

## Product Datasheet - Technical Specifications



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### Your contact

Technical and commercial sales, price information,  
quotations, demo/test equipment, consulting:

Tel.: **+49 - (0)81 41 - 52 71-0**

FAX: **+49 - (0)81 41 - 52 71-129**

E-Mail: [sales@meilhaus.com](mailto:sales@meilhaus.com)

**Meilhaus Electronic GmbH**  
Am Sonnenlicht 2  
82239 Alling/Germany

Tel. **+49 - (0)81 41 - 52 71-0**  
Fax **+49 - (0)81 41 - 52 71-129**  
E-Mail [sales@meilhaus.com](mailto:sales@meilhaus.com)

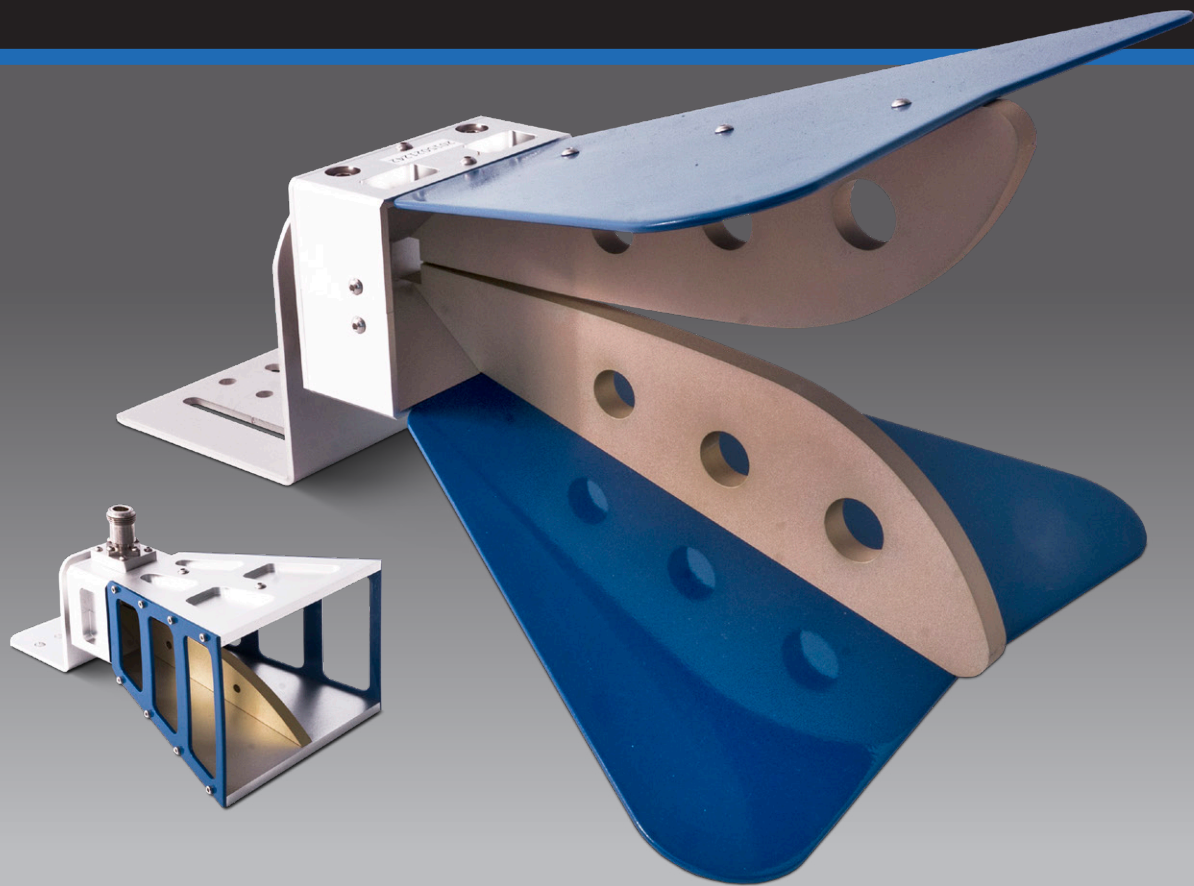
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HIGH-POWER HORN ANTENNAS

# POWERLOG<sup>®</sup>

SERIES

High gain and maximum power



## Highlights:

- Optimal for EMC immunity testing with extremely high field strengths
- Exceptionally high power support
- Small in size and lightweight

**AARONIA AG**  
WWW.AARONIA.DE



MADE IN GERMANY

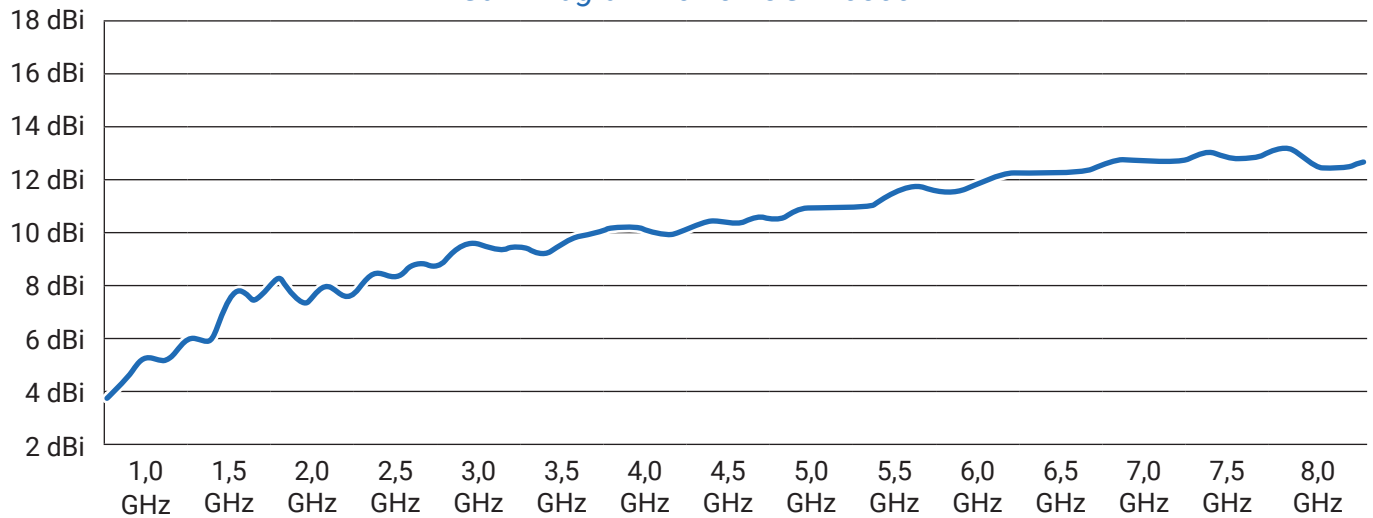
# Specifications

## PowerLOG® 10800

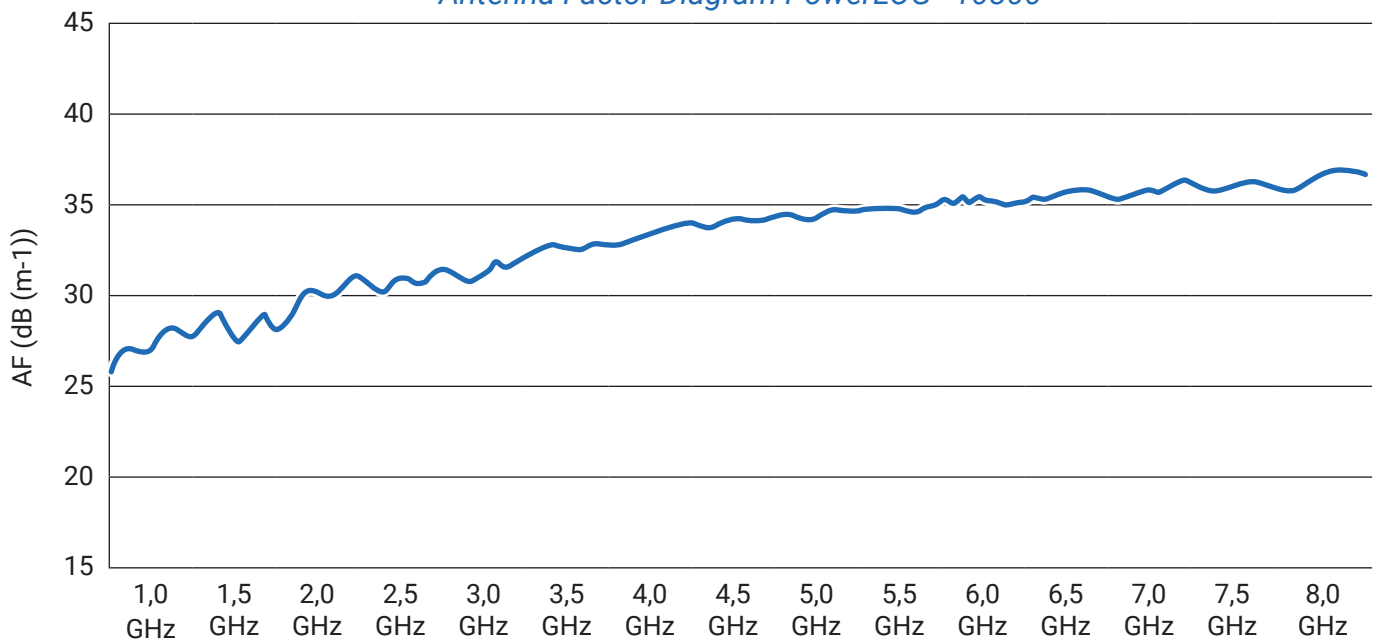
Dimensions [L x W x D]	235 x 252 x 175 mm	Nominal Impedance	50 Ohm
Weight	1400 g	VSWR (typ.)	< 2,5:1
Design	Dual-ridged horn	Max. Input Power	400 W (peak), 200 W (CW)
Gain	4 – 13 dBi	Temperature Range	- 40° C – 85° C
RF Connection	N (female)	Relative Humidity	0 % – 95 %
Frequency Range	1 GHz – 8 GHz	Warranty	2 years

Specific calibration data and mounting plate included

Gain Diagram PowerLOG® 10800



Antenna Factor Diagram PowerLOG® 10800



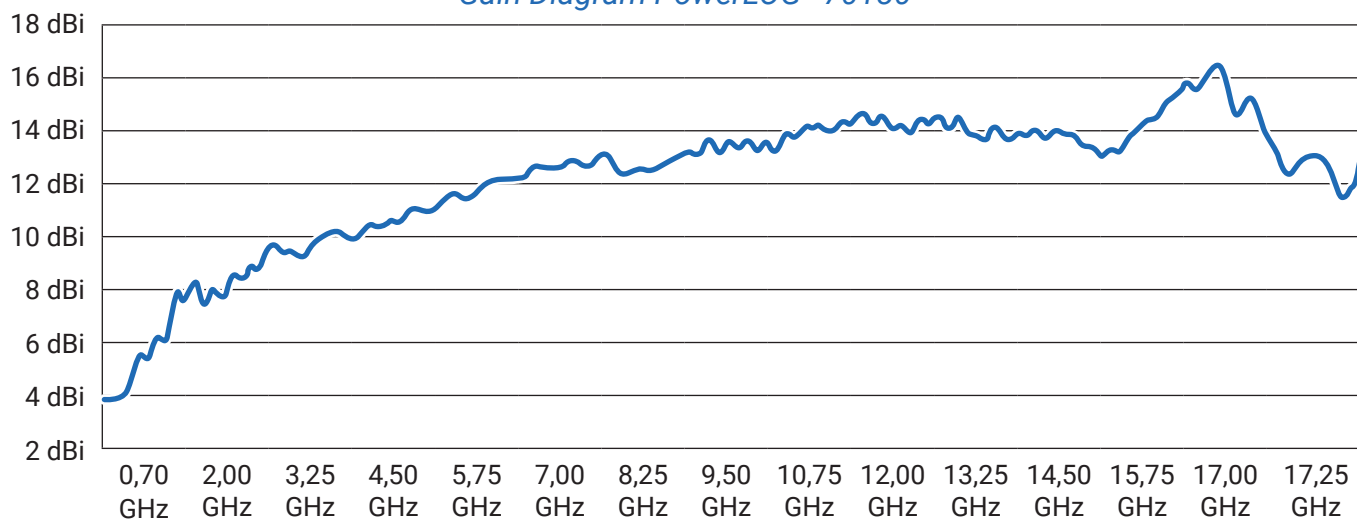
# Specifications

## PowerLOG® 70180

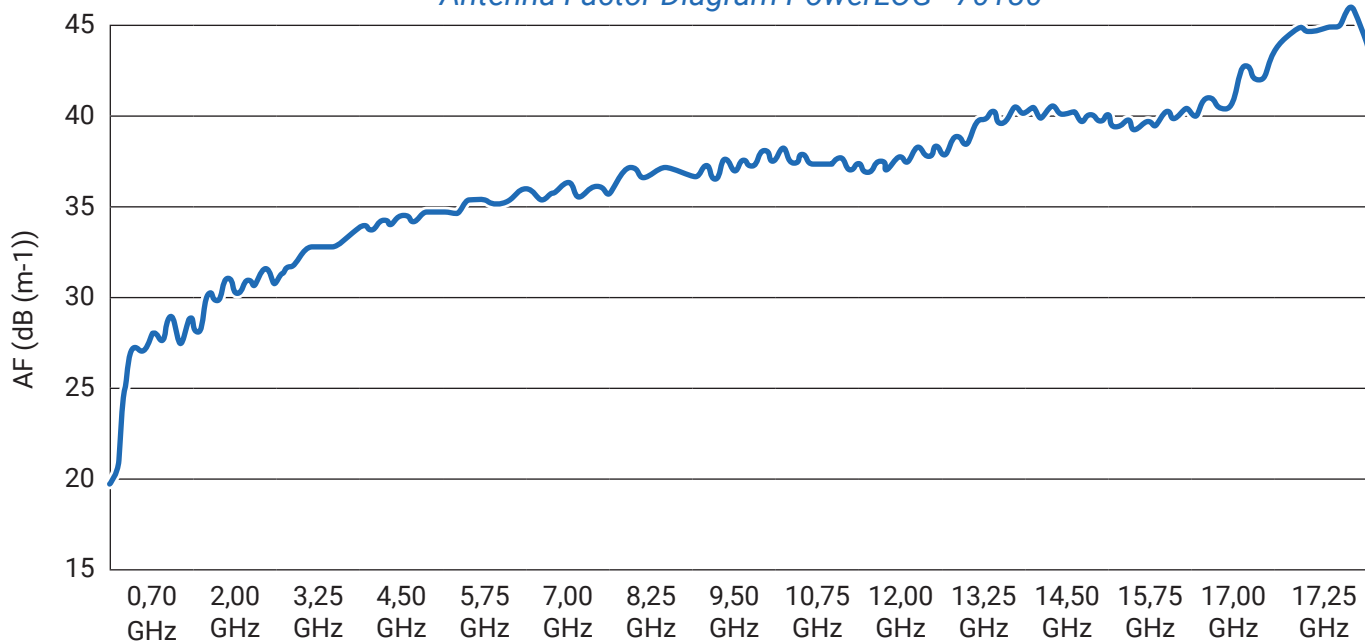
Dimensions [L x W x D]	235 x 252 x 175 mm	Nominal Impedance	50 Ohm
Weight	1400 g	VSWR (typ.)	< 3:1
Design	Dual-ridged horn	Max. Input Power	500 W (peak), 300 W (CW)
Gain	2 – 17 dBi	Temperature Range	- 40° C – 85° C
RF Connection	N (female)	Relative Humidity	0 % – 95 %
Frequency Range	700 MHz – 18 GHz	Warranty	2 years

Specific calibration data and mounting plate included

Gain Diagram PowerLOG® 70180



Antenna Factor Diagram PowerLOG® 70180



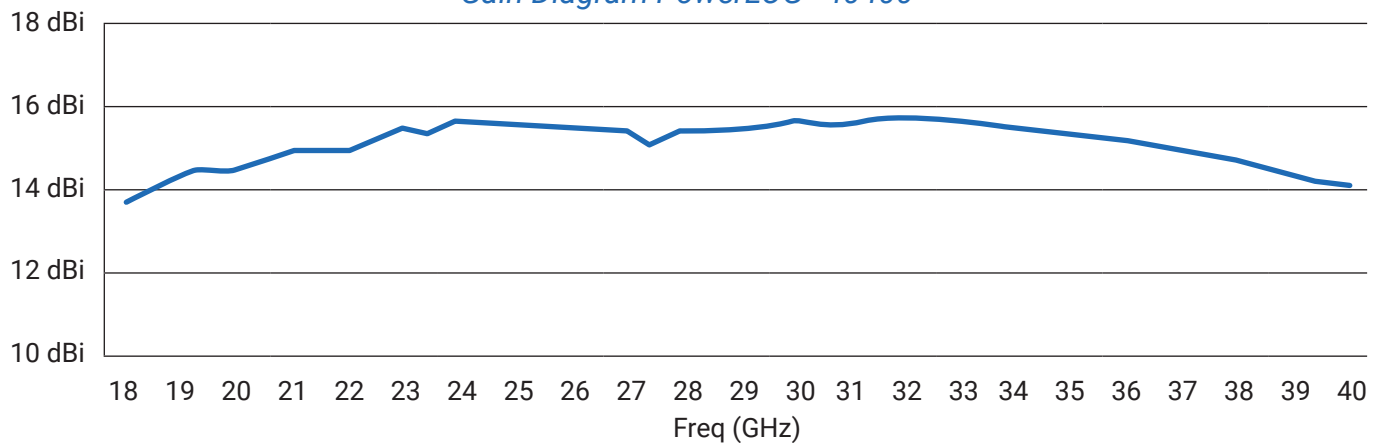
# Specifications

## PowerLOG® 40400

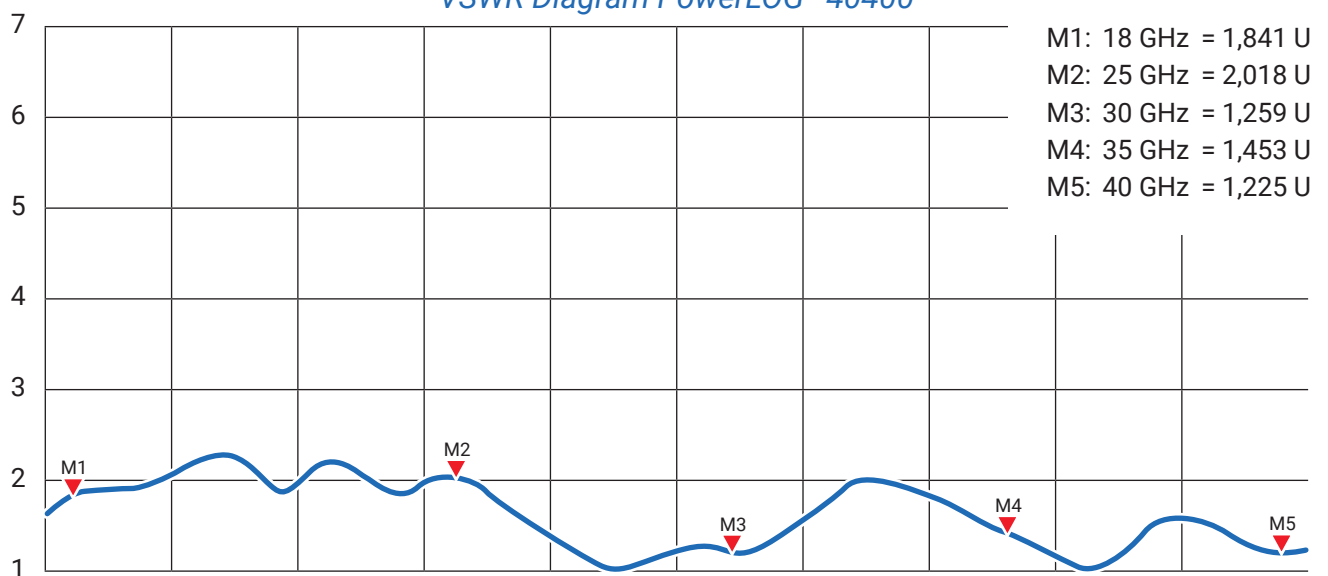
Dimensions [L x W x D]	74 x 55 x 38 mm	Nominal Impedance	50 Ohm
Weight	150 g	VSWR (typ.)	< 2:1 (within 18 to 40GHz)
Design	Dual-ridged horn	Max. Input Power	300 W (peak), 150 W (CW)
Gain	12 – 17 dBi	Temperature Range	- 10° C – 60° C
RF Connection	K (2,92 mm), female	Relative Humidity	5 % – 80 %
Antenna Factor	24 – 40 dB/m	Warranty	2 years
Frequency Range	4 GHz – 40 GHz <small>(specific calibration data from 18 GHz to 40 GHz.)</small>	Beamwidth	Vertical: 16° Horizontal: 20°

Specific calibration data and mounting plate included

Gain Diagram PowerLOG® 40400



VSWR Diagram PowerLOG® 40400



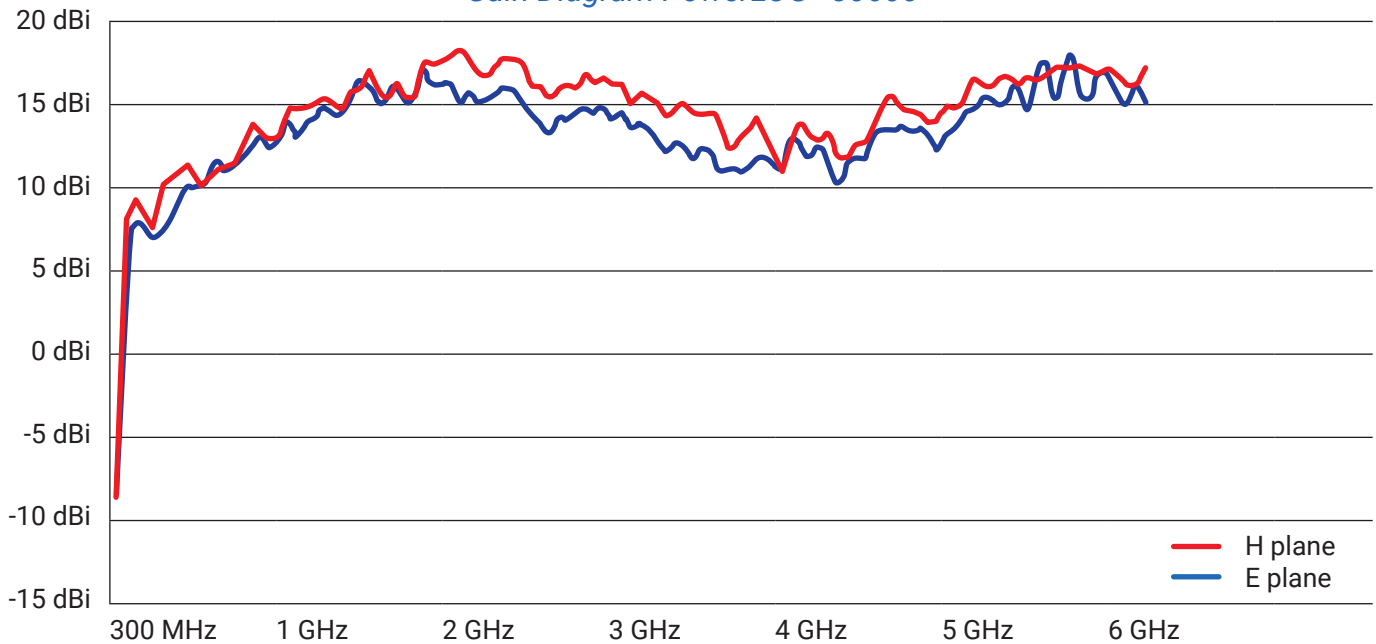
# Specifications

## PowerLOG® 30600

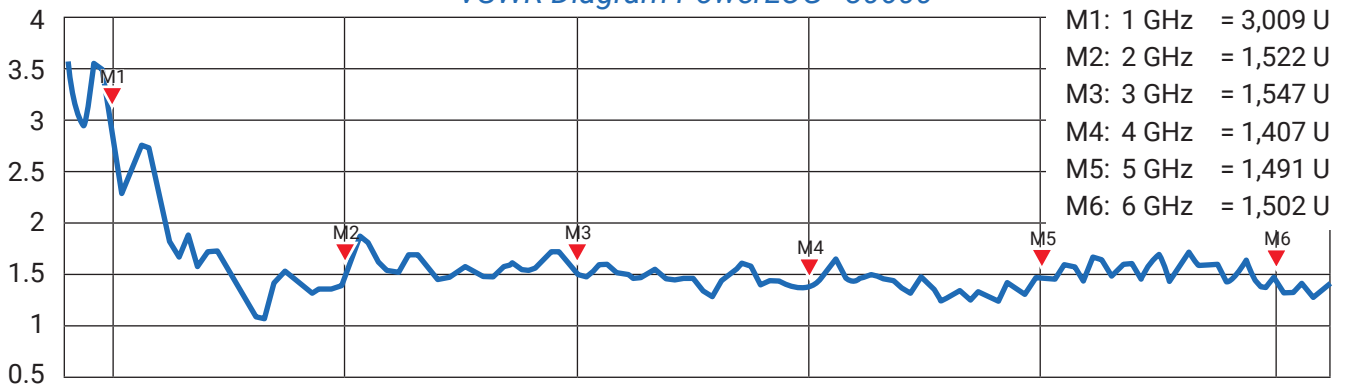
Dimensions [L x W x H]	756 x 600 x 393 mm	Nominal Impedance	50 Ohm
Weight	9 kg	VSWR (typ.)	low
Design	Double ridged horn	Max. Input Power	500 W
Gain	6 – 16 dBi	Temperature Range	- 10° C – 60° C
RF Connection	K (2,92 mm), female	Relative Humidity	10 % – 70 %
Antenna Factor	24 – 35 dB/m	Warranty	2 years
Frequency Range	300 MHz – 6 GHz	Beamwidth	17° – 70°

Specific calibration data and mounting plate included

Gain Diagram PowerLOG® 30600



VSWR Diagram PowerLOG® 30600



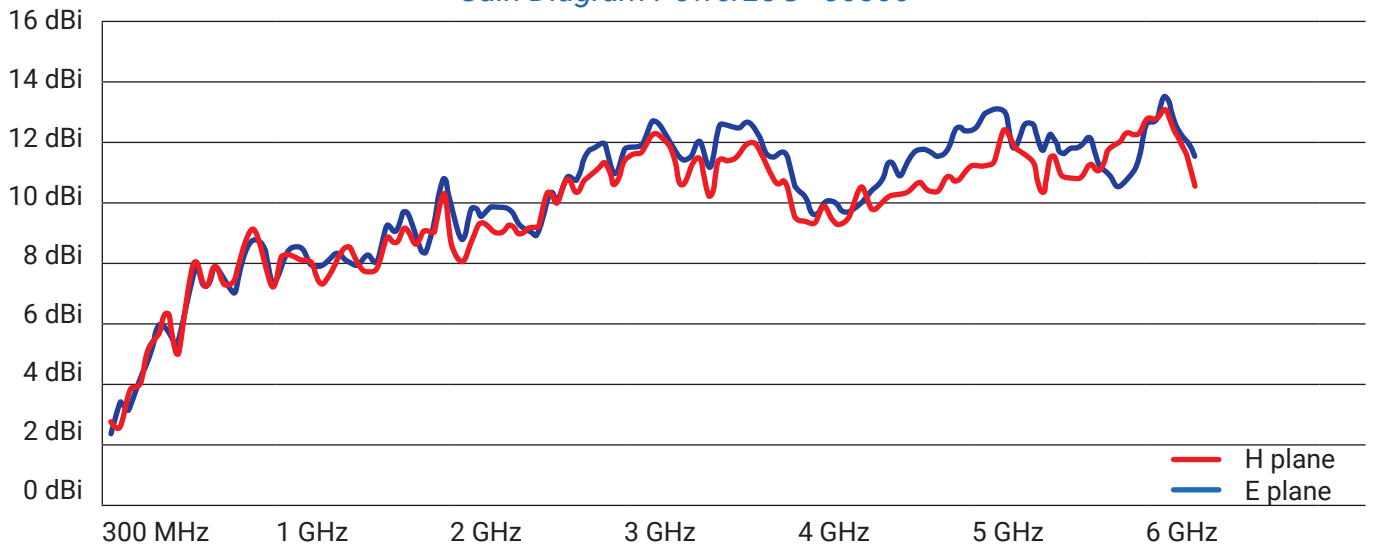
# Specifications

## PowerLOG® 30800

Dimensions [L x W x H]	510 x 507 x 507 mm	Nominal Impedance	50 Ohm
Weight	4,2 kg	VSWR (typ.)	low
Design	Open Boundary Quad-Ridged	Max. Input Power	500 W
Gain	3 – 14 dBi	Temperature Range	???
RF Connection	N-Female 2x	Relative Humidity	???
Antenna Factor	24 – 35 dB/m	Warranty	2 years
Frequency Range	300 MHz – 8 GHz	Beamwidth	17° – 65°

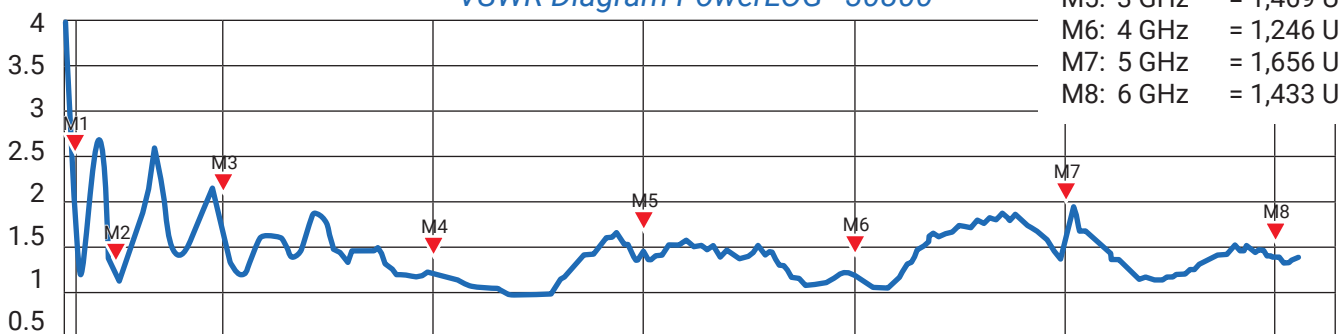
Specific calibration data and mounting plate included

Gain Diagram PowerLOG® 30800



- M1: 300 MHz = 2,281 U
- M2: 500 MHz = 1,276 U
- M3: 1 GHz = 1,750 U
- M4: 2 GHz = 1,260 U
- M5: 3 GHz = 1,469 U
- M6: 4 GHz = 1,246 U
- M7: 5 GHz = 1,656 U
- M8: 6 GHz = 1,433 U

VSWR Diagram PowerLOG® 30800



# Recommended Accessories

## Heavy Tripod

(strongly recommended)

Highly recommended for our PowerLOG® antennas. Quick and easy antenna polarization change, guarantees perfectly stable antenna handling.

**Order/Art.-No.: 284**



## 1 m / 5 m / 10 m SMA Cable with Locking Nut

Same as above, but with an extremely practical locking nut for easy installation with no additional tools. All versions available as: SMA plug (male) / SMA plug (male) (requires SMA to N Adapter for connection to PowerLOG).

**Order/Art.-No.: 771X (1 m), 772X (5 m), 773X (10 m)**



## 1 m / 5 m / 10 m SMA Cable

High-quality special SMA cable, connecting test equipment to any PowerLOG® antenna. Customers can choose between three different cables:

- 1 m standard SMA cable (RG316U)
  - 5 m low-loss SMA cable (especially low damping)
  - 10 m low-loss SMA cable (especially low damping)
- All versions: SMA plug (male) / SMA plug (male)

**Order/Art.-No.: 771 (1 m), 772 (5 m), 773 (10 m)**



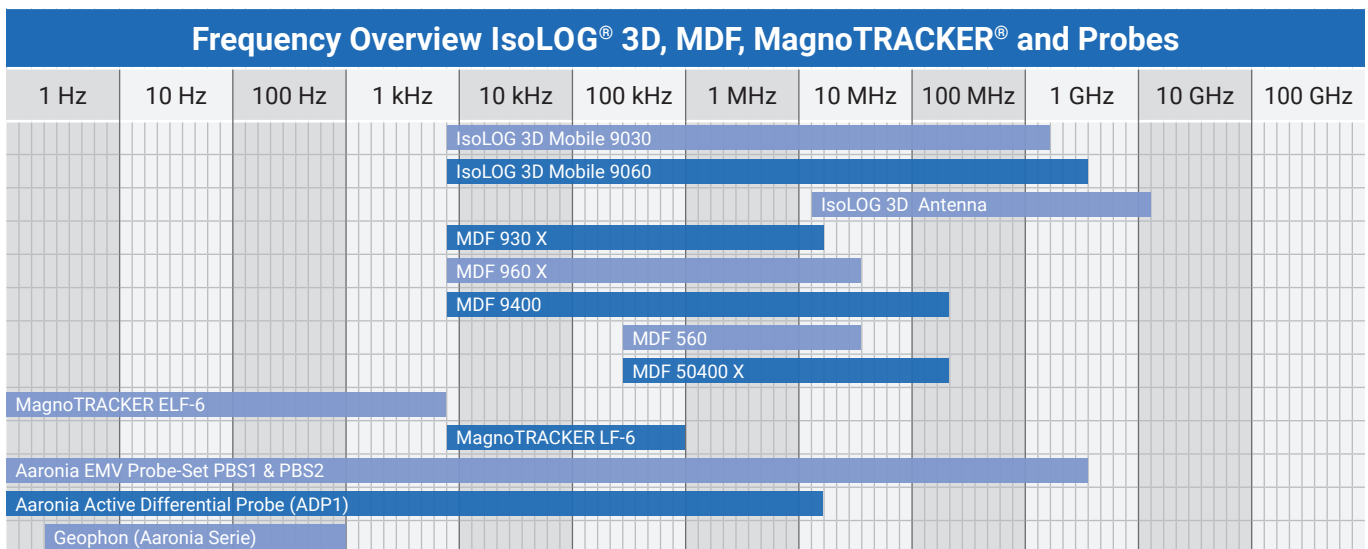
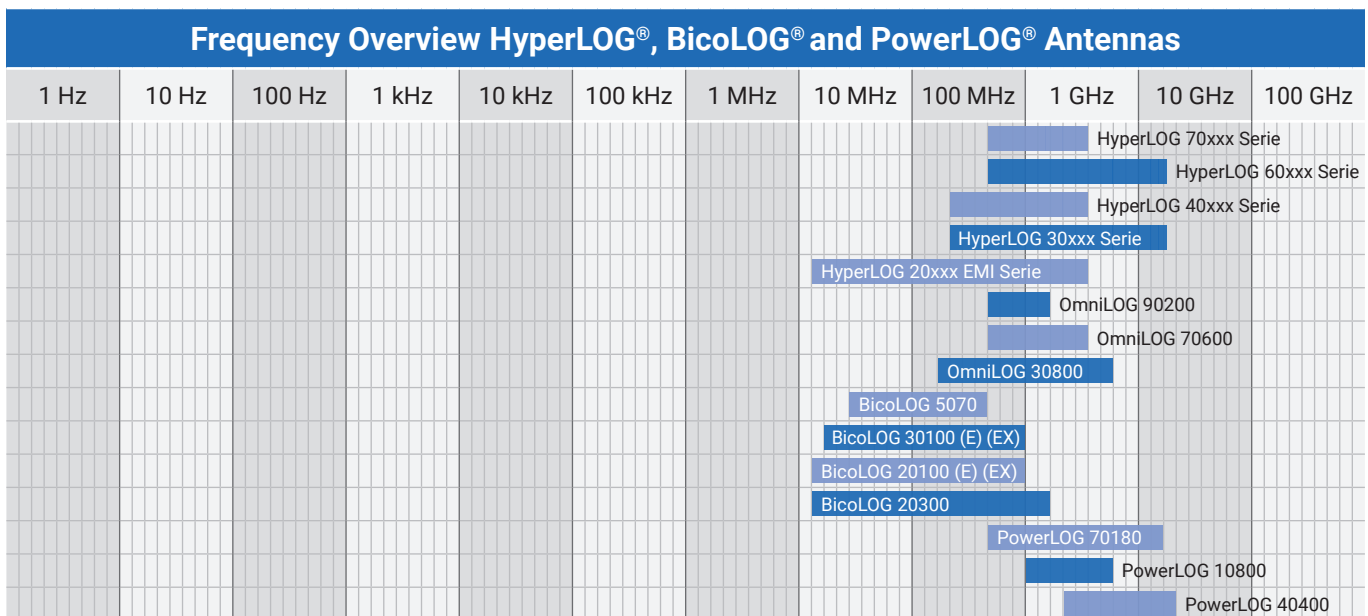
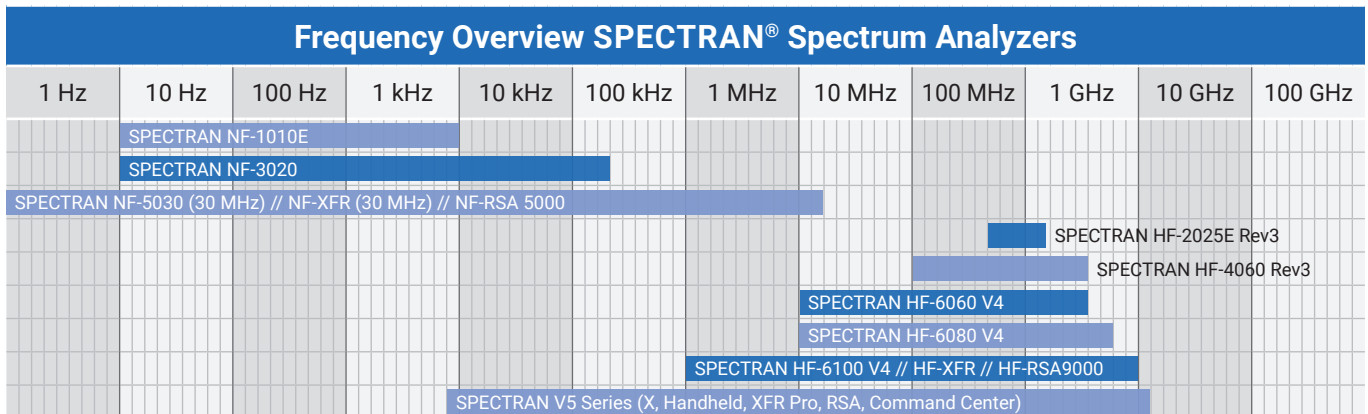
## SMA to N Adapter

This special high-quality adapter allows for operating all PowerLOG® antennas with any standard spectrum analyzer equipped with an N connector. This adapter can be used with very high frequencies. Measuring just 30 x 20 mm in size, its nominal impedance is 50 Ohm. Layout: SMA socket (female) / N plug (male).

**Order/Art.-No.: 770**



# Frequency Overviews



# REFERENCES



## Selected Aaronia Clients

### Government, Military, Aeronautic, Astronautic

- **NATO**, Belgium
- **Department of Defense (DoD)**, USA
- **Department of Defence**, Australia
- **Airbus**, Germany
- **Boeing**, USA
- **German Armed Forces**, Germany
- **NASA**, USA
- **Lockheed Martin**, USA
- **Lufthansa**, Germany
- **German Aerospace Center (DLR)**, Germany
- **Eurocontrol**, Belgium
- **EADS**, Germany
- **Drug Enforcement Administration (DEA)**, USA
- **Federal Bureau of Investigation (FBI)**, USA
- **Federal Criminal Police Office (BKA)**, Germany
- **Federal Police**, Germany
- **Ministry of Defence**, Netherlands

### Research/Development, Science and Universities

- **MIT - Physics Department**, USA
- **California State University**, USA
- **Indonesian Institute of Science (LIPI)**, Indonesia
- **Los Alamos National Laboratory (LANL)**, USA
- **University of Bahrain**, Bahrain
- **University of Florida**, USA
- **University of Victoria**, Canada
- **University of Newcastle**, United Kingdom
- **University of Durham**, United Kingdom
- **University Strasbourg**, France
- **University of Sydney**, Australia
- **University of Athen**, Greece
- **University of Munich**, Germany
- **Technical University of Hamburg**, Germany
- **Max-Planck Inst. for Radio Astronomy**, Germany
- **Max-Planck Inst. for Nuclear Physics**, Germany
- **Research Centre Karlsruhe**, Germany

### Industry

- **IBM**, Switzerland
- **Intel**, Germany
- **Shell Oil Company**, USA
- **ATI**, USA
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- **BMW**, Germany
- **Daimler**, Germany
- **Volkswagen**, Germany
- **BASF**, Germany
- **Siemens AG**, Germany
- **Rohde & Schwarz**, Germany
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- **Philips**, Germany
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- **VIAVI**, Korea
- **Wilkinson Sword**, Germany
- **IBM Deutschland**, Germany
- **Nokia-Siemens Networks**, Germany

