

# R&S®HL210A3 LOG-PERIODIC HF ANTENNA

1.5 MHz to 30 MHz

For high-sensitivity radiomonitoring through reception of ground waves and vertically polarized skywaves



The R&S®HL210A3 log-periodic HF antenna is suitable for the reception of ground waves and vertically polarized skywaves and allows even very weak signals to be detected.

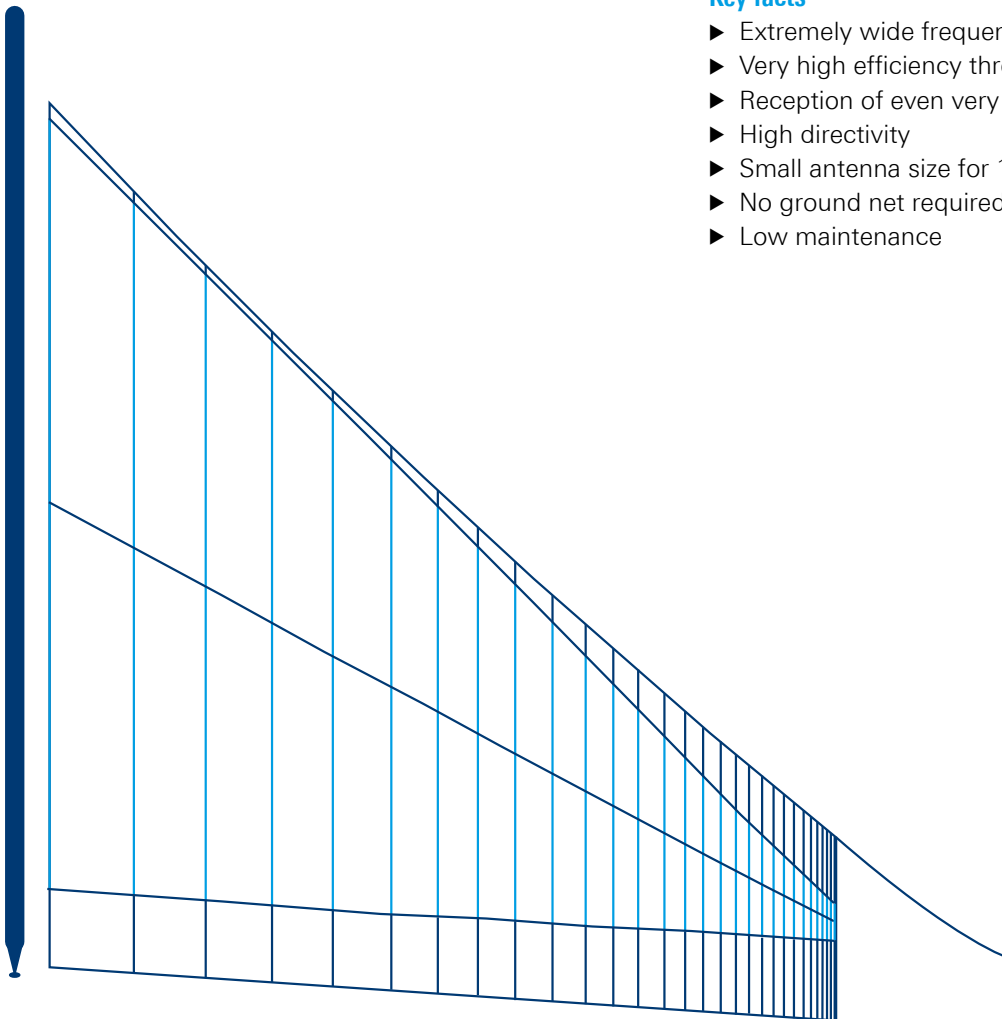
According to the physical characteristics of vertically polarized waves, maximum sensitivity is obtained at low and medium elevation angles. The radiation pattern of the R&S®HL210A3 is optimally suited for this purpose. The azimuth range of the R&S®HL210A3 of about 120° can be enhanced up to 360° by adding two further antennas.

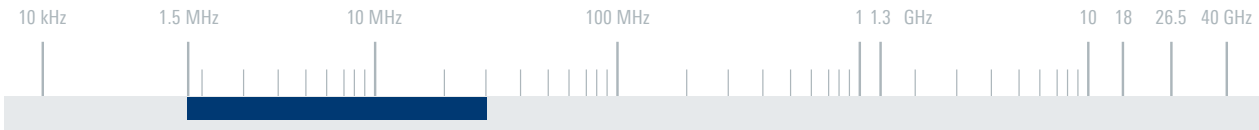
The antenna can be adapted to customer requirements regarding frequency range, environmental data and size.

For additional reception of horizontally polarized waves and high-angle radiation (predominantly horizontally polarized), the antenna can be combined with the R&S®HL410A3 log-periodic HF antenna.

## Key facts

- ▶ Extremely wide frequency range
- ▶ Very high efficiency through dipole structure
- ▶ Reception of even very weak signals
- ▶ High directivity
- ▶ Small antenna size for 1.5 MHz to 30 MHz range
- ▶ No ground net required
- ▶ Low maintenance





**Specifications (exemplary data only)**

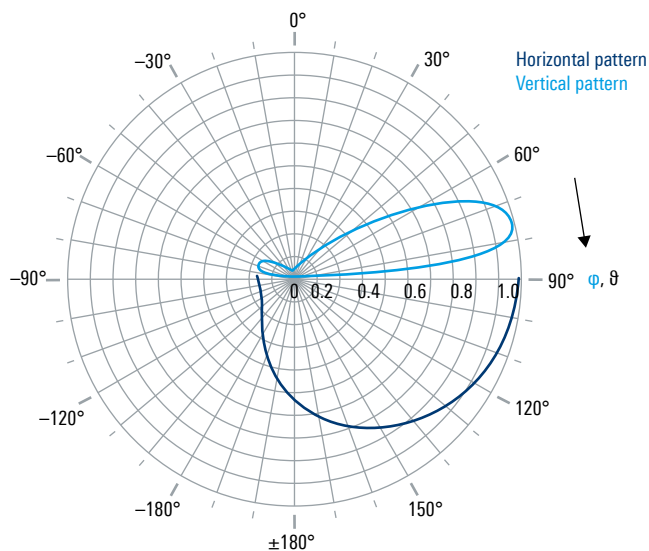
Frequency range	1.5 MHz to 30 MHz	
Polarization	linear/vertical	
Input impedance	50 Ω	
VSWR	1.5 MHz to 2 MHz	< 6
	2 MHz to 30 MHz	< 2.5; < 2.0 (typ.)
Directivity	1.5 MHz to 2 MHz	8 dBi to 10.5 dBi
	2 MHz to 30 MHz	10.5 dBi to 12 dBi
Efficiency	> 90%	
Connector	N female	
MTBF	≥ 100000 h	
Operating temperature range	-40°C to +55°C	
Maximum wind speed	survival	225 km/h
	with ice deposit	135 km/h
	operational	130 km/h
Permissible ice deposit	20 mm radial	on wires with diameter > 7 mm
	2 × diameter	on wires with diameter < 7 mm
Dimensions	length of antenna array	approx. 97 m (318 ft)
	height of supporting mast	approx. 90 m (295 ft)

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**Ordering information**

Ordering information	Type	Order No.
Log-periodic HF antenna	R&S®HL210A3	on request

**Typical vertical and horizontal radiation patterns (only half of the horizontal radiation pattern displayed)**



**Typical horizontal reception characteristic of a system with three R&S®HL210A3**

