



## **ESDF-118** **Electronically Scanned Direction Finding System**



### **KEY FEATURES**

- 1-18 GHz frequency coverage
- High gain, uniform pattern
- 60° elevation beamwidth
- Amplitude & Phase Matched Spiral Antenna Array
- 360° coverage
- Rugged mechanical structure with protective radome
- Designed to MIL-E-16400 standard

### **APPLICATIONS**

- Shipboard direction finding
- Fixed and Mobile ground direction finding
- Signal intelligence and electronic signal measurement

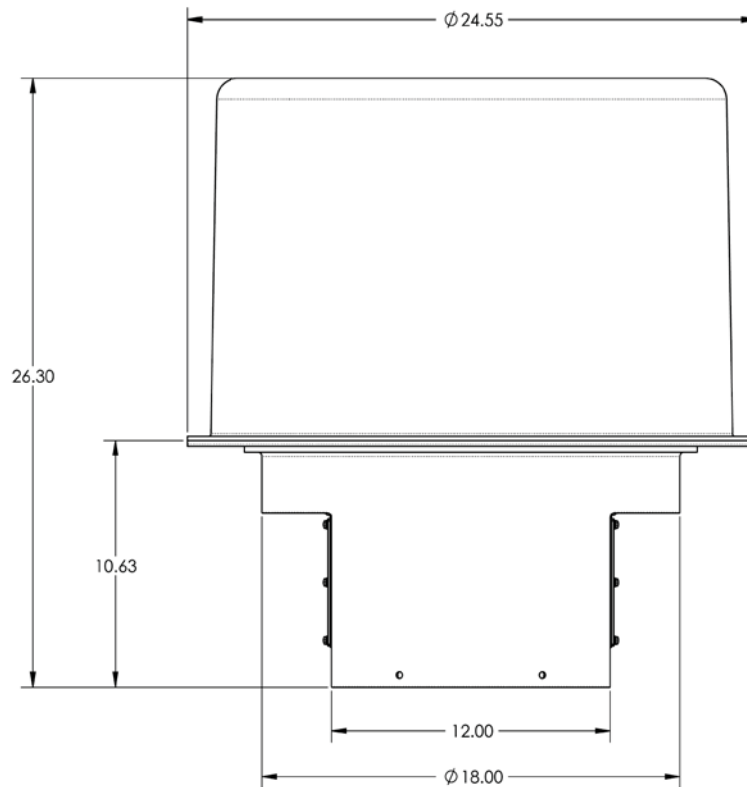
The ESDF-118 is part of TECOM Industries' diverse line of rugged, high accuracy military grade direction finding (DF) antenna systems designed for shipboard DF requirements in the ESM user community.

The ESDF-118 is an electronically scanned Interferometer based antenna system. It operates in the frequency range of 1-18 GHz using an array of six cavity backed spiral antennas and an omni-directional antenna providing 360° coverage with constant gain and constant elevation beamwidth. Using phase and amplitude comparison techniques, the ESDF-118 can locate the direction of a signal of interest within 2° RMS of accuracy.

Each spiral antenna is mounted on a common mounting assembly with RF outputs from the individual antennas provided on separate RF connectors. The mechanical structure of the ESDF-118 is constructed with adequate space available to integrate additional processing circuitry. The ESDF-118 is a military grade product, designed and built for harsh environments and offered with a protective radome.

The scalable yet low-complexity design of the ESDF-118 platform provides flexibility to modify the product and customize it to meet specific customer requirements beyond its current capabilities.

SPECIFICATIONS		
	DF Antenna Array	OMNI Antenna
Frequency Range	1-18 GHz	1-18 GHz
Polarization	RHCP	Slant linear
VSWR	3.0:1 maximum	2.0:1 maximum
Beamwidth - Azimuth	110 - 60 degrees typical	360 degrees
Beamwidth - Elevation	60 degrees typical	30 degrees typical
Gain	-4.0 dBiC at 2 GHz typical	0 dBi typical
	3.0 dBiC at 4 GHz typical	
	4.0 dBiC at 8 GHz typical	
	3.0 dBiC at 12 GHz typical	
	3.0 dBiC at 18 GHz typical	
DF Accuracy	2 degrees RMS	
Connectors	6 X SMA : RF spiral antenna output 1 X Type N : OMNI output Power Connector: Available as an option	
Approximate System Weight	60 LBS	
Dimensions	See diagram below for mechanical specifications and dimensions	



Mechanical dimensions with enclosed radome. Dimensions are in inches unless otherwise indicated.