

# UHF Interferometer

100 – 500 MHz

VERSION: 1.3

Product Code: DF-A0100



## SPECIFICATIONS:

Electrical: DF		
Frequency range	100 – 500 MHz	
Channels/elements	5	
DF method	Correlative interferometer	
RMS accuracy	< 1° (see note 1)	
Polarisation	Vertical	
Omni-output	With optional monitoring antenna attachment	
Nominal input impedance	50 Ω	
Interfaces:		
Antenna outputs	5 x TNC(m) pigtails extending 0.2 m from switch interface flange	
Mechanical	Flange for tower/shelter mounting Switch interface flange	
Mechanical:		
Dimensions (ø x h)	1480 mm x 2135 mm 2000 mm x 2120 mm (with MISC-A0088)	
Total mass	< 50 kg	
Environmental: designed to meet the following specifications		
Wind survival	180 km/h (without ice)	
Temperature (operation)	-40 °C to +70 °C	
Lightning	- Protected against lightning induced surges - Optional lightning conductor attachment (MISC-A0088) will provide a measure of protection against direct strikes (see note 2)	
Humidity	95%, non-condensing	
Water proofing	IP65 rain proof	
Electrical: optional RF switches (see 'related products')		
	<b>DF-A0101</b>	<b>DF-A0102</b>
Switching function	Switch between calibration signal and antenna outputs	5-to-3 channel commutation, switch between calibration signal and selected antenna channels
Control	RS 485 115 kbaud	RS 485 115 kbaud  Commutation strobe line (RS485 levels, differential pair)
Commutation speed	N/A	< 15µs
Switching time	< 100 µs using serial commands	
RF interface (inputs)	5 x TNC(f) bulkhead (antenna inputs) 1 x N(f) bulkhead (ext. cal signal)	
RF interface (outputs)	5 x N(f) bulkhead   3 x N(f) bulkhead	
Stored information	Model no., serial no., user data fields	
RF calibration	- Internal wideband noise source - External calibration signal injection	
Power supply	19 – 36 V DC	
Power consumption	< 0.7 A (noise source off)	
Lightning protection	All interfaces protected with inline surge arrestors	

### Notes:

- Only in a phase and amplitude correlative system. RMS accuracy is measured over all azimuth using 1° characterization table, calculated per frequency point. A suitable SNR is required to accomplish specified accuracy.
- Lightning conductor attachment will allow the antenna and switch to survive direct strikes of a limited magnitude. Severe strikes will still cause damage.

## PRODUCT DESCRIPTION:

The DF-A0100 is single band 100 to 500 MHz antenna array for use in high precision DF applications. The antenna features hardening against lightning-induced surges with an optional lightning conductor attachment available for added protection. Alternately, an optional omni-directional monitoring antenna attachment can be used to provide an additional monitoring channel.

The full-size elements give excellent DF sensitivity. Ultimate angular resolution for strong signals is well under 1°. Dipole elements provide good cross-polarisation rejection, and fair performance for signals arriving from 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.

## RELATED PRODUCTS:

DF-A0101: Calibration switch (see pane)  
DF-A0102: Calibration and commutation switch  
MISC-A0088: Lightning conductor attachment  
OMNI-A0274: Monitoring antenna attachment

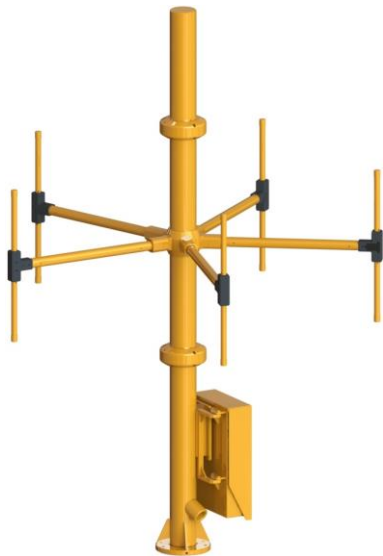
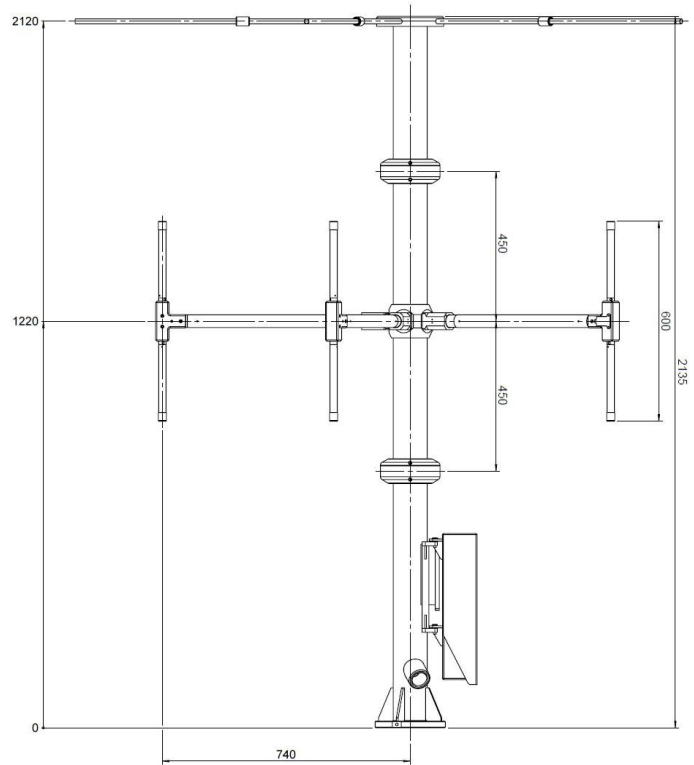
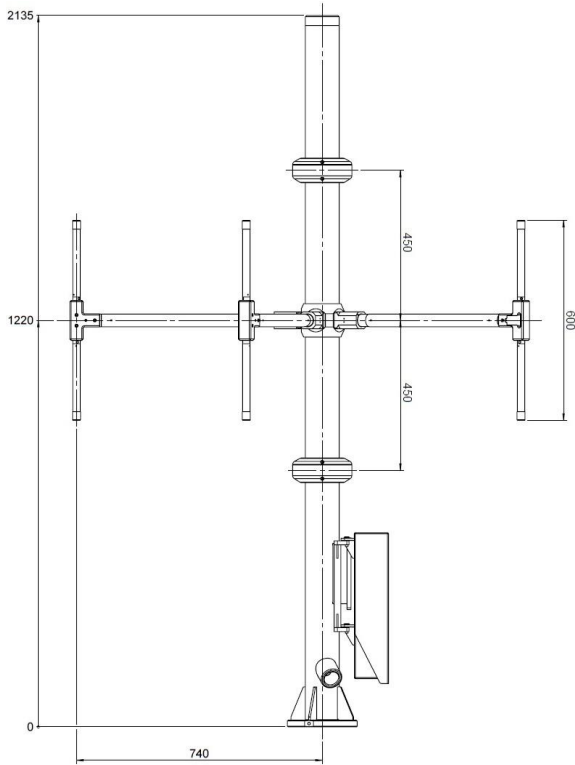
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## ANTENNA DIMENSIONS:



STANDARD DF-A0100



INCLUDING MISC-A0088 LIGHTNING CONDUCTOR



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## SENSITIVITY:

