1.8m | 6ft ValuLine® Low Wind Load Antenna, dual-polarized, 5.925 – 7.125 GHz

Product Classification

Product Type
Microwave antenna

Product Brand
ValuLine®

General Specifications

Antenna Type
LX - ValuLine® Low Wind Load Antenna, dual-polarized

Polarization
Dual

Side Struts, Included
1

Side Struts, Optional
1

Dimensions

Diameter, nominal
1.8 m | 6 ft
Antenna Dimensions and Mounting Information

Electrical Specifications

Operating Frequency Band 5.925 – 7.125 GHz
Gain, Low Band 37.6 dBi
Gain, Mid Band 38.1 dBi
Gain, Top Band 38.6 dBi
Boresite Cross Polarization Discrimination (XPD) 33 dB
Front-to-Back Ratio 60 dB
Beamwidth, Horizontal 1.9 °
Beamwidth, Vertical 1.9 °
Return Loss 23.9 dB
**VSWR**
1.14

**Radiation Pattern Envelope Reference (RPE)**
7438

**Electrical Compliance**
IC 3059A | IC 3064A | US FCC Part 101A | US FCC Part 74A

### Electrical Specifications, Band 2

**Beamwidth, Horizontal**
2.1°

**Gain, Mid Band**
37.8 dBi

**Operating Frequency Band**
5.725 – 5.850 GHz

### Mechanical Specifications

**Compatible Mounting Pipe Diameter**
115 mm | 4.5 in

**Fine Azimuth Adjustment Range**
±5°

**Fine Elevation Adjustment Range**
±15°

**Wind Speed, operational**
180 km/h | 111.847 mph

**Wind Speed, survival**
200 km/h | 124.274 mph

### Wind Forces at Wind Velocity Survival Rating

**Axial Force (FA)**
4670 N | 1,049.858 lbf

**Angle α for MT Max**
-120°

**Side Force (FS)**
2050 N | 460.858 lbf

**Twisting Moment (MT)**
25003 N-m | 221,295.203 in lb

**Force on Inboard Strut Side**
2900 N | 651.946 lbf

**Zcg without Ice**
490 mm | 19.291 in

**Zcg with 1/2 in (12 mm) Radial Ice**
540 mm | 21.26 in

**Weight with 1/2 in (12 mm) Radial Ice**
191 kg | 421.082 lb
Wind Forces at Wind Velocity Survival Rating Image

Packaging and Weights

| Weight, net | 86 kg | 189.597 lb |

* Footnotes

**Axial Force (FA)**
Maximum forces exerted on a supporting structure as a result of wind from the most critical direction for this parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.

**Boresite Cross Polarization Discrimination (XPD)**
The difference between the peak of the co-polarized main beam and the maximum cross-polarized signal over an angle twice the 3 dB beamwidth of the co-polarized main beam.

**Front-to-Back Ratio**
Denotes highest radiation relative to the main beam, at 180° ±40°, across...
the band. Production antennas do not exceed rated values by more than 2 dB unless stated otherwise.

**Gain, Mid Band**
For a given frequency band, gain is primarily a function of antenna size. The gain of Andrew antennas is determined by either gain by comparison or by computer integration of the measured antenna patterns.

**Operating Frequency Band**
Bands correspond with CCIR recommendations or common allocations used throughout the world. Other ranges can be accommodated on special order.

**Radiation Pattern Envelope Reference (RPE)**
Radiation patterns define an antenna’s ability to discriminate against unwanted signals. Under still dry conditions, production antennas will not have any peak exceeding the current RPE by more than 3dB, maintaining an angular accuracy of +/-1° throughout.

**Return Loss**
The figure that indicates the proportion of radio waves incident upon the antenna that are rejected as a ratio of those that are accepted.

**Side Force (FS)**
Maximum side force exerted on the mounting pipe as a result of wind from the most critical direction for this parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.

**Twisting Moment (MT)**
Maximum forces exerted on a supporting structure as a result of wind from the most critical direction for this parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.

**VSWR**
Maximum; is the guaranteed Peak Voltage-Standing-Wave-Ratio within the operating band.

**Wind Speed, operational**
For VHLP(X), SHP(X), HX and USX antennas, the wind speed where the maximum antenna deflection is 0.3 x the 3 dB beam width of the antenna. For other antennas, it is defined as a deflection is equal to or less than 0.1 degrees.

**Wind Speed, survival**
The maximum wind speed the antenna, including mounts and radomes, where applicable, will withstand without permanent deformation. Realignment may be required. This wind speed is applicable to antenna with the specified amount of radial ice.