

Direction Finding and Monitoring Antenna

20 – 8000 MHz

Product Code: DF-A0136

VERSION: 1.3

SPECIFICATIONS:



PRODUCT DESCRIPTION:

The DF-A0136 direction finding antenna covers a frequency range of 20 MHz to 8 GHz. A separate, but fully integrated active monitoring antenna gives high sensitivity omni-directional coverage on the same axis as the DF antenna, without interfering with the DF array.

The full-size elements on all bands give excellent DF sensitivity. Ultimate angular resolution for strong signals is well under 1° for most of the frequency range. Dipole elements provide good cross-polarisation rejection, and fair performance for signals arriving from up to 15° above or below the horizon.

The integrated monitoring antenna is in two bands, mounted above the Band C & D DF antenna module housed in the radome. Each band of the monitoring array is amplified at the top of the cable, and passively combined to give continuous coverage over the frequency range 20 MHz to 9 GHz, with a single output connector.

This DF antenna is designed to be usable with either a 5- or 2-channel phase-sensitive receiver and correlative algorithm. Characterisation of the antenna can be performed on request.

Related products: DF-A0137, DF-A0057-03

Electrical - DF:									
DF frequency range	Band A: 20 – 300 MHz; Band B: 300 – 1000 MHz; Band C: 1000 – 3000 MHz; Band D: 3000 – 8000 MHz								
Nominal input impedance	50 Ω								
Antenna type	5-element DF interferometer (From 5- to 2-channel receiver compatible)								
Polarisation	Vertical								
Output cables	RG 400 cables								
DF connectors	20 x TNC male								
Monitoring connector	1 x N male								
Electrical - monitoring:									
Frequency range	20 – 9000 MHz								
Nominal H-plane beamwidth	360°								
Nominal E-plane beamwidth	60°								
Typical VSWR*	2:1								
Polarisation	Vertical								
Connector type	N-type male								
Nominal impedance	50 Ω								
Input voltage (via coax)*	13 – 24 V DC								
Input current*	< 150 mA								
Power consumption (nom)*	< 2.25 W								
OP1dB (typ.)*	> 11 dBm								
OIP2 (typ.)*	> 31 dBm								
OIP3 (typ.)*	> 21 dBm								
Sensitivity (typ.) (S/N = 0 dB, BW = 1 Hz)*	<table border="1"> <tbody> <tr> <td>20 – 100 MHz</td> <td>-20 dBμV/m</td> </tr> <tr> <td>100 – 1000 MHz</td> <td>-30 dBμV/m</td> </tr> <tr> <td>1 – 3 GHz</td> <td>-35 dBμV/m</td> </tr> <tr> <td>3 – 6 GHz</td> <td>-40 dBμV/m</td> </tr> </tbody> </table>	20 – 100 MHz	-20 dBμV/m	100 – 1000 MHz	-30 dBμV/m	1 – 3 GHz	-35 dBμV/m	3 – 6 GHz	-40 dBμV/m
20 – 100 MHz	-20 dBμV/m								
100 – 1000 MHz	-30 dBμV/m								
1 – 3 GHz	-35 dBμV/m								
3 – 6 GHz	-40 dBμV/m								
Mechanical:									
Cross-sectional wind area	1.50 m ² (including antenna switch)								
Maximum wind speed	160 km/h (without ice load)								
Assembled height	3.60 m								
Assembled diameter (max)	2.70 m								
Shipping dimensions	2.20 m x 0.90 m x 0.60 m								
Weight of antenna including shipping container	60 kg 135 kg								

*in active mode

ELECTRICAL FEATURES:

- Full-size DF
- Wideband DF
- 5-element interferometer
- Optimised for 2-channel receivers
- High sensitivity omni antenna integrated
- Rapid deploy/stow design with integrated dust caps

MECHANICAL FEATURES:

- Designed for tower-mounting

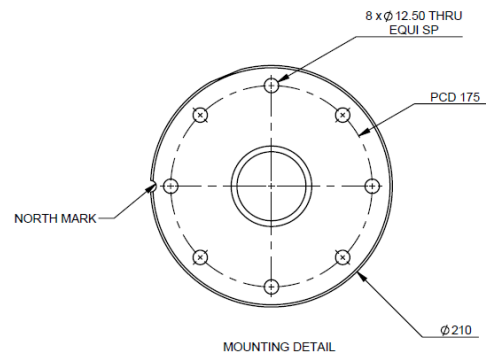
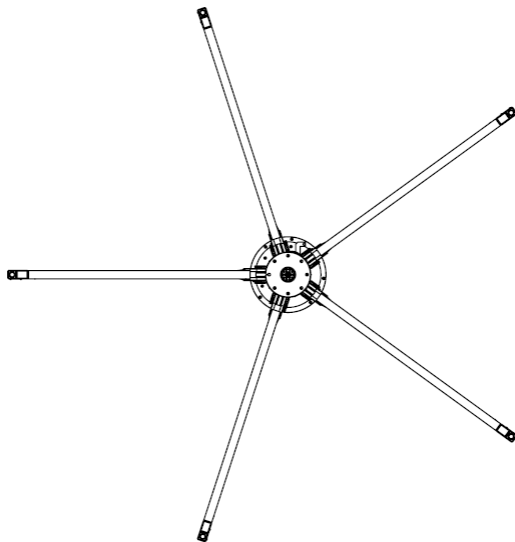
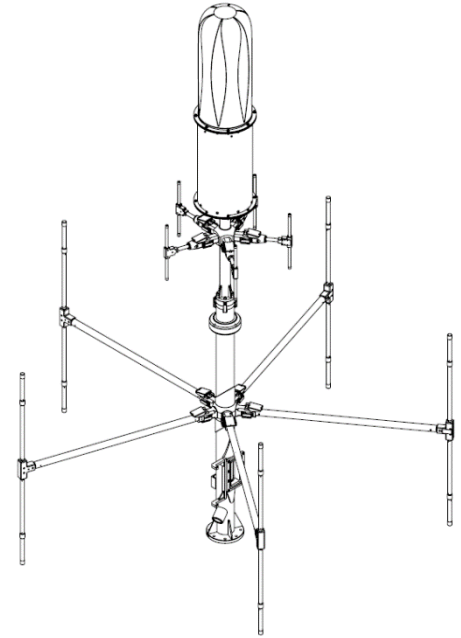
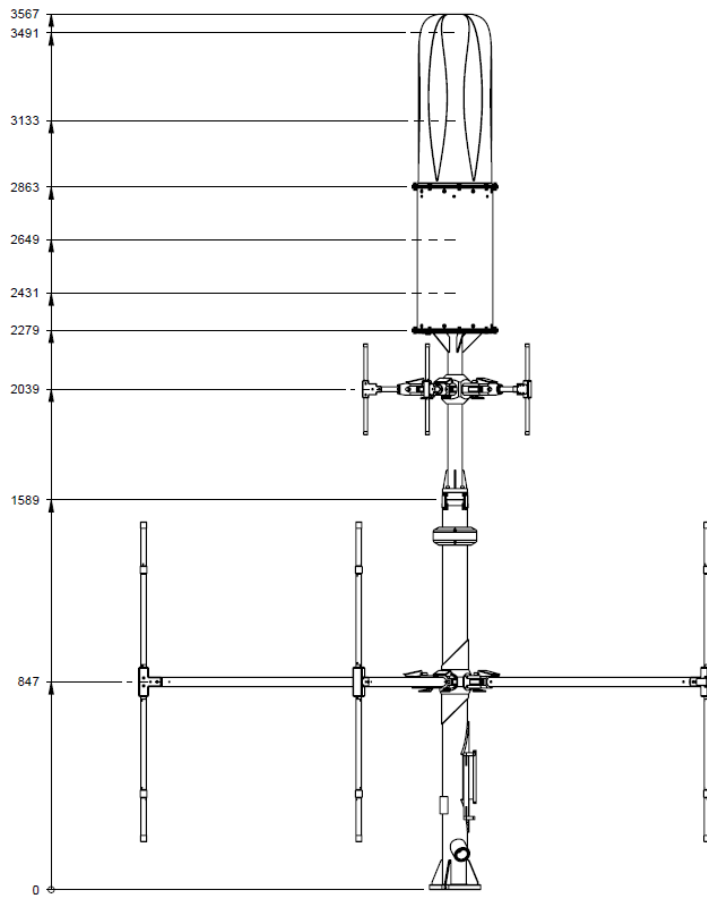
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DF ANTENNA DIMENSIONS:



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ENVIRONMENTAL SPECIFICATIONS (designed to meet the following):

Vibration	Designed for MIL-STD-810E method 516.4, category 8
Mechanical shock	Designed for MIL-STD-810E method 516.4 (40 g)
Low temperature storage	Designed for MIL-STD-810E method 502.3 (-30 °C)
High temperature storage	Designed for MIL-STD-810E method 501.3 (+70 °C)
Rain	Designed for MIL-STD-810E 506.3 procedure I (95% RH)
Artificial weathering (UV stability) total duration 500 h	Designed for BS 3900: part F16, method A. lamps: UV-B (313) Product exceeds requirements set out by the British Standard
Temperature and humidity	Designed for MIL-STD-810E method 507.3
Salt / fog	Designed for MIL-STD-810E 509.3 procedure I
Dust	Designed for MIL-STD-810E 510.3 procedure II