

Log-Periodic Dipole Antenna HL040

Broadband transmission and reception from 400 to 3000 MHz – mobile and stationary use

The linearly polarized Log-Periodic Antenna HL040 provides broadband transmission and reception in the frequency range 400 to 3000 MHz and can be used in the lab and for open-field applications.

- Suitable for field-strength and EMI measurements thanks to precise construction and individual calibration
- Compact design
- EMC measurements in the field of mobile radio
- Very low frequency dependence
- High polarization isolation
- Excellent front-to-back ratio
- Integrated antenna flange
- Individual calibration to ANSI
- High symmetry of radiation patterns

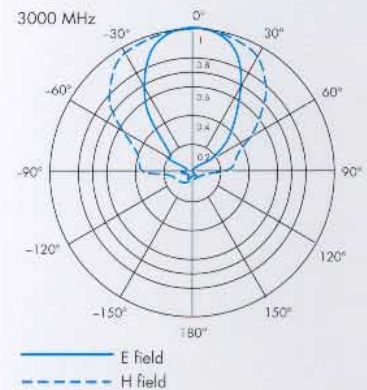
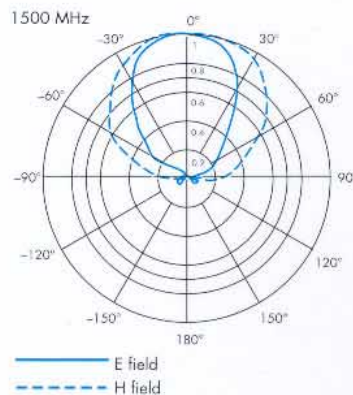
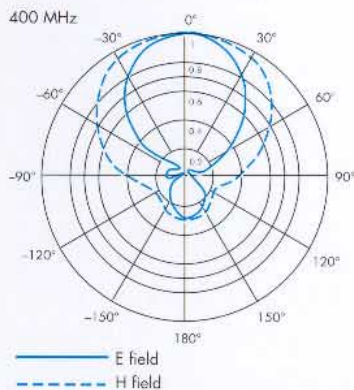


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Operation

For obtaining broadband characteristics, the Antenna HL040 is constructed of log-periodic dipoles. The number of dipoles used in conjunction with a special feed line offers the following advantages when compared to other antenna configurations:

- Very low frequency dependence of radiation patterns and input impedance
- High symmetry of radiation patterns, ie the longitudinal axis of the antenna corresponds to the radiation or reception maximum; there is no annoying squint
- A polarization isolation of >20 dB permits accurate spatial determination of the electrical field vector



Measured radiation patterns of Log-Periodic Dipole Antenna HL 040

- High front-to-back ratio and therefore negligible effect of feed line and antenna support on antenna characteristics

Mobile and stationary use

The antenna can be mounted in two different ways:

- For mobile use, on crank-type telescopic mast by means of the fastening elements provided on the mast
- For stationary use, to the M8 x 8 threaded holes provided on the antenna flange

Stationary antennas with horizontal or vertical polarization must be mounted horizontally.

Made to last

Antenna HL040 is made of the following materials:

- Tinned brass for the dipoles
- Polypropylene for the antenna support
- Glassfiber-reinforced plastic for the base plate
- Weatherproof aluminium for the antenna flange
- Coloured glassfiber-reinforced plastic for the radome protecting the antenna against environmental influences and resulting damage

Specifications

Frequency range	400 to 3000 MHz
Polarization	linear
Impedance	50 Ω
SWR	<2.5 typ. <2.0
Gain	5 to 7 dBi
Front-to-back ratio	>10 dB (400 to 450 MHz) >15 dB (450 to 3000 MHz)
Polarization isolation	>20 dB
RF connector	N female
Input power	max. 50 W (cw)
Dimensions	
Height	max. 130 mm
Width	max. 302 mm
Length	max. 680 mm
Weight	2.8 kg
Colour	RAL 7001
MTBF	>10 ⁵ h

Environmental conditions

Permissible wind speed	200 km/h
without ice deposit	118 km/h
with 1/4" radial ice deposit	
Rated temperature range ¹⁾	-20 to +70 °C
Storage temperature range ¹⁾	-51 to +71 °C
Relative humidity ¹⁾	95% at max. +55 °C
Resistance to salt mist, sand and dust	MIL-STD-810D
Class of protection ²⁾	IP53
Shock ³⁾	MIL-STD-810D
Vibration ³⁾	random
Fixing elements	flange for crank-type telescopic mast

Ordering information

Log-Periodic Dipole Antenna	HL040	4035.8755.02
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- ¹⁾ Test specification MIL-T-28800D
- ²⁾ Applicable during operation (antenna horizontal or vertical)
- ³⁾ Applicable during transport (antenna lying flat)



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Certified Quality System
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