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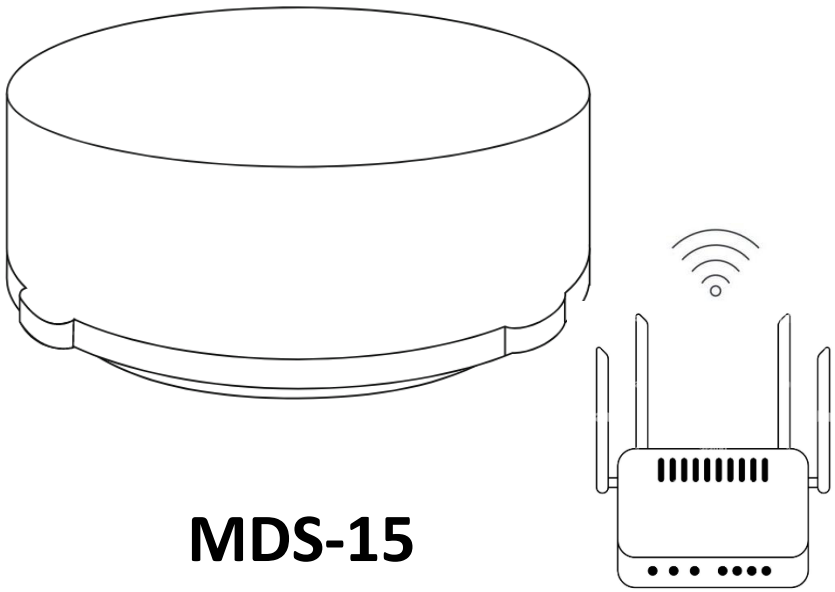

MDS-15

FEATURES
Built-in ethernet RJ45 connection cable to connect via a Wifi router to a compatible marine Wifi navigation system (wifi router not included)
36NM range
Digital radar target technology
Built-in excellent sea and rain clutter algorithm
Fully digital signal processing
High performance microwave front end

TECHNICAL SPECIFICATIONS

ANTENNA UNIT

Radiator	Slotted waveguide array
Radiator length	55 cm
Horizontal beamwidht	4°
Vertical beamwidht	25°
Weight	16000 g
Sidelobe	-Within +20° off mainlobe; less than -18dB -Outside +20° off mainlobe; less than -23dB
Polarization	Horizontal
Antenna rotation speed	24 rpm (+2)
Wind resistance	100 knots (51.5m/s)

TRANSCEIVER MODULE (Contained in radome)

Transmitting tube	MSF1421B or MAF1421B
Frequency	9410 MHz + 30MHz
Peak output power	4kW nominal
Pulselength & pulse repetiotion rate	0.08 μS, 2100Hz (0.125,0.25,0.5,0.75,1.5nm)
	0.3 μ S,1.5,2,3nm)
	0.8 μ S,600Hz(3,4,6,8,12,16,24,36nm)
Warm up time	1:30 minutes
Modulator	FET switching method
I.F.	60MHz
Tuning	Automatic or manual
Receiver front end	Microwave IC
Bandwidth	Tx pulselength 0.3 μS and 0.08 μS 25MHz
	Tx pulsetength 0.8 μS: 3MHz
Duplexer	Circulator with diode limiter

ENVIROMENT

ETHERNET CABLE	15 meters shielded ethernet cable with RJ45 connector
POWER SUPPLY UNIT	From 10.5 to 40 Vdc +built-in regulated power supply
POWER CONSUMPTION	40W max
TEMPERATURE	Antenna unit -25°C +70°C
HUMIDITY	93% or less to +40°C
COMPASS SAFE DISTANCE	Standard Compass to Antenna unit: **130 cm**
	Steering Compass to Antenna unit: **95cm**

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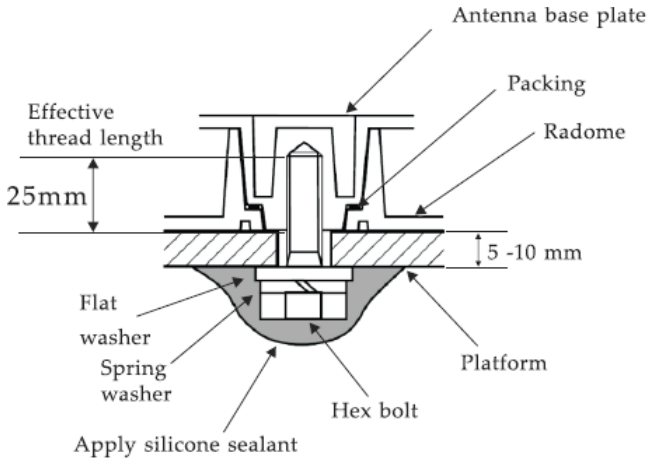
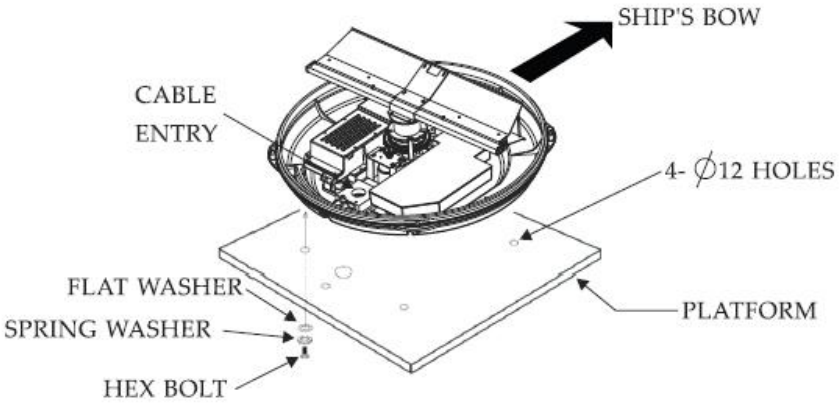
MOUNTING OF THE MDS-12 RADOME

Fasten the radome base to the mounting platform





Locate the antenna unit where there is a good all-round view as far as possible, no part of the ship's superstructure or riggging intercepting the scanning beam. Any obstruction will cause shadow and blind sectors.

To lessen the chance of picking up electrical interference, avoid routing the signal cable near other onboard electrical equipment. Avoid running cable in parallel with power cables.

The compass safe distance should be observed to prevent deviation of the magnetic compass.

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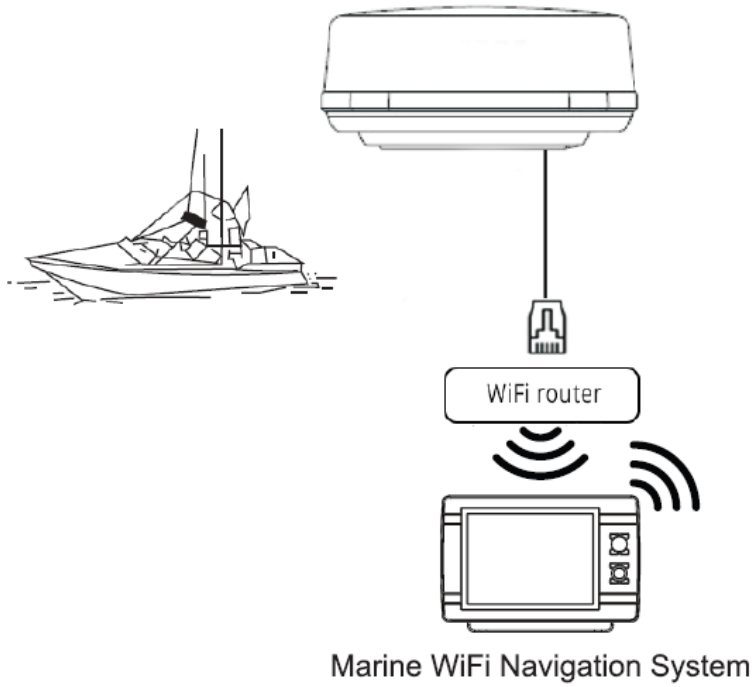
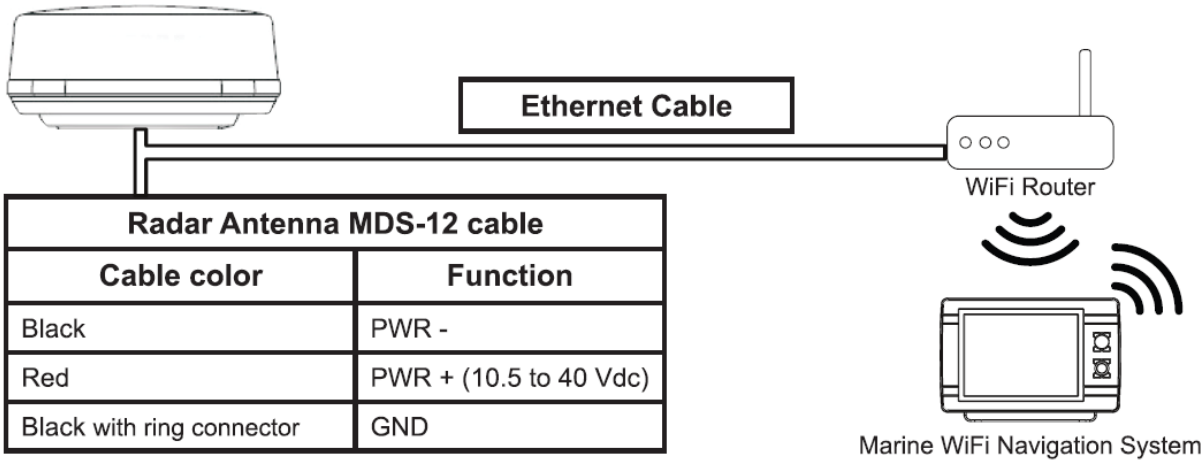
CONNECTIONS

For connecting the Radar Antenna MDS-12 to a compatible marine WiFi navigation system an external WiFi router is required (not included).

MDS-12 connects via ethernet cable to the external WiFi router. Through the WiFi router, the radar antenna MDS-12 connects wirelessly to the marine Wifi navigation system.

Check the marine WiFi navigation system specifications for compatibility with the radar antenna MDS-12.





Radar Antenna MDS-12 cable	
Cable color	**Function**
Black	PWR -
Red	PWR + (10.5 to 40 Vdc)
Black with ring connector	GND

The black cable with ring connector is used to connect to grounding of the metal boat. For wooden or fiberglass boats it is not needed to connect the ground wire.

It is suggested to add a power switch with fuse (5° for 12V and 3Afor 24V) for the radar antenna.

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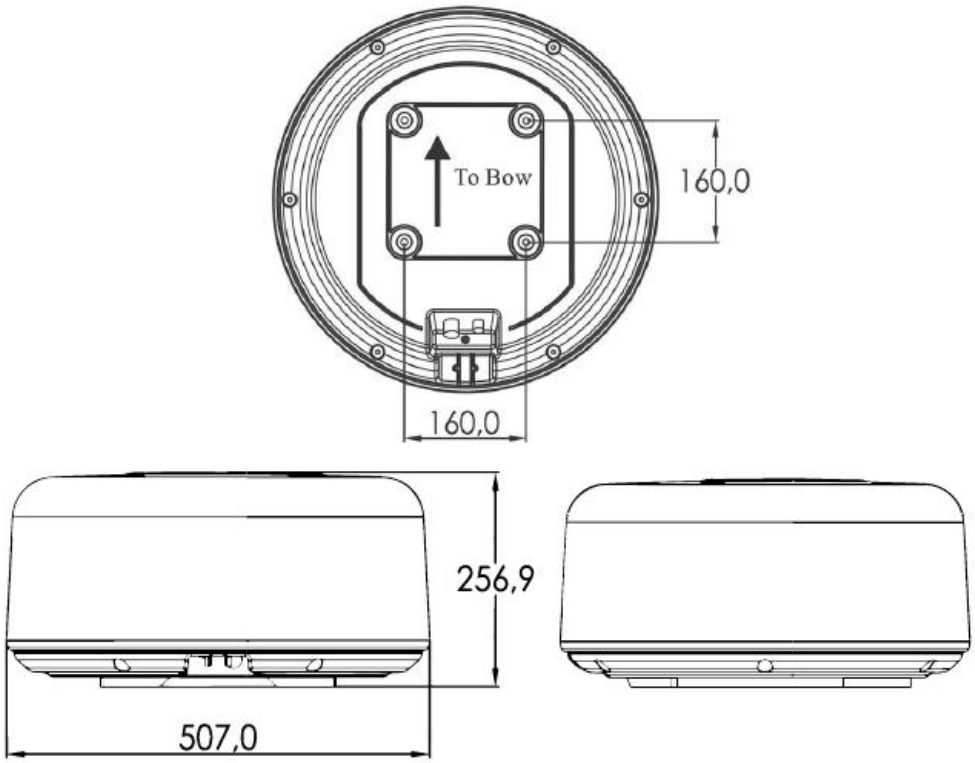
DIMENSIONS



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