BMA-7100
Heavy Duty Pan/Tilt Antenna Positioner

> Key Features
- Continuous 360° Pan Rotation
- 300 lb. Capacity
- Integral Controller and GPS Receiver
- Compliant with MIL-STD 810G
- Single Channel RF Rotary Joint

> Description
The BMA-7100 is a great choice for extremely heavy loads and precision pointing accuracy. Not affected by wind loads or other outside forces. This unit has amazing low velocity control and can be used for tracking very low speed targets like celestial objects.

Super Slow velocity control down to 0.004 degrees/second and a max velocity up to 85 degrees/second.

This pan and tilt pedestal is designed for heavy duty operation providing 360° pan rotation. Various control methods are included; RS-232, RS-485, CAN, Ethernet, Device Net. Ethernet with included Windows® application are standard.

With a max velocity of 85 degrees/second target acquisition is fast even with heavy loads. The strength (412 ft lbs torque) of this unit makes it perfect for large diameter microwave reflectors or antennas with high wind load.

The included GPS receiver allows auto-calibration, especially useful when used in portable/mobile operations.

> Applications
- Tripod/Portable
- Vehicle Mast Mount
- Fixed/Permanent Tower Mount
- Maritime Use Factory Upgrade

> Options
- MCP+™ Control Application for Windows®
- Low Torque/High Speed Elevation
- Dual Channel RF Rotary Joint
- Electromechanical Stabilization
- Four Band Tracking Receiver
> Technical Specifications

Motor Voltage    24-48 VDC
Load Capacity   300 lbs.
Duty Cycle   Intermittent
Duty Life    100,000 hours
Pan Range   360° degrees continuous
Pan Speed   1° to 85° per second (+/-0.1°)
Pan Torque   258 ft/lbs. continuous
Pan Motor Current   615 W, max. full load

Elevation Axis (high torque/low speed Reduction Standard)
Tilt Range   180° (+/-90°)
Tilt Speed   1° to 60° per second (+/-0.1°)
Tilt Torque   412 ft/lbs. continuous
Tilt Motor Current   615 W, max. full load

Elevation Axis (low torque/high speed Reduction Optional)
Tilt Range   180° (+/-90°)
Tilt Speed   1° to 85° per second (+/-0.1°)
Tilt Torque   258 ft/lbs. continuous
Tilt Motor Current   615 W, max. full load

Motor Type   Brushless Servo AZ and EL
Connector   PTB6E-14-18S (Power/Signal - Elevation Arm)
Dimensions   15.5”H X 11”W X 10”D (39.37 x 27.94 x 25.4 cm)
Weight   75 lbs. (34 kg)
Drive   Harmonic AZ/EL
Slip Rings   4@10 Amps and 14@2 Amps, Plus Ethernet
Backlash   Zero
Encoder Resolution   0.0001856° AZ and EL
Control   RS-232, RS-485, CAN, Ethernet, Device Net (Ethernet with control
GUI standard)
Material   Aluminum with stainless steel fasteners
Finish   White (contact factory for other color options)
Environmental   IP67, designed for compliance with MIL-STD 810G,

> Rotary Joint

RF Rotary Joint   Sealed, DC to 40 GHz (see list below)
VSWR   DC to 10 GHz = 1.30 max., 10 to 20 GHz = 1.45 max.
Insertion Loss   0.1 dB from DC to 20 GHz
Power Handling   100W average, DC-20 GHz
Additional derating at altitude, consult factory

810800300   BMA-7100; Pan/Tilt Pedestal; Heavy Duty Positioner; Continuous Rotation, controller, GPS receiver
8013885400   BCIU-7100; Power supply and communications interface unit, 110/240 VAC 50/60 Hz, 2U x 19” rack mount
130099196   Multi-Control Point-Plus (MCP+) Control Application for Windows®
Control Cable   Cable between pan/tilt and BCIU-7100, specify length up to 150’
RF Coaxial Cable   Connects pan/tilt to microwave receiver, specify length
Antenna Reflector and Feed   Specifications vary by frequency and intended use, contact factory for details
Antenna Mounting Bracket   Varies according to size and type of antenna

> Ordering Information

8014981400 Add BMRT-4B, Four Band Tracking Receiver
-A Add dual channel rotary joint
-B Add tactical stabilization for COTM
-C Select optional low torque/high speed elevation control (specify at time of order)
-D Upgrade for corrosive or marine/shipboard environment