

R&S®AC090 SHF Directional Antenna System

1 GHz to 18 GHz/0.85 GHz to 26.5 GHz

Extremely broadband directional antenna for radiomonitoring, steerable in azimuth and elevation



Features

- ▀ Extremely broadband without change of feed
- ▀ 0.9 m reflector diameter
- ▀ Adjustable in azimuth and elevation
- ▀ System control via PC user interface (Windows NT/2000/XP)
- ▀ Use of the R&S®HL050S7 allows the preamplifier to be bypassed at high field strengths (also applies to the R&S®HL024S7/S8)

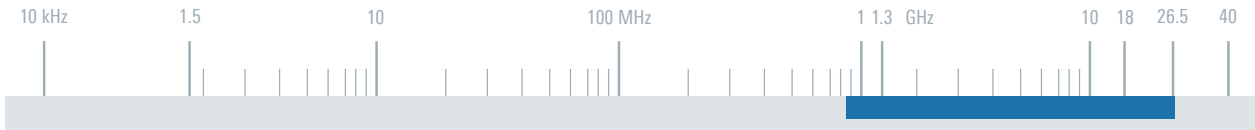
Brief description

The R&S®AC090 is a stationary directional antenna that can be adjusted in azimuth and elevation.

The reflector has a diameter of 0.9 m and – depending on the feed used – receives signals in the range 1 GHz to 18 GHz or 0.85 GHz to 26.5 GHz. The frequency range can be extended to up to 40 GHz by flange-connected options.

The R&S®AC090 is used for radiomonitoring tasks, for instance.





Specifications

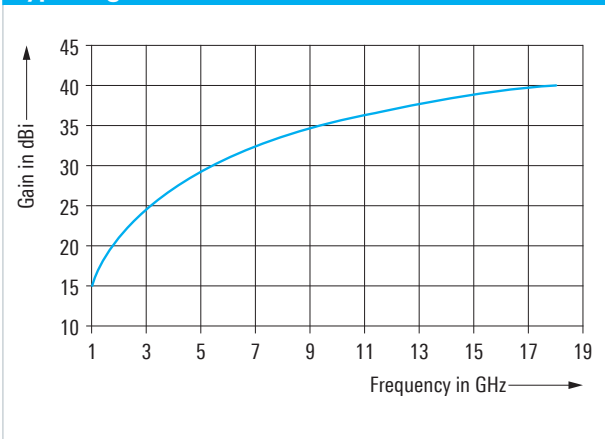
Frequency range (depending on feed)	1 GHz to 18 GHz, 0.85 GHz to 26.5 GHz
Gain	15 dBi to 40 dBi (1 GHz to 18 GHz)
Half-power beamwidth	19° to 1.1° (1 GHz to 18 GHz)
Min. field strength	see figure below
Range of rotation	
Azimuth	±180°
Elevation	-5° to +95°
Speed of rotation	
Azimuth	≥5°/s
Elevation	>1.5°/s, typ. 2°/s

Connector	RPC3.5 female
MTBF	>8000 h
Operating temperature range	-30°C to +50°C
Max. wind speed	180 km/h (without ice deposit)
Reflector diameter	approx. 0.9 m (approx. 35.4 in)
Weight	approx. 165 kg (approx. 363.8 lb)

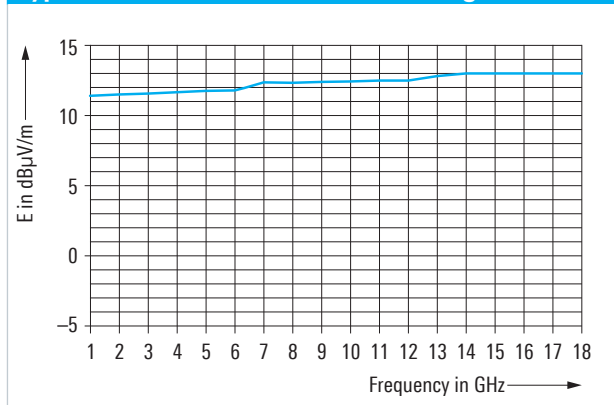
Ordering information

Ordering information	Type	Order No.
SHF Directional Antenna System	R&S®AC090	4051.4509.00
Feed options (see also pages 136 to 148)		
Log-Periodic Antenna, 0.85 GHz to 26.5 GHz		
Basic model	R&S®HL050S1	4065.0100.02
With preamplifier	R&S®HL050S7	4064.6040.02
Crossed Log-Periodic Antenna, 1 GHz to 18 GHz		
Basic model	R&S®HL024S1	4055.1256.02
With passive polarization network	R&S®HL024S2	4052.1003.02
With preamplifier, 1 RF output	R&S®HL024S7	4042.8505.02
With preamplifier, 2 RF outputs	R&S®HL024S8	4042.7509.02
With active polarization network	R&S®HL024S9	4047.6252.02
Recommended extras		
Reflector Antenna, 18 GHz to 26.5 GHz, 29 dBi to 33 dBi	R&S®AC308R2	4051.6001.02
Reflector Antenna, 26.5 GHz to 40 GHz, 33 dBi to 36 dBi	R&S®AC308R3	4051.6253.02

Typical gain



Typical minimum receive field strength



With R&S®HL024S9 (for a receiver with $F = 15$ dB, $\Delta f = 1$ MHz).