

# SHF Antennas

## SHF Directional Antenna System R&S® AC 180



**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
- ◆ 1.8 m reflector diameter
- ◆ Enhanced antenna gain
- ◆ Adjustable in azimuth and elevation
- ◆ System control via PC user interface (Windows NT/2000)



*R&S® AC 180 with optional R&S® AC 308R2/R3*

### Brief description

The R&S® AC 180 is a stationary directional antenna that can be adjusted in azimuth and elevation.

The reflector has a diameter of 1.8 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® AC 180 is used for radiomonitoring tasks, for instance.

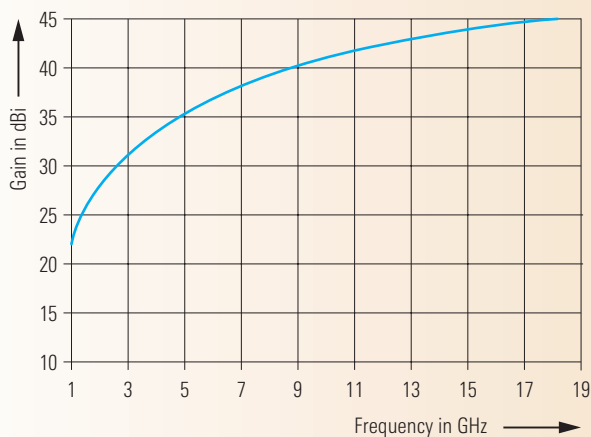


## Specifications

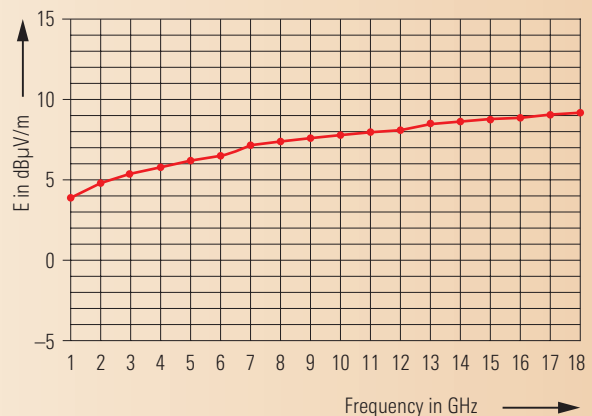
Frequency range	1 GHz to 18 GHz	Connector	RPC3.5 female
Depending on feed	0.85 GHz to 26.5 GHz	MTBF	>8000 h
Gain	20 dBi to 46 dBi (1 GHz to 18 GHz)	Operating temperature range	-30°C to +55°C
Half-power beamwidth	15° to 7° (1 GHz to 18 GHz)	Max. wind speed	160 km/h (without ice deposit)
Min. field strength		Reflector diameter	approx. 1.8 m
With R&S®HL024S9	6 dB(μV/m), (Δf = 1 MHz)	Weight	approx. 420 kg
Range of rotation			
Azimuth	±180°		
Elevation	-5° to +95°		

## Ordering information

<b>SHF Directional Antenna</b>			
<b>System</b>	R&S®AC 180	4051.5505.00	
Feed options (see also pages 122 to 134):			
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
<b>Recommended extras</b>			
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  
(for a receiver with F = 15 dB, Δf = 1 MHz)**