

HF DF Antenna

1 – 30 MHz*

VERSION: 1.3

Product Code: DF-A0048



SPECIFICATIONS:

Electrical:	
Frequency range	1 – 30 MHz*
Channels	3 (including omni)
DF method	Watson-Watt or 3-channel CIDF
RMS accuracy	< 3 ° RMS
Polarisation	Vertical
Omni pattern ripple	< 3 dB RMS
VSWR	< 5:1 (over 90% of the band)
Nominal impedance	50 Ω
Connector	3 x N-type female
Power handling	Receive only
ESD protection	All metal parts are grounded
Mechanical:	
Total height (deployed/stowed)	< 3250/1200 mm
Total diameter (deployed /stowed)	< 1600/280 mm (excl. quadpod) < 1900/280 mm (incl. quadpod)
Total mass	< 8.3 kg
Mounting	- Self-standing with quadpod - Guy ropes (not incl.) for high wind - Bolt hole flange for semi-permanent
Colour	Per request
Environmental: designed to meet the following specifications	
Temperature range	Designed for storage: -30 °C to +70 °C Designed for operation -30 °C to +55 °C
Weatherproofing	Designed for IP66 rain resistant
Shock and vibration	Designed for MIL-STD 810E 516.4: vibration category 8, shock 40 g
Exposed materials	Painted aluminium and fibreglass

Notes:

* Extended operation to 88 MHz is possible with some DF degradation from 47-60 MHz

PRODUCT FEATURES:

- Stationary and transportable DF antenna
- High sensitivity
- Covers the whole HF band
- Patented cross-polarisation resistant technology
- Externally noise-limited passive antenna
- Waterproof
- Integrated quadpod for quick deployment
- Low visual profile
- Compact when stowed

APPLICATIONS:

- HF groundwave DF
- HF interferometric SSL DF
- HF monitoring
- Rapidly deployable DF

RELATED PRODUCTS:

- DF-A0016

PRODUCT DESCRIPTION:

The DF-A0048 is a compact, stationary and transportable HF direction finding antenna designed for DF systems using the Watson-Watt estimation method.

The antenna consists of two identical loop antennas arranged in a “crossed-loop” configuration, with a large diameter of 1.6 m to achieve a high sensitivity. The loops make use of Alaris’ innovative and patented cross-polarisation cancelling technology that eliminates disturbances due to cross-polarisation from on-horizon sources. This offers enhanced, reliable accuracy in real-world applications and field trials over traditional crossed-loop designs. In addition to the loops, the DF-A0048 provides an omni-directional sense signal that can be used for monitoring and resolving the 180 degree angle of arrival ambiguity that is inherent in crossed-loop type DF antennas.

The antenna is made from lightweight materials and designed to be collapsible for quick, easy and repetitive deployment and stowing in a harsh field environment. The product is unique in that it features a fully integrated quadpod for rapid field deployment but can also be bolted to a plinth for semi-permanent installations. When stowed, the antenna collapses into a very small form factor for easy transportation and storage.

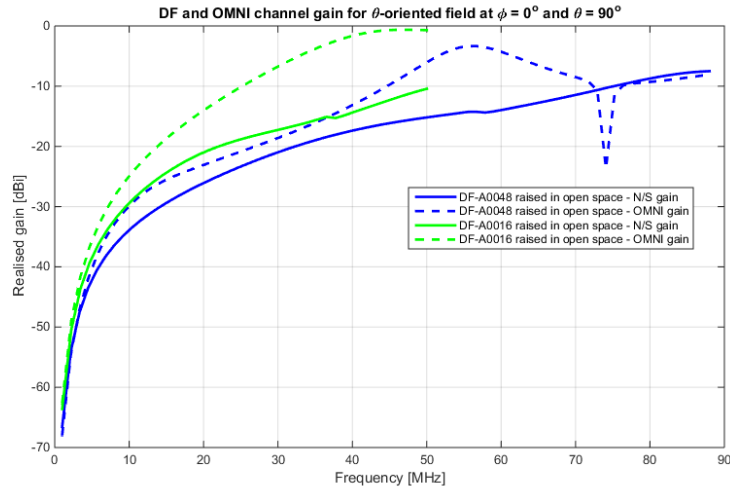
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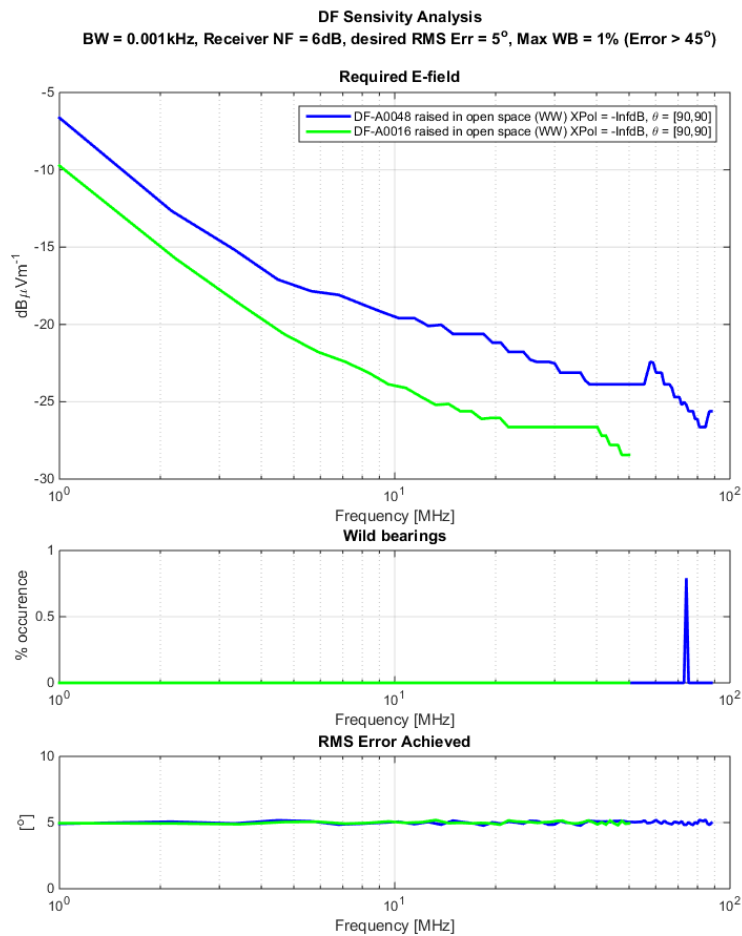
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Gain:



Sensitivity:



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195 Follen Road
Lexington, Massachusetts
sales@cyntony.com
781-430-0675



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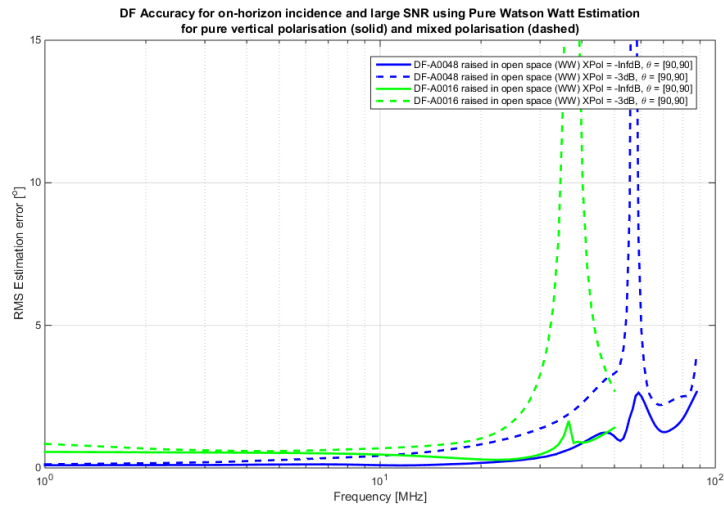
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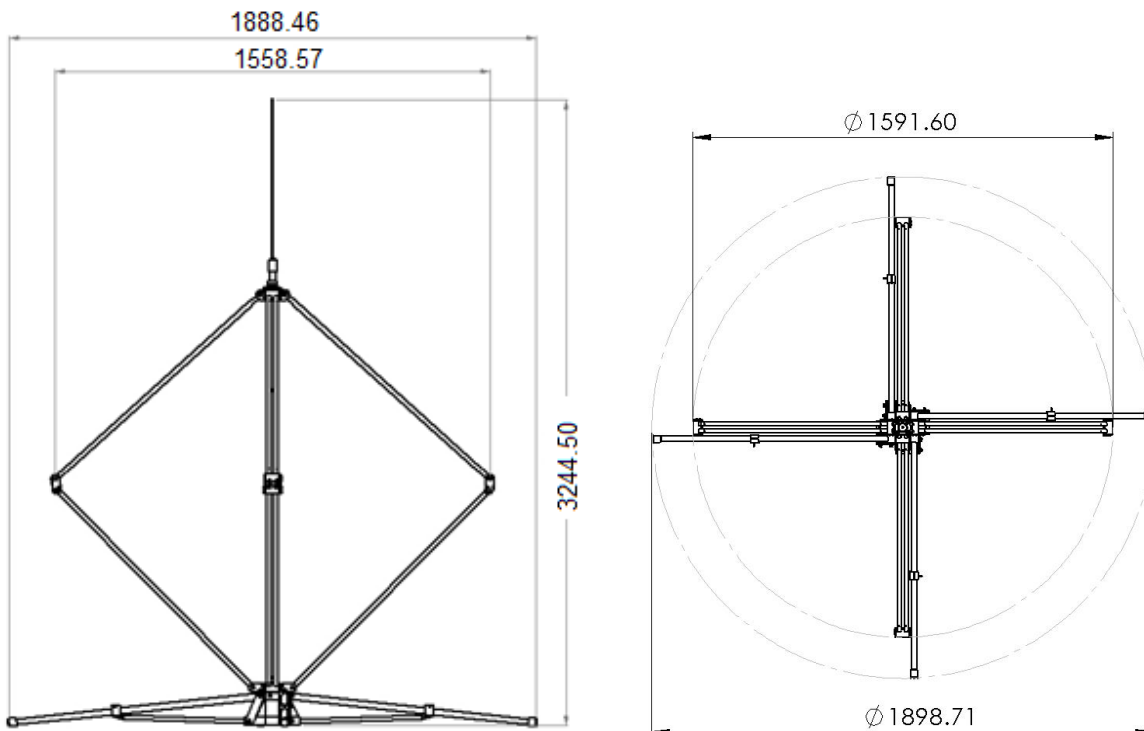
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DF Accuracy:



Outline dimension drawings:



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