

SD310-HL- PIM Certified 1 dipole antenna, 1.5/2.0 dBd gain, low PIM, HD, 370-512 MHz

- Industry-leading -150 dBc PIM rating, covers 370-512 MHz in 3 band splits
- 1.5 dBd elliptical (bi-directional) pattern (1/2 wave), 2.0 dBd gain offset pattern (1/4 wave)
- Rugged wind ratings

The SD310-HL series is an extremely rugged single-bay exposed dipole antenna designed for applications where Passive Intermodulation interference (PIM) is a consideration. These premium-quality antennas are well suited to public safety/public security applications in either the TETRA or APCO P-25 bands.

The SD310-HL provides industry leading -150 dBc passive intermodulation (PIM) performance.

Application Notes

- The SD310-HL is a low-PIM broadband antenna designed to provide highly reliable spot or microcell coverage for public safety applications where Passive Intermodulation (PIM) interference is a consideration. The SD310 has also been used as an indoor antenna for industrial and warehouse applications where some gain is required to penetrate walls.
- The SD310-HL series covers 370-512 MHz in 3 band splits: 370-430 MHz (F1: for TETRA applications), 406-470 MHz (F2, for APCO P-25 applications), 450-512 MHz (F3).
- The SD310-HL is available in a half-wave configuration (P2) providing 1.5 dBd gain in a bi-directional pattern, and a quarter-wave configuration (P4) providing 2 dBd gain in an offset pattern.



Model	Description	Pattern
SD310-HF1P2LDF	1.5 dBd gain, low PIM, elliptical, HD, 370-430 MHz	Bi-directional
SD310-HF1P4LDF	2.0 dBd gain, low PIM, offset, HD, 370-430 MHz	Offset
SD310-HF2P2LDF	1.5 dBd gain, low PIM, elliptical, HD, 406-470 MHz	Bi-directional
SD310-HF2P4LDF	2.0 dBd gain, low PIM, offset, HD, 406-470 MHz	Offset
SD310-HF3P2LDF	1.5 dBd gain, low PIM, elliptical, HD, 450-512 MHz	Bi-directional
SD310-HF3P4LDF	2.0 dBd gain, low PIM, offset, HD, 450-512 MHz	Offset



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Product Specification Sheet		SD310-HL- PIM Certified		Dated: 05-02-10

SD310-HF1P2LDF

SD310-HF1P4LDF

SD310-HF2P2LDF

SD310-HF2P4LDF

Electrical Specifications

Frequency Range, MHz	370 to 430	370 to 430	406 to 470	406 to 470
Gain (nominal), dBd (dBi)	1.5 (3.6)	2 (4.1)	1.5 (3.6)	2 (4.1)
Input VSWR (max)	1.5:1	1.5:1	1.5:1	1.5:1
Polarization	vertical	vertical	vertical	vertical
Pattern	Bi-directional	Offset	Bi-directional	Offset
Horizontal beamwidth, degrees		180		175
Vertical beamwidth, degrees	73	77	78	84
Average Power Input (max), W	75	75	75	75
Passive intermod. (2x20W, 3rd ord.), dBc	-150	-150	-150	-150
Lightning protection	DC ground	DC ground	DC ground	DC ground
Bandwidth, MHz	60	60	64	64

Mechanical Specifications

Connector	7/16 DIN (female)	7/16 DIN (female)	7/16 DIN (female)	7/16 DIN (female)
Length/ Height, in (mm)	48 (1219)	48 (1219)	48 (1219)	48 (1219)
Width, in (mm)	18.8 (476)	12.3 (311)	18.8 (476)	12.3 (312)
Depth, in (mm)	3.5 (89)	3.5 (89)	3.5 (89)	3.5 (89)
Base pipe diameter, in (mm)	1.9 (48)	1.9 (48)	1.9 (48)	1.9 (48)
Base pipe mounting length, in (mm)	18 (457)	18 (457)	18 (457)	18 (457)
Weight, lbs (kg)	7 (3.2)	6.5 (3)	7 (3.2)	6.5 (3)
Weight iced, lbs (kg)	11 (5)	9.5 (4.3)	11 (5)	9.5 (4.3)
Actual Shipping weight, lbs (kg)	15 (6.8)	13 (5.9)	15 (6.8)	13 (5.9)
Shipping dimensions, in (mm)	83x5x20 (2108x127x508)	50x19x4 (1270x483x102)	83x5x20 (2108x127x508)	50x19x4 (1270x483x102)
Mounting hardware	clamps not supplied	clamps not supplied	clamps not supplied	clamps not supplied

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SD310-HF3P2LDF

SD310-HF3P4LDF

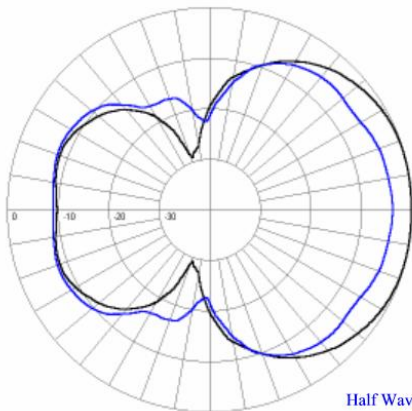
Electrical Specifications

Frequency Range, MHz	450 to 512	450 to 512
Gain (nominal), dBd (dBi)	1.5 (3.6)	2 (4.1)
Input VSWR (max)	1.5:1	1.5:1
Polarization	vertical	vertical
Pattern	Bi-directional	Offset
Horizontal beamwidth, degrees		180
Vertical beamwidth, degrees	75	84
Average Power Input (max), W	75	75
Passive intermod. (2x20W, 3rd ord.), dBc	-150	-150
Lightning protection	DC ground	DC ground
Bandwidth, MHz	62	62

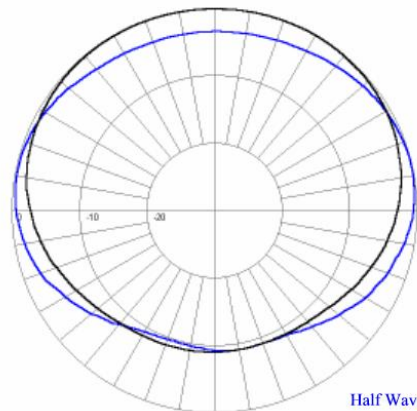
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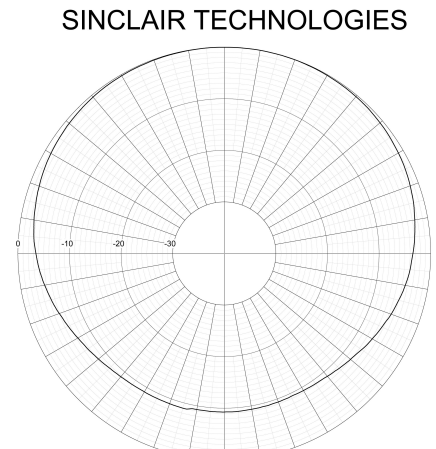
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Elevation
SD310-HF1P2LDF



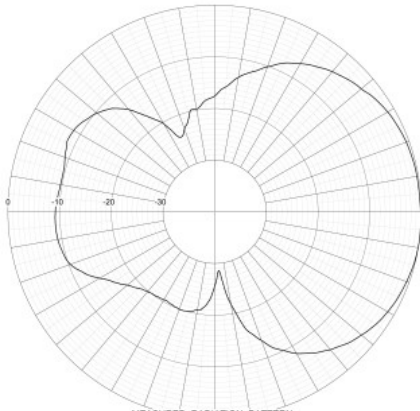
Azimuth
SD310-HF1P2LDF



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MEASURED RADIATION PATTERN
Horizontal
Relative Gain - 10 dB per Division
SD310-HF1P4LDF

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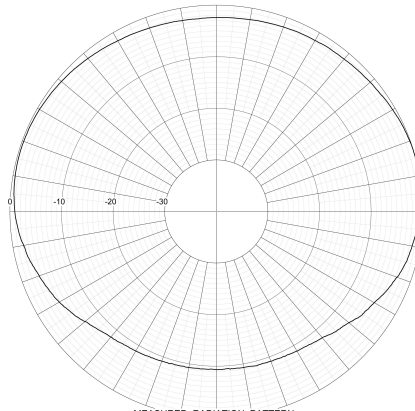
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MEASURED RADIATION PATTERN
Vertical
Relative Gain - 10 dB per Division

SD310-HF1P4LDF

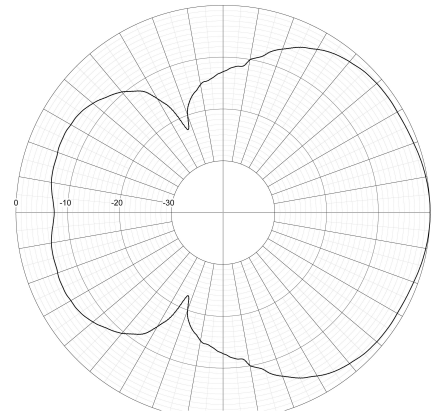
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MEASURED RADIATION PATTERN
Horizontal
Relative Gain - 10 dB per Division

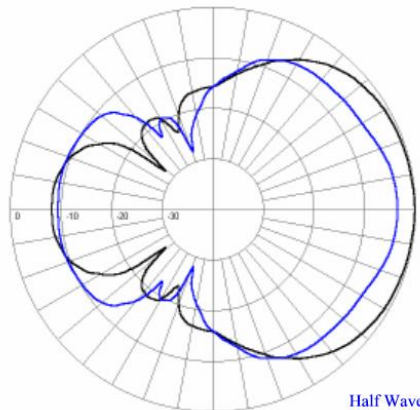
SD310-HF2P2LDF

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MEASURED RADIATION PATTERN
Vertical
Relative Gain - 10 dB per Division

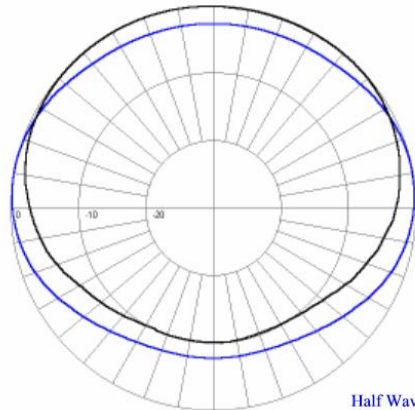
SD310-HF2P2LDF



Elevation

SD310-HF3P2LDF

Half Wave
Quarter Wave



Azimuth

SD310-HF3P2LDF

Half Wave
Quarter Wave

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