



3D RADAR

FREGAT-M2EM

TWO CHANNEL
NOISEPROOF



The shipborne noiseproof two channel 3D radar «Fregat-M2EM» is intended for detection of air and surface targets and providing fire means with target designation data. It is installed on warships of medium and large displacement.

«Fregat-M2EM» radar has been developed and is produced by FSUE «SMP «Salyut».

The radar solves the following tasks:

- Control of air and surface situation at ranges up to 300 km;
- Detection of air targets, small size and low flying included;
- Detection of surface targets;
- Providing IFF of detected targets;
- Giving out of initial radar information for fire arms, ECM means and information processing system;
- In integration with information processing devices tracking of the detected targets and giving out of the secondary radar information for the control systems;
- In integration with TA and TD devices target allocation and giving out of target designation data for AD means of the warship.

High anti-interference of the radar is provided by:

- Adaptive distribution of energy in space;
- Electronic frequency re-tuning in a wide band;
- High space resolution and low level of antenna pattern sidelobes;
- Complex signals with high resolution ability;
- Nonlinear methods of processing signals;
- Blanking of echo-signals received by sidelobes of antennae from objects with large reflecting surface;
- Logical processing of signals after detection;
- Double adaptive moving target selection.

The radar has a built-in system of automatic capacity for work check and diagnostics capable of finding out breakdowns and faultinesses with an accuracy to a changeable element.

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FREGAT-M2EM

SPECIFICATIONS

Frequency band	E
Number of radar channels	2
Number of measured coordinates	3

COVERAGE

range, km	300
azimuth, deg	360
altitude, km	30
elevation, deg:	
I channel	45
II channel	55

DETECTION RANGE, KM

fighter	230
missile	50
ship	range of direct visibility
minimum range, km	2

Maximum scan rate, sec.	2,5
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Antenna rotation speed, rpm	12; 6
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MEASURING ACCURACY OF COORDINATES

range, m	120
azimuth, mil	6
elevation, mil	7

WEIGHT, T

antenna post	2,5
devices	9,25 – 9,85*

Power consumption, kW	90
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Number of devices	20 – 24*
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* – depends on composition

