

AC3000E Antenna Control System

Datasheet

AC3000E-ACU



AC3000E-ADU



1. General Description

AC3000E Antenna Control System is an antenna pointing control system with perfect function; it can manually or automatically control antenna position pointing to the peak value of the receipt signal from the synchronous communication satellite. AC3000E antenna control system is designed with the latest digital processing technology, the most precise antenna pointing, high reliability and maximum flexible system configuration. The system has a storage capacity for multiple satellites, has practical inclined orbit tracking capability, with input of RS-232, RS422 or RS-485 remote control communication interface and Ethernet interface. In addition, a lightning protection is designed as well to ensure system stability and operating reliably. AC3000E antenna control system is applicable to antennas with less than 10 meters diameter. The port connecting the AC3000E antenna control system and the tracking signal is a serial port, any DC voltage of -10~+10V (Including satellite receiver AGC output, MODEL DC output etc.

2. Configuration

1) AC3000E antenna control system includes following parts:

- (1) AC3000E antenna control unit (ACU)
- (2) Antenna driver unit (ADU)
- (3) Cable with 45 meters length (cable with max 90M length is optional)
- (4) ACU AC power with international standard cable and D-type plug.

2) AC3000E antenna control unit (ACU) consists of following parts:

Central processing board (Includes coding, A/D conversion, etc.), two-axis or three-axis, DC power, VFD display, keyboard and Chassis, etc.

3) AC3000E antenna driver consists of the following parts:

- * limit switch.
- * Logical Drive control panel
- * Air switch
- * Emergency stop
- * Az variable-frequency inverter
- * El variable-frequency inverter
- * 24V DC power
- * lighting protection
- * Polarization control circuit (three axis/four axis system, optional)

*Antenna position sensor brushless single, (two-speed resolver, photoelectrical encoder as option)

Position sensor can be single speed, two-speed, and two-speed can be selected as required from 1:16 to 1:128. Photoelectric Encoder can be selected from 14 bit to 20 bit. All these can be selected according to control requirements or user needs.

3. Working Mode:

AC3000E antenna control unit (ACU) allows users to store up to 99 synchronous satellite positions; it can be worked as the following mode:

- *Standby
- *Manual (High/low speed control)
- *Step tracking
- * Learning optimization tracking (it can track synchronous satellites with inclined angle $\leq 5^\circ$) (optional)
- *Command mode (optional)
- *Program tracking mode (optional)
- *Scanning mode (optional)

4. AC3000E antenna control system tracking accuracy:

10% θ HP in step tracking mode;
7% θ HP in optimization tracking mode. (Optional)

5. AC3000E antenna control system power:

ACU: Single-phase: AC 100V-240V, 50Hz/60Hz.
ADU: three-phase: AC 380V,50Hz, 1neutral ,1 ground.
Note: different power supply should be notified when ordering.