

SP4-1.8

1.2 m | 4 ft Standard Performance Parabolic Reflector Antenna, Single-polarized, 1.7-1.9GHz



General Specifications

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| Antenna Type | Standard Performance Parabolic Reflector Antenna |
| Size, nominal | 4 ft 1.2 m |
| Polarization | Single |

Electrical Specifications

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| Operating Frequency Band | 1.7 - 1.9 GHz |
| Half Power Beamwidth, Horizontal | 9.3 degrees |
| Half Power Beamwidth, Vertical | 9.3 degrees |
| Cross-Polarization Discrimination | 30 dB |
| Front to Back Ratio (F/B) | 32 dB |
| Gain, Low Frequency | 23.6 dBi |
| Gain, Mid Frequency | 24.1 dBi |
| Gain, High Frequency | 24.6 dBi |
| VSWR | 1.5:1 |
| Return Loss | -14 dB |

Mechanical Specifications

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| Fine Azimuth Adjustment | +/- 10 degrees |
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| Fine Elevation Adjustment | +/- 25 degrees |
| Mounting Pipe Diameter, Min | 4.5 inch 11.4 cm |
| Mounting Pipe Diameter, Max | 4.5 inch 11.4 cm |
| Net Weight | 60 lbs 27 kg |
| Wind Velocity Operational | 90 mph 145 km/h |
| Wind Velocity Survival Rating | 125 mph 201 km/h |
| Mechanical Configuration | SP4 |
| Axial Force (FA) | 855 lbs 3803 N |
| Side Force (FS) | 45 lbs 200 N |
| Twisting Moment (MT) | 1120 ft-lbs 1518 Nm |
| Operating temperature range | -40 to +60 C |
| Max pressure, psig, (if waveguide interface) | 5 |

Regulatory Compliance

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|----------------|------------|
| FCC | undeclared |
| ETSI | undeclared |
| RoHS-complaint | Yes |

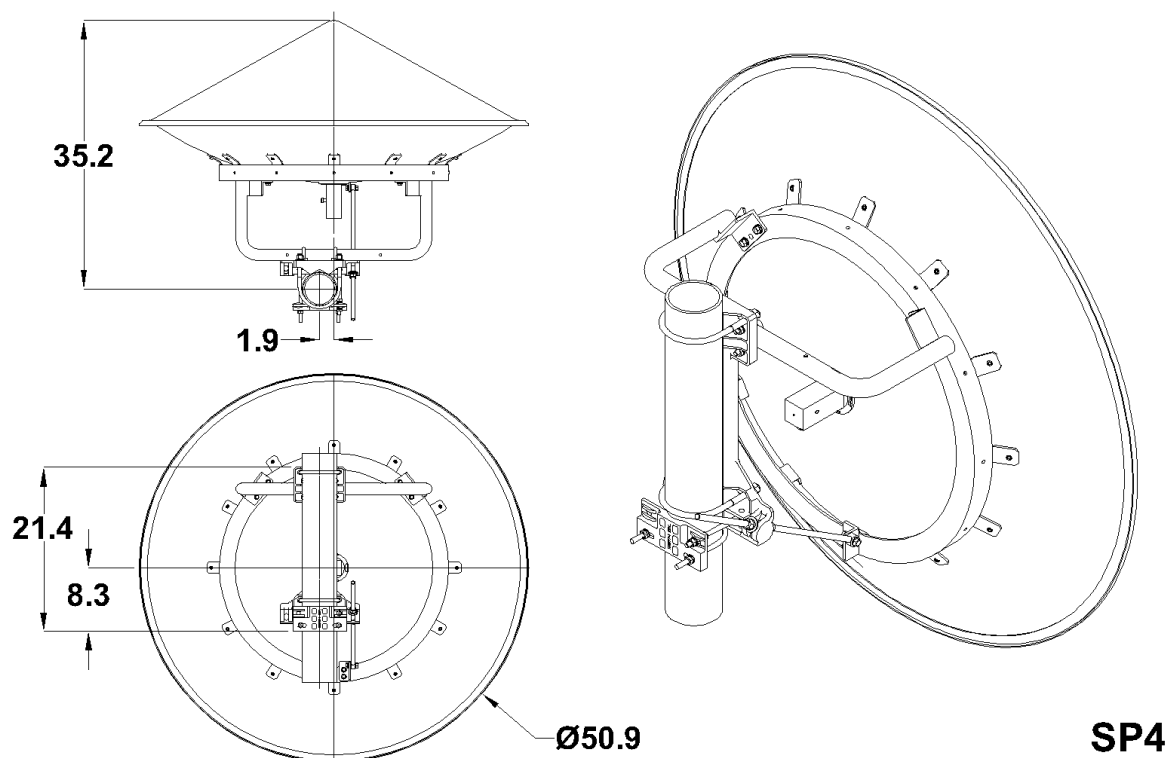
Shipping Information

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| Package Type | Wood Crate |
| Gross Weight | 126 lbs 57.15 kg |
| Dimensions, L x W x H | 59 x 19 x 60in 150 x 48 x 152 cm |
| Shipping Volume | 38.92 cu ft 1.1 cu m |

Additional Comments

Choose Radiowaves products for best performance and reliability

Technical Drawings



Radiowaves Glossary

| | |
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| Axial Force: | Force applied to the face of the antenna due to wind at specified wind speed |
| Beamwidth | The total width of the main beam measured in degrees between the 3-dB (half-power) points on either side of the peak of the main beam |
| Cross Polarization Discrimination (XPD) | The dB difference between maximum received co-polarized signal at electrical boresight and maximum received cross-polarized signal |
| Front to Back Ratio (F/B) | The dB difference between maximum received signal at electrical boresight to maximum received signal behind the antenna (180 +/- 40 degrees) |
| Gain | A measure of how well the antenna focuses available energy into a single beam. Larger antennas typically have higher gains and smaller beamwidths. |
| Gross Weight | Shipping weight, includes weight of antenna plus packaging materials |
| Net Weight | Weight of antenna only as mounted on tower. |
| Operating Frequency Band | The frequency limits between which the antenna meets declared specifications. Antennas may operate outside the frequency band with mild performance degradation. |
| Return Loss | A measure of how much rf energy incident upon the antenna is reflected back from whence it came, expressed as a negative dB value. |
| Side Force (FS) | Force applied to the side of the antenna due to wind at specified wind speed |
| Twisting Moment (MT) | The torsional (twisting) moment (force x distance) applied to the mounting pipe due to wind at the specified wind speed. |

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| VSWR | A measure of how much rf energy incident upon the antenna is reflected back from whence it came, expressed as a ratio |
| Wind Velocity Operational | Wind speed where the antenna deflection is less than or equal to 0.1 degrees |
| Wind Velocity Survival Rating | Wind speed where the antenna will not suffer permanent damage, but may require re-pointing. |