

3.0m | 10ft Sentinel® Ultra High Performance, Super High XPD Antenna, dual-polarized, 12.200 – 13.250 GHz, grey, PBR120 flange

40 dB

Product Classification

Product Type Microwave antenna

General Specifications

Antenna Type USX - Sentinel® Ultra High Performance, Super

High XPD Antenna, dual-polarized

Polarization Dual

Antenna Input PBR120

Antenna Color Gray

Reflector Construction Two-piece reflector

Radome Color Gray

Radome Material Fabric

Flash Included Yes

Side Struts, Included 2

Side Struts, Optional 3

Dimensions

Diameter, nominal 3.0 m | 10 ft

Electrical Specifications

Boresite Cross Polarization Discrimination (XPD)

Operating Frequency Band 12.200 – 13.250 GHz

Gain, Low Band 48.5 dBi

Gain, Mid Band 48.8 dBi

Gain, Top Band 49.2 dBi

Front-to-Back Ratio 82 dB

Beamwidth, Horizontal 0.6 °

Beamwidth, Vertical 0.6 °



Page 1 of 7

Return Loss 26 dB

VSWR 1.1

Radiation Pattern Envelope Reference (RPE) 7427

Electrical Compliance ACMA FX03_13a | ETSI 302 217 Class 3 | US

FCC Part 101A

Cross Polarization Discrimination (XPD) Electrical Compliance ETSI EN 302217 XPD Category 3

Mechanical Specifications

Compatible Mounting Pipe Diameter 115 mm | 4.5 in

Fine Azimuth Adjustment Range $\pm 5^{\circ}$ Fine Elevation Adjustment Range $\pm 5^{\circ}$

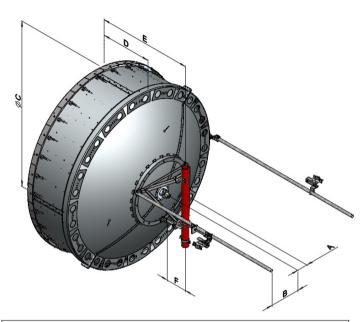
 Wind Speed, operational
 180 km/h | 111.847 mph

 Wind Speed, survival
 200 km/h | 124.274 mph



Antenna Dimensions and Mounting Information

USX10



Dimensions in inches (mm)						
Antenna Size, ft (m)	А	В	С	D	E	F
10 (3)	8.0 (203)	22.5 (572)	125.0 (3174)	38.6 (980)	71.1 (1807)	10.3 (262)

Wind Forces at Wind Velocity Survival Rating

Axial Force (FA) 18800 N | 4,226.409 lbf

-130° Angle α for MT Max

Side Force (FS) -6560 N | -1,474.747 lbf

Twisting Moment (MT) -10725 N-m | -94,924.25 in lb

Force on Inboard Strut Side 9500 N | 2,135.686 lbf

Force on Outboard Strut Side 3350 N | 753.11 lbf

Zcg without Ice 618 mm | 24.331 in

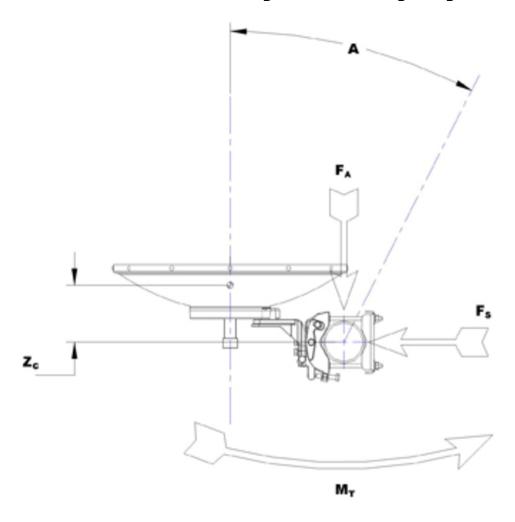
Zcg with 1/2 in (12 mm) Radial Ice 744 mm | 29.291 in

Weight with 1/2 in (12 mm) Radial Ice

466 kg | 1,027.353 lb



Wind Forces at Wind Velocity Survival Rating Image



Packaging and Weights

Volume

 Height, packed
 1170 mm | 46.063 in

 Width, packed
 1930 mm | 75.984 in

 Length packed
 2410 mm | 134.353 in

Length, packed 3410 mm | 134.252 in

Packaging Type Standard pack

Weight, gross 513 kg | 1,130.97 lb

Weight, net 263 kg | 579.815 lb

Regulatory Compliance/Certifications



7.7 m³ | 271.923 ft³

Agency Classification

CHINA-ROHS Above maximum concentration value

ISO 9001:2015 Designed, manufactured and/or distributed under this quality management system

REACH-SVHC Compliant as per SVHC revision on www.andrew.com/ProductCompliance

ROHS Compliant/Exempted UK-ROHS Compliant/Exempted



* Footnotes

Operating Frequency Band

Bands correspond with CCIR recommendations or common

allocations used throughout the world. Other ranges can be

accommodated on special order.

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.

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.

Return LossThe figure that indicates the proportion of radio waves

incident upon the antenna that are rejected as a ratio of

those that are accepted.

VSWR Maximum; is the guaranteed Peak Voltage-Standing-Wave-

Ratio within the operating band.

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

Cross Polarization Discrimination (XPD) Electrical Compliance 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.

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

Page 6 of 7



as a deflection is equal to or less than 0.1 degrees.

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.

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.

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.

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.

Andrew standard packing is suitable for export. Antennas are shipped as standard in totally recyclable cardboard or wire-

bound crates (dependent on product). For your convenience,

Andrew offers heavy duty export packing options.

Axial Force (FA)

Wind Speed, survival

Side Force (FS)

Twisting Moment (MT)

Packaging Type