



SURFACE MOVEMENT RADAR ANTENNAS SERIES ASX-2103 • ASX-1903

GENERAL DESCRIPTION

The antenna system ASX-2103 / ASX-1903 series is designed especially for Surface Movement Radar.

Using a motor group with indirect coupling, the system is characterized for an extreme reliability and operation duration also under adverse climatic conditions.

Thanks to its physical low profile, favourable aerodynamics and compactness are obtained.

Both right-handed circularly polarized and left-handed circularly polarized versions are available.

Even if it finds first application in SMGCS programs, it can be profitably used for radar tracking of fast surface targets in other shore-based applications.

FEATURES

- High azimuth discrimination
- 60 rpm
- Functionality 24h for 360 day/night all-weather conditions.
- Maintenance free (MTBF more that 60000 h)

APPLICATIONS

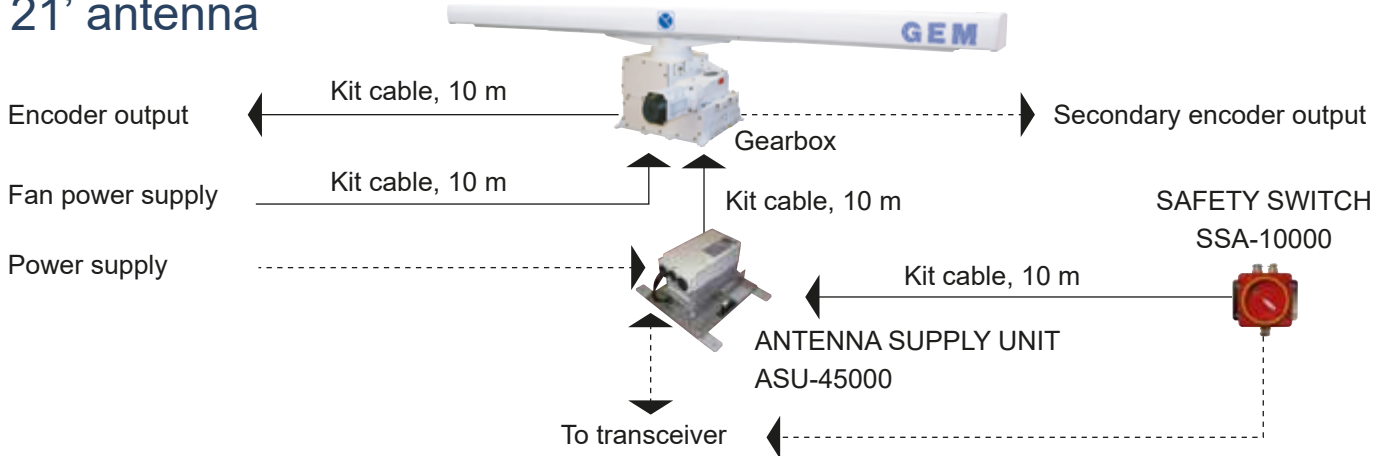
- SMGCS
- Coastal Surveillance & Security
- Homeland Security



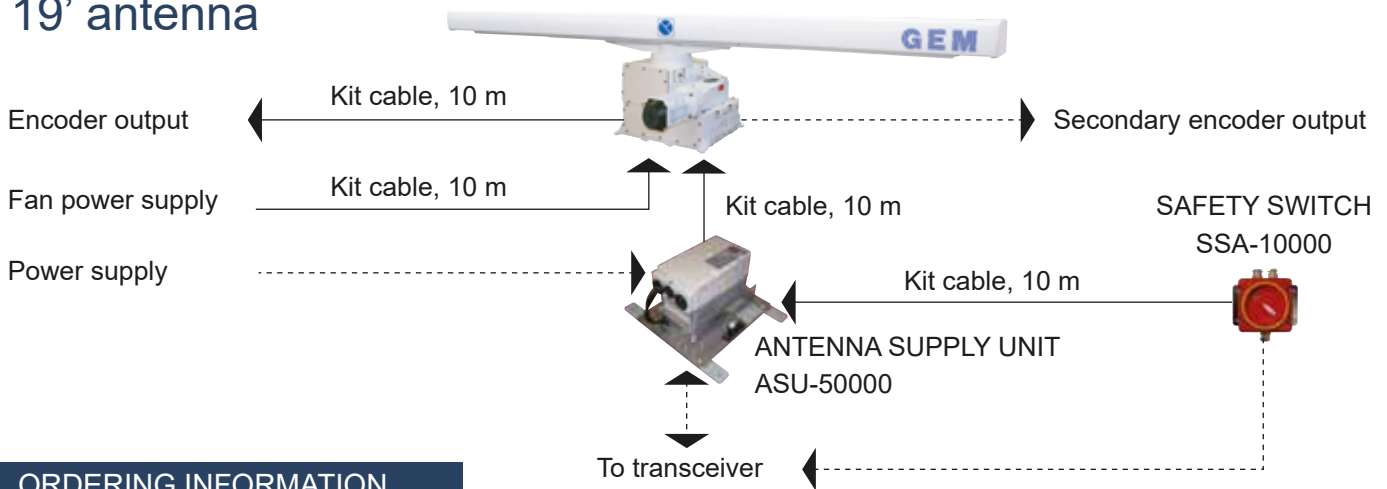
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GENERAL DIAGRAM OF CONNECTION

21' antenna



19' antenna



ORDERING INFORMATION

Order Code	Antenna Length	Polarization	Antenna Supply Unit	Safety Switch
ASX-2103/RC	21 feet (6.51 m)	Right-Hand Circular	ASU-45000	SSA-10000
ASX-2103/LC	21 feet (6.51 m)	Left-Hand Circular		
ASX-1903/RC	19 feet (5.89 m)	Right-Hand Circular	ASU-50000	
ASX-1903/LC	19 feet (5.89 m)	Left-Hand Circular		

SUPPLY COMPOSITION AGAINST EACH ORDER CODE

- Antenna system including gearbox and antenna unit
- Tilt Unit
- Antenna Supply Unit (ASU)
- Safety switch Unit (SSA)
- Connecting cables kit (standard lengths: 10 mt)
- Certificate of conformance
- Packing list

OPTIONS:

- Depending on installation requirements, cable lengths are delivered in accordance with Buyer's instructions
- Can be released at other center frequencies between 8800-9600MHz upon Buyer's requirement
- Use and installation manual in English language

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SERIES SPECIFICATIONS

BASIC PERFORMANCE DATA	ASX-2103/RC • ASX-2103/LC	ASX-1903/RC • ASX-1903/LC
Antenna type:	Slotted waveguide array	
Center frequency	Between 9300 MHz and 9500 MHz	
Array length:	21 feet (6.51 m)	19 feet (5.89 m)
Gain:	38 dBic ± 1 dB	35 dBic ± 1 dB
VSWR:	less than 1.2:1	
Beamwidth (at -3 dB)		
Horizontal:	0.35° ± 0.02°	0.43° ± 0.03°
Vertical:	11° ± 1°	17° ± 10%
Sidelobes		
Within ± 10°:	less than -28 dB	
Outside ± 10°:	less than -35 dB	
Azimuth encoders:	16384 pulses per revolution	
Rotation speed:	60 rpm	
Drive Motor Power:	9 kW	3.5 kW
ELECTRICAL POWER		
Required supply at ASU input:	one phase, 50/60 Hz	
Voltage:	220 Vac	
Absorption:	9000 Volt Ampère	3000 Volt Ampère
ENVIRONMENTAL PERFORMANCES (nominal)		
Operating temperature range:		
Standard	from -25° C to +55° C	
With heating unit	from -40° C to +70° C	
Relative humidity:	up to 100% at +40° C with dehydrator	
Vibrations:	in accordance with IEC-60945	
Vibrations/shock:	1g from 0 to 50 Hz	
Operational wind speed:	up to 100 knots	
Precipitation:	Rainfall: up to 16 mm/hr Hail: up to a diameter of 12 mm at 17 m/s	
Icing:	up to 10 mm thick	



21' ANTENNA and ROTATION UNIT

Estimated Weight
 21' Antenna Unit: 178 Kg
 Rotation Unit: 350 Kg
 Tilt: 31 Kg

19' ANTENNA and ROTATION UNIT

Estimated Weight
 19' Antenna Unit: 65 Kg
 Rotation Unit: 250 Kg
 Tilt: 20 Kg

ANTENNA SUPPLY UNIT Estimated Weight 20 Kg

SAFETY SWITCH Estimated Weight 2 Kg

Surveillance & Security

Guidance, Navigation & Positioning

Military & Defence

Marine Electronics

This brochure should not be considered a contractual offer to sell. The specifications given herein may be changed by the manufacturer, GEM elettronica S.r.l., without notice.

