OE-120B/UPX Antenna Group

The OE-120B/UPX is an advanced, electronically steered shipboard antenna group used with identification and air traffic management systems.

Description
The antenna group supports a wide range of systems, including identification friend or foe (IFF), secondary surveillance radar and air traffic control radar. The field-proven system is highly reliable, offering constant fleet protection for navies around the world.

Features and benefits
- Instantaneous, multiple target identification supports defense against today’s sophisticated air threats.
- Accommodates all standard IFF modes to support a wide range of mission requirements.
- Adapts to land and sea applications to support a variety of mission environments.
- Electronically steered system architecture offers increased reliability and reduced maintenance.
- Array configuration allows for smooth performance degradation in the event of a failure.
**Parameters**

- **Transmit frequency**: 1030 MHz
- **Receive frequency**: 1090 MHz
- **Transmit power maximum**:
  - Sum beam (Vertical polarization) – 5 KW
  - Difference beam (Vertical polarization) – 1 KW
  - Omni (~44 degree elevation) – 5 KW
- **Transmit format**: Accommodates all standard IFF and air traffic control radar beacon system modes, as well as other modes limited to 0.02 duty cycle
- **Sum beam shape**: 7 degree azimuth, 44 degree elevation, 360 degree azimuthal coverage
- **ISLS effective beamwidth**:
  - Sum/omni – 9.3 degree (1-port)
  - Sum/difference – 3.0 degree (2-port)
- **Beam position corrections**:
  - 20 degree roll (Automated)
  - 12 degree pitch
- **Beam azimuth positions**: 1024 separate beam positions
- **Beam positioning time**: 50 microseconds (maximum)
- **Beam positioning command**:
  - External or internal
- **Input power, total system**: 115V 60/400 Hz, single-phase, 600 watts

**Environmental Capabilities**

- **Temperature limits**:
  - Above deck: -28 degrees celsius to +65 degrees celsius
  - Below deck: 0 degrees celsius to 50 degrees celsius
- **Relative humidity**: 0 percent to 95 percent
- **Nuclear air blast**: to 3 pounds / square inch
- **Icing**: to 4.5 pounds / square foot
- **Storage**: -62 degrees celsius to +75 degrees celsius

**Physical Characteristics**

- **Above Deck Components**
  - **Antenna AS-3134A/UPX (Unit 1)**: 16.25 inches height x 12.5 feet depth, 448 pounds
  - **Antenna position programmer CV-4477/UPX (Unit 2)**: 45 inches height x 34 inches width x 20 inches depth, 345 pounds (unit), 200 pounds (cables)

- **Below Deck Component**
  - **Antenna control C-12877/UPX (Unit 3)**: 21 inches height x 21 inches width x 22 inches depth, 80 pounds (unit), 50 pounds (isolation system)

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