between antenna and power supply as well as between power supply and receiver. The antenna is operational after connecting the power supply to an AC outlet.

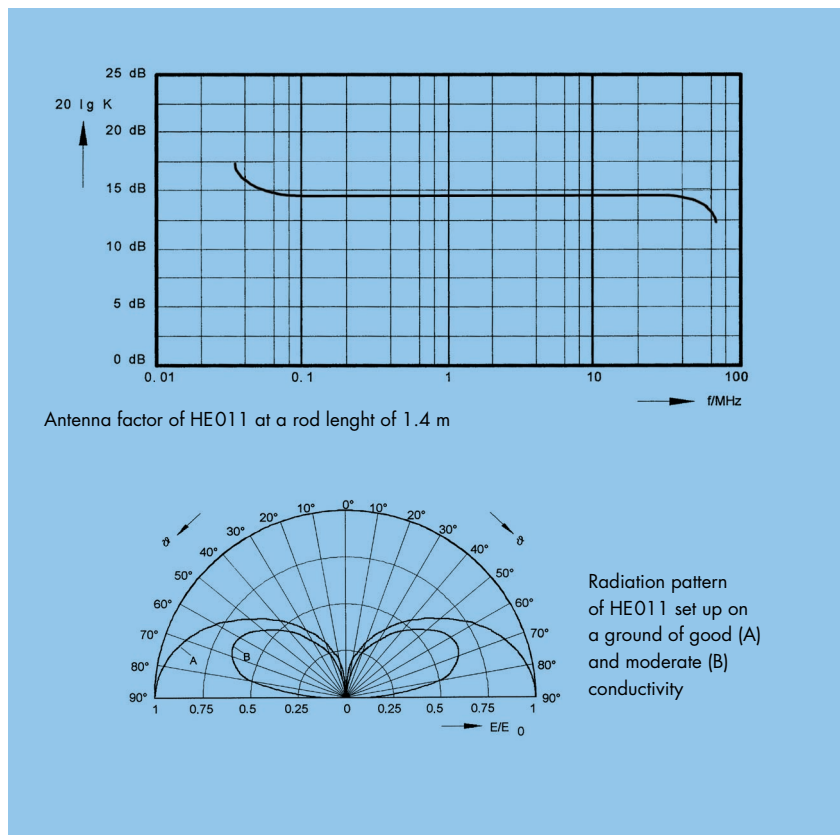
The antenna base can easily be attached to a mast or other support using the fixtures supplied.



ROHDE & SCHWARZ

ROHDE & SCHWARZ GmbH & Co. KG · Mühlendorfstraße 15 · D-81671 München

P.O.B. 801469 · D-81614 München · Telephone +4989 4129-0 · Fax +4989 4129-3247 · Internet: <http://www.rsd.de>



Specifications

Frequency range	50 kHz to 30 MHz, operational up to 200 MHz
Nominal impedance	50 Ω
VSWR	<2
Max. permissible rms values of interference field strengths (before damage occurs)	
Frequency	10 kHz 100 kHz 1 MHz 10 MHz 100 MHz
	3×10^5 V/m 3×10^4 V/m 3×10^3 V/m 300 V/m 30 V/m
Linearity	
IP2	≥50 dBm (60 dBm typ.)
IP3	≥30 dBm
Crossmodulation	
Permissible field strength for S/N ratio 20 dB	10 V/m (corresponding to 10% modulation transfer, interference source 30% modulated with 1 kHz)
RF connector	N female
Power supply	24 V DC ±15%, max. 170 mA at 24 V
General data	
Dimensions	length approx. 420 mm to 1420 mm, width for mast mounting 63 mm
Weight	approx. 0.8 kg
Order designation	
Active Rod Antenna HE011	4031.7654.03 Equipment supplied: Antenna Electronics HE011 including fixtures and telescopic rod, power supply unit, AC/DC adapter, 15-m coaxial cable RG-58 (N connector - BNC con- nector), 1-m coaxial cable RG-58 (BNC connector - BNC con- nector)