

X-band Radar Sensors

The Kongsberg series of X-band (3 cm) radar sensors include sensors for both 10 kW and 25 kW transmission. The X-band radar sensor is available in both masthead (up-mast) and bulkhead (down-mast) version and can be provided with both 6 and 8 feet scanners.



Features

- Modular and solid state design
- Built-in power supply unit
- Built-in performance monitor (required for IMO SOLAS vessels)

X-band Advantages

- Increased resolution with a smaller antenna than the S-band radar sensor
- Compatible with SARTs (Search And Rescue Transponders) and radar beacons

Options for Standard Models

- Masthead (up-mast) or bulkhead (down-mast) mounted transceiver
- 6 feet or 8 feet scanners
- 10kW or 25 kW transceivers

Standards Applied

The equipment meets in full or exceeds the requirements of IEC 60945 and IEC 60936-1.

Type Approval

The equipment conforms to the relevant EU MED directives.

Technical Specifications

Technical Specifications

Transmitter characteristics

Magnetron Nominal Peak Power: 10 kW or 25 kW
 Magnetron Frequency: 9410 Mhz

Pulse Length/PRF

0.05 μ s / 1760 Hz Nominal
 0.25 μ s / 1760 Hz Nominal
 0.75 μ s / 785 Hz Nominal

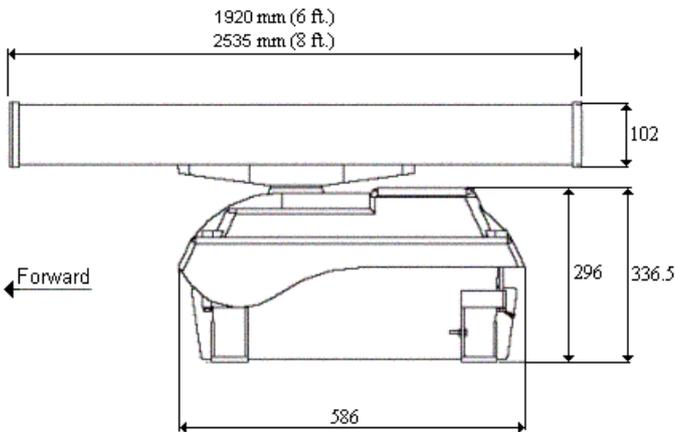
Pulse Generator

Solid-state with pulse forming network driving a magnetron.

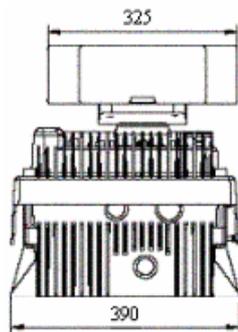
Receiver characteristics

Logarithmic
 Low noise front end
 Automatic or manual tuning
 IF centered at 60 Mhz
 IF bandwidth 20 Mhz (Short pulse) nominal
 IF bandwidth 20 Mhz (Medium pulse) nominal
 IF bandwidth 3 Mhz (Long pulse) nominal
 Noise factor 5 dB nominal

Radar Scanners:



| | | |
|---------------------------------------|-----------|-----------|
| | 6 ft. | 8 ft. |
| Weight, including transceiver | 52 kg max | 55 kg max |
| Weight (Turning Unit w/o transceiver) | 44 kg max | 47 kg max |



Transceiver Power Supplies

Nominal input

AC 92 V to 276 V RMS at 47 Hz to 64 Hz, or
 DC 21.6 V to 32 V (10 kW only)

| | | |
|--------------|-------|-------|
| Consumption: | 10 kW | 25 kW |
| | 210 W | 250 W |

Power consumption figures assume 100 knots wind.

Scanner Characteristics

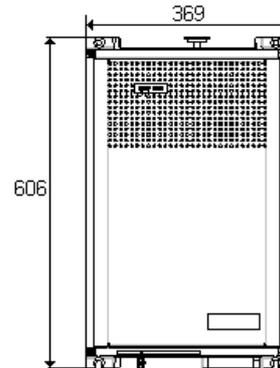
| | | |
|-----------------------------|--------------|-------------|
| Aperture length: | 6ft. (1.88m) | 8ft. (2.5m) |
| Horizontal beamwidth: | 1.3° max | 1.0° max |
| Vertical beamwidth: | 24° nom | 24° nom |
| Sidelobes within 10° -min: | -23 dB | -23 dB |
| Sidelobes outside 10° -min: | -30 dB | -30 dB |
| Gain (nominal): | 30 dB | 31dB |
| Polarization: | Horizontal | Horizontal |
| Rotation: | 28rpm | 28rpm |
| Limiting rel. wind speed: | 100 knots | 100 knots |

Environmental Specification

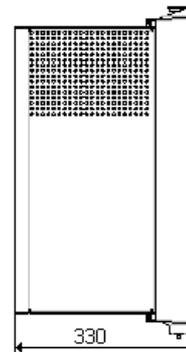
In compliance with IEC 60945.

Minimum operating temperature - 40°C.

Down-mast Transceiver:



Weight: 23kg



All dimensions are in millimetres.

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