

R&S®HL024S9 Crossed Log- Periodic Antenna

1 GHz to 18 GHz

Log-periodic directional antenna consisting of R&S®HL024A1, two broadband preamplifiers and a switching network for linear or circular polarization



Features

- Wide frequency range
- Broadband preamplifiers
- Switching network for horizontal, vertical and circular polarization
- No reduction in S/N due to the use of a low-noise amplifier at the antenna output
- Can be used as a feed for the R&S®AC090 to R&S®AC300 SHF directional antenna systems

Brief description

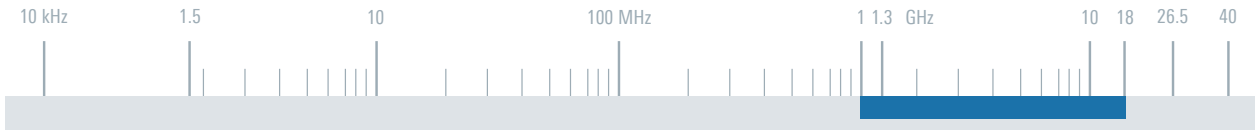
The R&S®HL024S9 consists of the R&S®HL024A1 crossed log-periodic antenna and two broadband preamplifiers. It is suitable for the reception of linearly and circularly polarized waves.

Due to the integrated switching network, horizontal, vertical or left-hand and right-hand circular polarization can be selected.

The preamplifiers prevent a significant reduction in S/N due to loss in RF cables connecting the antenna to a receiver.

The antenna can also be used as a feed for the R&S®AC090 to R&S®AC300 SHF directional antenna systems.





Specifications

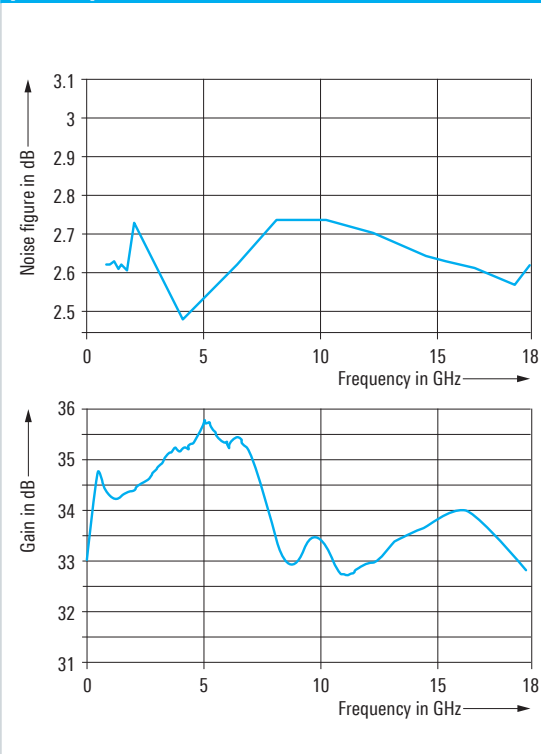
Frequency range	1 GHz to 18 GHz
Polarization	horizontal, vertical, left-hand or right-hand circular
Input impedance	50 Ω
VSWR	<2.5
Gain (without preamplifier and switching network)	typ. 7 dBi
Axial ratio	typ. 3 dB
Noise figure	max. 3.6 dB
Preamplifier gain	
Linear polarization	26 dB \pm 2 dB
Circular polarization	>22 dB \pm 2 dB

1 dB compression point	min. +5 dBm
Power supply	+15 V DC (max. 0.5 A) (preamplifier), +12 V DC (max. 1 A) (switching network)
Connector	SMA female
Control connector	10-contact, round, male
MTBF	>55 000 h
Operating temperature range	-30°C to +55°C
Dimensions (diameter \times height; with radome)	approx. 210 mm \times 390 mm (approx. 8.3 in \times 15.4 in)
Weight	approx. 1.2 kg (approx. 2.6 lb)

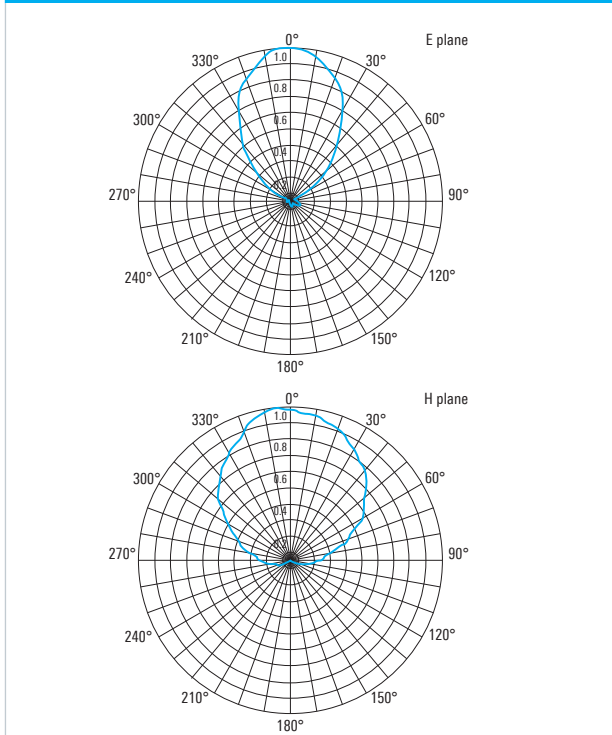
Ordering information

Ordering information	Type	Order No.
Crossed Log-Periodic Antenna	R&S®HL024S9	4047.6252.02
Recommended extras		
Control Unit	R&S®GB016	4056.7006.02
Control Cable, length 10 m	R&S®GB016Z1	4056.7270.02
Microwave Cable, length 5 m	R&S®AC008W2	0751.6931.04
Microwave Cable, length 10 m	R&S®AC008W2	0751.6931.05
Adapter for R&S®HZ-1	R&S®HL025Z1	4053.4006.03
Wooden Tripod	R&S®HZ-1	0837.2310.02

Typical noise figure and gain of broadband preamplifier



Typical radiation patterns in the E and H planes



R&S®HL024S9 with linear polarization.