

## Radar Radome 10223-9

### Overview



The Radar Radome is a system designed primarily for X-band radar, both with respect to physical dimensions and frequency but may be used for harsh weather conditions.

### Benefits

- Ideally suits housing sensitive equipment (radars, etc.).
- Protects equipment from harsh weather conditions.
- Increases equipment lifetime and durability.
- Does not affect electromagnetic equipment performance.
- Allows remote monitoring of temperature, humidity, and operational status of the system.

### Areas of use:

- Oil platform, FPSO / FSO surveillance radar systems
- Ship surveillance radars
- Oil field surveillance vessels
- Harbor radar / radio surveillance
- Coastal zone radar surveillance
- VTMS - Vessel Traffic Management Systems.

### Radar Dome specification

Radar	Terma Scanter 5202, 9ft antenna
Volume	11000 liters
Weight	Single 1869 kg / Dual 1946 kg
Material dome	Gas and dust-proof fiberglass optimized for 9,2- 9,5GHz
Material support frame	Stainless steel SS316L painted RAL9010
Mounting	20 bolts M33, standard 24" ANSI flange
Wind tolerance	Designed for 350 km/hr. (225mph)
Interfaces	Power: 230/400 VAC/16A Signal cable: Single Mode Fiber Gas Detectors: Simtronics/Optronics
Optional	ATEX / IECEx approval Internal ex-heaters Microwave absorber kit Dehumidifier Remote monitoring of environment. E.g. temperature and humidity



## Antenna specifications

Frequency	9.14-9.50 GHz
Antenna aperture length (L)	9ft (2.89m)
Horizontal beamwidth	0.82° max
Vertical beamwidth	16° nom
Sidelobes within 10° (min)	-24dB
Sidelobes outside 10° (min)	-30 dB
Gain (nominal)	32 dBi
Polarization	Horizontal
Rotation rate (standard/high)	20rpm

## Certificates and standards

Project specific.

## Radar specification

### Key Features

Weight	26kg
h x w x d	466mm x 422mm x 422mm
Type	Solid State power amplifier
Frequency	9.2-9.5 GHz
Sector Transmission	Blanking/reduced tx-power
Sampling	12bit @ 200MHz
Dynamic Range	> 100 dB (incl. processing)
Noise figure	2.5 dB typical
Emitter	>80W peak (equivalent to 25 kW magnetron)

## Non-ex version of Radar Dome

Radome in non-ex version is used for protection of nearby personnel from being accidentally struck by quickly rotating antennas and for protection of equipment from harsh weather conditions: wind, ice, humidity, freezing rain, UV rays etc.

Input power requirement Non-EX Radome							
Item #	Part Name	Manufacturer	Unit Of Measure	Quantity	Max Nom. Power	Frequence Hz	Voltage
1	Antenna 9ft	Terma	each	1	1500W	0-90	400VAC
2	Ant.Controller Unit	Terma	each	1	330W	50-60	400VAC
3	SC5000	Terma	each	2	1050W	50-60	230VAC
4	Dehumidifier DC-5	DST	each	1	1100W	50-60	230VAC
5	LED light	Quintex	each	1	30W	50-60	230VAC
6	Heater	EX Heat industrial	each	1	1000W	50-60	230VAC
7	PSU 24V	Sea Surveillance	each	1	60W	50-60	230VAC
8	Cisco Switch	Cisco	each	1	36W	50-60	230VAC
					6156W		
					< 7kW		