

Active Receiving Dipole Antenna HD 1 A

The main advantage of the active dipole antenna HD 1 A is its extremely large bandwidth and dynamic range. The antenna is ideal for applications requiring reception over a large frequency range (1.5 - 30 MHz).

The very small dimensions and associated low weight makes this antenna ideal for both stationary - where space is at a premium - and transportable applications.

The system can be extended to a receiving antenna system for vertical and horizontal polarization, if necessary also subsequently, by combination with an active monopole (e.g. STA .. A/ . / 0.01-30).

The antenna amplifier for the horizontal dipole is installed in a watertight and seawater resistant cast aluminum alloy housing, the antenna head. The antenna rods are made of glass fibre reinforced plastic fitted with stainless steel screw connections.

The cable connector is fitted to the bottom side of the antenna head's bottom flange. It is protected against the environment by means of a trumpet shaped mounting support (the funnel) which is mounted to the bottom flange of the antenna head. The opposite end of the funnel fits the size of 2" supporting pipes.



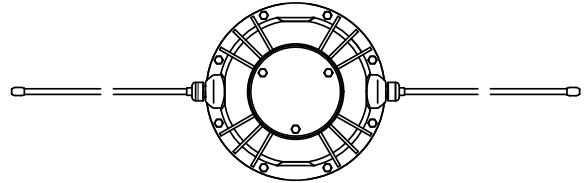
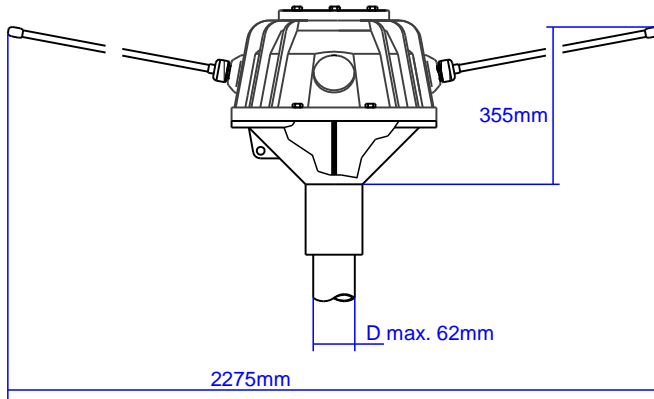
With regard to the robust construction and the use of weatherproof materials our active antennas can be used under extreme environmental conditions.

The operating voltage for the antenna is 39 Vdc. The AAN power supply series or an aas.tech Antenna Distribution System is used to feed the operating voltage to the active element via the coaxial cable.

Technical Data

Parameter	Data
Application	active symmetrical dipole antenna
Characteristic	horizontally polarized dipole antenna
Colour	similar RAL 7035 (light grey)
Bending moment at mounting flange	100 daNm (wind speed 150 km/h)
Shock test	50 g / 10ms
Vibration test	4 – 12,5 Hz amplitude = 1,6 mm 12,5 - 90 Hz acceleration 10 m/s ²
Ambient temperature	-40°C ... +70°C
Storage temperature	-55°C ... +80°C
Relative humidity	100%
EMP test	STANAG 4145
Lightning protection	500 kV/m/μs
RF connector	1 N socket
Power supply	39 Vdc power feeding through coaxial cable
MTBF	> 55.000 h (Tu = 40°C)
MTTR (replacement of subassemblies)	1,0 h
Frequency range	1,5 - 30 MHz
Output impedance	50 Ω
Effective height at 50 Ω	55 cm (tolerance ± 1,5 dB)
Intermodulation 2nd order (E1=E2=100 mV/m)	≥ 70 dB
Intermodulation 3rd order (E1=E2=100 mV/m)	≥ 110 dB
Equivalent noise field strength (limit of sensitivity B=1 Hz)	≤ 0,015 μV/m
Sensitivity (B=3 kHz, S/N=10 dB)	≤ 2,6 μV/m
Cross modulation (causing 10 % modulation)	≥ 5,2 V/m
Max. tolerable field strength (1dB reduction of gain)	≥ 8,0 V/m

Dimensions and Weight



11,2 kg

Accessories

Type Designation	Application	Details
AAN 800	power supply unit 115/230 Vac for use with up to 8 active antennas	Doc. 1_6_10
AAN 30/B	power supply unit 115/230 Vac	Doc. 1_6_7
TR 10/E1	2" supporting pipe 1 m high, aluminum, RAL 7035	Doc. 1_5_2

Data given without tolerance are typical values.
 Design and specification are subject to change without prior notice, errors excepted.

Spare Parts

Applicable for

- Active 2 Dipole Antenna HD 1 A

No.	Designation Type	Part-Number NSN	Max. Qty. (a)	MTBF/hrs MTTR/hrs	Dimensions/mm Weight/kg (b)	Qty (c) Qty (d)	Remark
1	Flat gasket 11	D.0254 5330-12-320-6337	1	- -	270x3 0,05	- 1	
2	Flat gasket 12	D.0255 5330-12-319-8961	1	- -	310x3 0,06	1 1	
3	Antenna rod STA 10	0005.4202.00 5985-12-314-0516	2	130.000 -	32x970 0,30	1 1	
4	Active element AE DD	0005.6605.00	1	60.000 -	200x200x50 0,70	- 1	
5	Manual HD 1 A	056610		- -	DIN A4		

- (a) Maximum quantity per equipment
 (b) Dimensions and weight are without packing
 (c) Recommended quantity per equipment for 90 days on board
 (d) Recommended quantity per equipment for 3 years depot

Note:

The spare part table is applicable for versions in standard colour (similar RAL7035). Spare parts (housing, mast adapter, rods) in other colours are available.