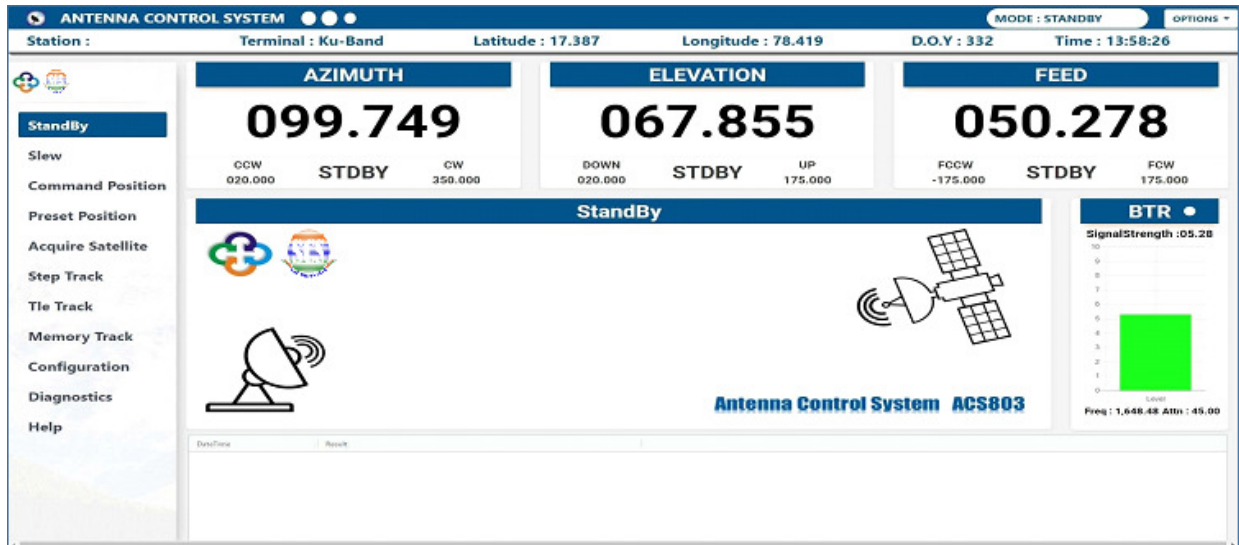




ACS803

Antenna Control System



Features:

- The ACS803 is an antenna control unit designed for geostationary antenna control.
- The unit provides user friendly motor control of Azimuth, Elevation and Pol axis.
- External beacon receiver option provides facilities for automatic satellite acquisition and tracking.
- Emergency Stop Switch on Front Panel
- Up to 5 Axis Control (Optional)

Operational Modes:

Manual : Slew and Step movement of each axes

Program Track : AZ, EL and Feed simultaneous movements, at the specified positions.

Preset Position: Predefined stored AZ, EL and Feed Position movement

Step Track : Step track for automatic satellite tracking

Digital Position mode : Required position movement of AZ, EL and Feed

TLE Track : TLE file generation and tracking, etc...

ACU Main Tasks:

- Satellite tracking strategy (step track, program track...)
- User interface: Local and remote through TCP-IP interface (optional)
- Position loop of up to three axes (azimuth, elevation and polarization)
- Interface with an external tracking receiver
- Configuration with user programmable parameters
- Data logging of all major events and encoder values.
- Interface with a Drive Cabinet
- Interface with LCU


General Specifications:

Parameter	Specification
Input Power Supply	3Ph, 440V and 230V AC Single Phase 50Hz
Axes supported	Azimuth. Elevation and Polarization
Angle Measurement in AZ & EL	
Sensors	17bit/18bit/19bit/22bitSSlabsoluteEncoder
Range	Azimuth-0°to359.99° Elevation-0°to 90°
Display Resolution	≤0.005 Deg
Accuracy	0.001Deg
Angle Measurement In POL	
Sensors	13bit/17bitSSlabsoluteEncoder
Range	0°to 359.99°
Display Resolution	0.01 Deg
Accuracy	0.05 Deg
Hardware Limits & Interlocks	Hardwired Limits & Interlocks logic is provided.
Emergency Stop	One ES Switch on the ADU provided. One ES Switch on ACU.
Limit switch inputs	AZCW, AZCCW, ELUP, ELDOWN, POLCW, POLCCW.
Input interface	Potential free contact (NC)
Tracking Signal Input Voltage	0 to 10 V from External Beacon Tracking Receiver
Keyboard	Ext. Keyboard
Display	17" LCD Screen / Laptop
Software Modes of operation	Standby mode Manual mode Position Track mode Program Track mode Preset mode Step Track mode Memory track Acquire satellite mode Configuration mode Diagnostics
Display	Universal Time (UTC) AZ. EL and POL Angles Mode Selected Faults Encoder not OK. Beacon Signal Strength AZ. EL. POL Limits.
Faults & Alarms	Low Beacon Signal Emergency Stop Pressed Hardware / Software Limits for all Axes (AZ, EL, POL) Azimuth Encoder Error, Elevation Encoder Error. POL Encoder Error.
Connectors	MS Circular Connector for all the Antenna Interfaces from ADU to Antenna with mating connectors.
Size	19"rack mountable sub rack of 5U or 6U with 500mm depth or Laptop



Antenna Control System

Power Supply	3 ϕ , 415 V AC, 50 Hz Power Supply should be provided
Controls	Front Panel Controls for AZ, EL & POL Bi-Directional Drive with illuminated Push Button Switches
Safety Protection	Power Out Put to Load (AZ, EL & POL Drive Axes) through MCBs mounted on front panel.
Remote / Local Control	Facility is available
Other Indicators	Input3 – phases at the rear panel
	Power ON
	Drive On (For AZ, EL and POL)
	3 ϕ Input Voltage O.K.
	Circuit breakers in each axis at I/P side
	Encoder Protection Unit on Antenna
Load Transfer & Motor Reversal	Using Variable Inverter Drives for AZ & EL Axes Using Solid State Relays for POL Axis
Mechanical Dimensions	19" (Width) for Rack Mounting Units 9" (Height)
Environmental	
Operating Temp	-20°C to 60°C
Storage Temp	-40°C to 70°C
Operating RH	100% non condensing
Storage RH	95% non condensing

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