Antenna Control Unit ACU 9300

Antenna Control Unit ACU 9300 series is designed for antenna pointing in the direction of the spacecraft in various modes and designed to work with antennas L, S, C, X and Ku-band with diameters up to 9.3 m (control motors up to 2.2 kW).

ACU 3700 provide operation with satellites in different orbits (geostationary, high elliptical, low circular) and with different types of tracking signals (L-band, 70/140 MHz, analog, digital).

TECHNICAL SPECIFICATIONS

Parameters	Specifications
Frequency range	L, S, C, X, Ku
Tracking Accuracy in Auto-Tracking Mode , dB, no more	0.4
Internal beacon receiver frequency range (L-band), MHz	950-1950
Internal beacon receiver synthesizer step size (L-band), MHz	1.0
Internal beacon receiver passband (L-band), MHz	from 10 to 40 with 2 MHz step
Internal beacon receiver frequency range (70/140 MHz), MHz	50..180
External Analog Tracking Signal, VDC	0...10
External Digital Tracking Signal	RS-485/RS-232
Remote Monitor and Control	RS-485
Input Power Three-phase AC 50 Hz, VAC	180...264
Operational Temperature , C	0...+40
Survival Temperature, C	-50..+80
Relative Humidity at 25 C	up to 85%
Dimensions, mm	482x505x176 (19" 4U)
Weight, kg	13,6

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ACU 9300

Operational modes:

1) **«Manual»** - movement of the antenna by pressing keys on the front panel ACU «Azimut - left», «Azimuth - right», «Elevation - up», «Elevation - down».

2) **«Targeting»** - moving the antenna to match the given (or stored in memory ACU) angles of elevation and azimuth. Targeting can be defined as the front ACU panel and the interface of remote monitoring and control;

3) **«Auto-Tracking»** - automatic search and installation of an antenna in the direction of maximum of pattern of the criterion to achieve the maximum level of tracking signal with a given error pointing.

As a tracking signal in the «Auto-tracking» mode can be used one of the following signals:

1) from internal beacon receiver - input frequency range 950-1950 MHz, frequency step 1 MHz, passband 10...40 MHz with 2 MHz step;

2) from internal beacon receiver with input frequency range 50-180 MHz;

3) from external beacon receiver - analog signal 0...10 VDC, proportional to the power level of the received RF signal;

4) from external beacon receiver - digital signal, proportional to the power level of the received RF signal

ACU provide the normal functioning when equipped with an antenna system:
- drives with asynchronous motors up to 2.2 kW
- encoders or sensors of the angular position

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