

Maritime Direction Finding Antenna

20 – 3000 MHz

Product Code: DF-A0092

VERSION: 2.4

SPECIFICATIONS:

Product codes and related products:	
DF-A0092	20 – 3000 MHz, 5-element, 3-band DF antenna, optimised for maritime applications
Electrical:	
Frequency range	Band 1: 20 – 300 MHz; Band 2: 300 – 1000 MHz; Band 3: 1000 – 3000 MHz
Bands	Band 1: 20 – 300 MHz; Band 2: 300 – 1000 MHz; Band 3: 1000 – 3000 MHz
Nominal input impedance	50 Ω
Antenna type	5-element DF interferometer
Polarisation	Vertical
Output cables	RG 400 cables (qty 15)
Connectors	TNC male
VSWR	3:1 over 85% of the band, 3.5:1 max
Mechanical:	
Maximum wind speed	160 km/h (without ice)
Assembled height	2.64 m
Assembled diameter (max)	2.67 m
Packaging length	1.550 m
Shipping container dimensions	1550 mm x 600 mm x 500 mm
Weight of DF including wooden container	55 kg 113 kg
Cross-sectional wind load area	0.75 m ²

PRODUCT DESCRIPTION:

The DF-0092 maritime direction finding antenna covers a frequency range of 20 MHz to 3 GHz. Shipped in a compact storage and transport box.

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.

This DF antenna is designed to be used with a 5-channel phase-sensitive receiver, and correlative algorithm. Calibration of the antenna can be performed on request.

ELECTRICAL FEATURES:

- Full-size DF
- Wideband DF
- 5-element interferometer

MECHANICAL FEATURES:

- Robust construction
- Waterproof
- Quick assembly



RELATED PRODUCTS:

- **DF-A0038** (Direction finding antenna with integrated monitoring system)

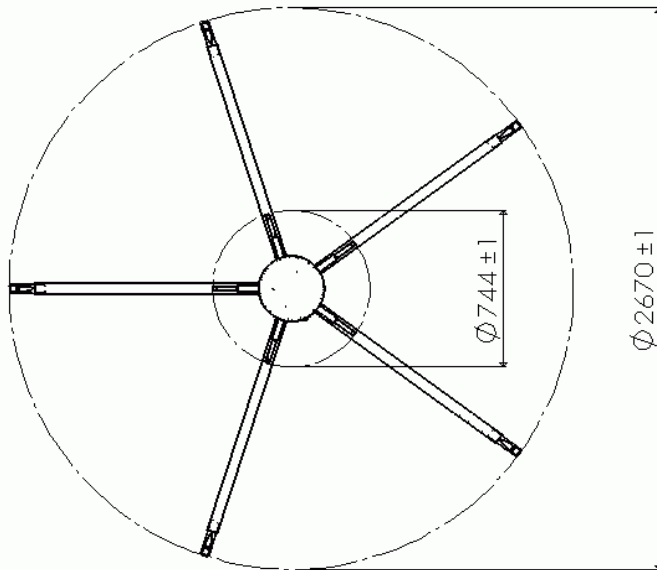
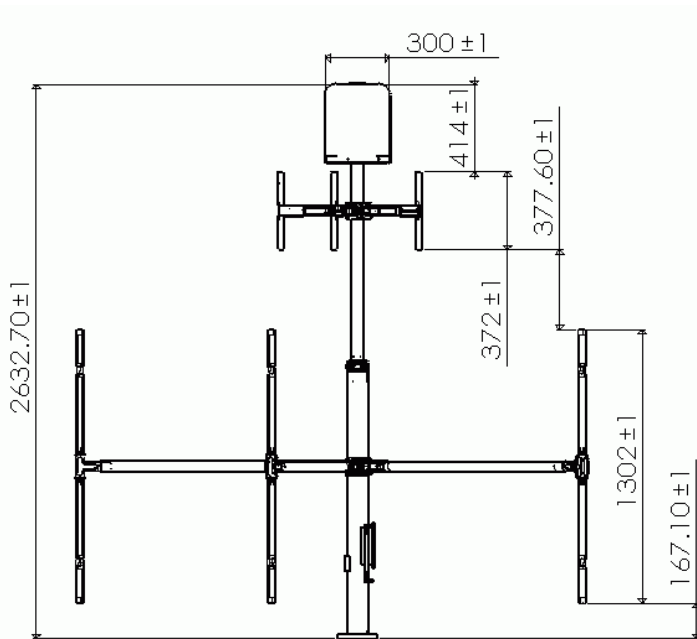
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DF antenna dimensions:



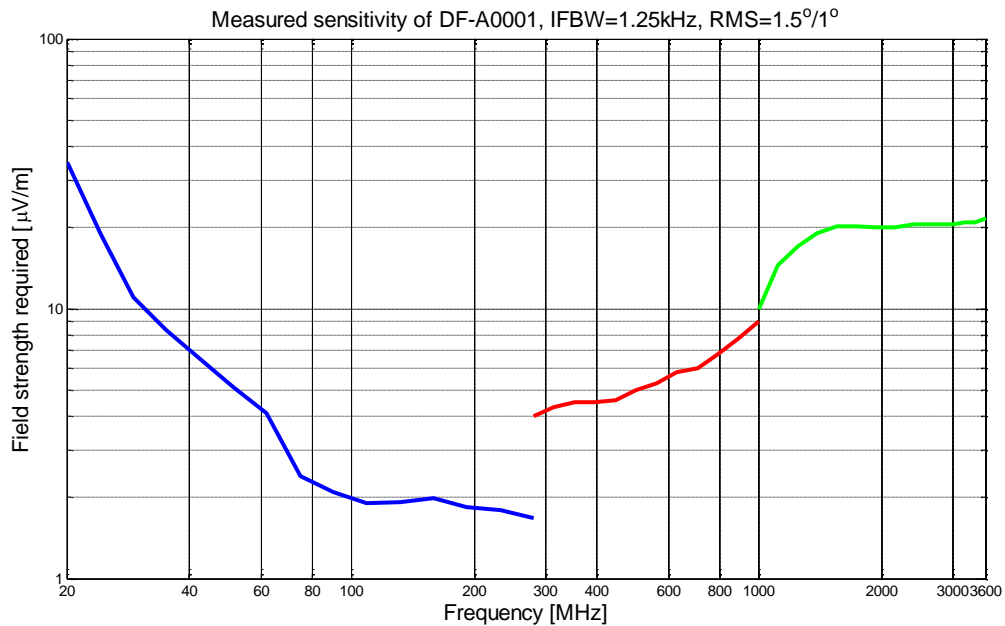
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DF sensitivity graph:



The graph illustrates the direction finding sensitivity of a typical system measured under specific electrical conditions.

The sensitivity is measured using an IF bandwidth of 1.25 kHz and without averaging.

The graph shows the minimum signal required to obtain a bearing fluctuation of less than 1° for the frequency range 20 to 280 MHz and less than 1° for the frequency range 280 to 3000 MHz.

Environmental testing specifications: designed to meet the following

Vibration	MIL-STD-810E method 516.4, category 8
Mechanical shock	MIL-STD-810E method 516.4 (50 g)
Low temperature storage	MIL-STD-810E method 502.3 (-30 °C)
High temperature storage	MIL-STD-810E method 501.3 (+85 °C)
Rain	MIL-STD-810E 506.3 procedure I (95% RH)
Artificial weathering (UV stability)	BS 3900: Part F16, method A. lamps : UV-B (313)
total duration 500 h	Product exceeds requirements set out by the British Standard
Temperature and humidity	MIL-STD-810E method 507.3
Salt / fog	MIL-STD-810E 509.3 procedure I
Dust	MIL-STD-810E 510.3 procedure II