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

- Industry-leading -150 dBC PIM rating, covers 370-512 MHz in 3 band splits
- 1.5 dBi elliptical (bi-directional) pattern (1/2 wave), 2.0 dBi 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 dBi gain in a bi-directional pattern, and a quarter-wave configuration (P4) providing 2 dBi gain in an offset pattern.

Model | Description | Pattern
--- | --- | ---
SD310-HF1P2LDF | 1.5 dBi gain, low PIM, elliptical, HD, 370-430 MHz | Bi-directional
SD310-HF1P4LDF | 2.0 dBi gain, low PIM, offset, HD, 370-430 MHz | Offset
SD310-HF2P2LDF | 1.5 dBi gain, low PIM, elliptical, HD, 406-470 MHz | Bi-directional
SD310-HF2P4LDF | 2.0 dBi gain, low PIM, offset, HD, 406-470 MHz | Offset
SD310-HF3P2LDF | 1.5 dBi gain, low PIM, elliptical, HD, 450-512 MHz | Bi-directional
SD310-HF3P4LDF | 2.0 dBi gain, low PIM, offset, HD, 450-512 MHz | Offset
## Antennas
### UHF and Tetra Antennas
#### SD310-HL- PIM Certified Series

<table>
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<tr>
<th>Model</th>
<th>Electrical Specifications</th>
<th>Mechanical Specifications</th>
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</thead>
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<td>SD310-HF1P2LDF</td>
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<tr>
<td>SD310-HF1P4LDF</td>
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<td></td>
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<tr>
<td>SD310-HF2P2LDF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD310-HF2P4LDF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Electrical Specifications
- **Frequency Range, MHz**
  - SD310-HF1P2LDF: 370 to 430
  - SD310-HF1P4LDF: 370 to 430
  - SD310-HF2P2LDF: 406 to 470
  - SD310-HF2P4LDF: 406 to 470
- **Gain (nominal), dBi**
  - SD310-HF1P2LDF: 1.5 (3.6)
  - SD310-HF1P4LDF: 2 (4.1)
  - SD310-HF2P2LDF: 1.5 (3.6)
  - SD310-HF2P4LDF: 2 (4.1)
- **Input VSWR (max)**
  - SD310-HF1P2LDF: 1.5:1
  - SD310-HF1P4LDF: 1.5:1
  - SD310-HF2P2LDF: 1.5:1
  - SD310-HF2P4LDF: 1.5:1
- **Polarization**
  - SD310-HF1P2LDF: vertical
  - SD310-HF1P4LDF: vertical
  - SD310-HF2P2LDF: vertical
  - SD310-HF2P4LDF: vertical
- **Pattern**
  - SD310-HF1P2LDF: Bi-directional
  - SD310-HF1P4LDF: Offset
  - SD310-HF2P2LDF: Bi-directional
  - SD310-HF2P4LDF: Offset
- **Horizontal beamwidth, degrees**
  - SD310-HF1P2LDF: 180
  - SD310-HF1P4LDF: 175
  - SD310-HF2P2LDF: 175
  - SD310-HF2P4LDF: 175
- **Vertical beamwidth, degrees**
  - SD310-HF1P2LDF: 73
  - SD310-HF1P4LDF: 77
  - SD310-HF2P2LDF: 78
  - SD310-HF2P4LDF: 84
- **Average Power Input (max), W**
  - SD310-HF1P2LDF: 75
  - SD310-HF1P4LDF: 75
  - SD310-HF2P2LDF: 75
  - SD310-HF2P4LDF: 75
- **Passive intermod. (2x20W, 3rd ord.), dBc**
  - SD310-HF1P2LDF: -150
  - SD310-HF1P4LDF: -150
  - SD310-HF2P2LDF: -150
  - SD310-HF2P4LDF: -150
- **Lightning protection**
  - SD310-HF1P2LDF: DC ground
  - SD310-HF1P4LDF: DC ground
  - SD310-HF2P2LDF: DC ground
  - SD310-HF2P4LDF: DC ground
- **Bandwidth, MHz**
  - SD310-HF1P2LDF: 60
  - SD310-HF1P4LDF: 60
  - SD310-HF2P2LDF: 64
  - SD310-HF2P4LDF: 64

#### Mechanical Specifications
- **Connector**
  - 7/16 DIN (female)
  - 7/16 DIN (female)
  - 7/16 DIN (female)
  - 7/16 DIN (female)
- **Length/ Height, in (mm)**
  - SD310-HF1P2LDF: 48 (1219)
  - SD310-HF1P4LDF: 48 (1219)
  - SD310-HF2P2LDF: 48 (1219)
  - SD310-HF2P4LDF: 48 (1219)
- **Width, in (mm)**
  - SD310-HF1P2LDF: 18.8 (476)
  - SD310-HF1P4LDF: 12.3 (311)
  - SD310-HF2P2LDF: 18.8 (476)
  - SD310-HF2P4LDF: 12.3 (312)
- **Depth, in (mm)**
  - SD310-HF1P2LDF: 3.5 (89)
  - SD310-HF1P4LDF: 3.5 (89)
  - SD310-HF2P2LDF: 3.5 (89)
  - SD310-HF2P4LDF: 3.5 (89)
- **Base pipe diameter, in (mm)**
  - SD310-HF1P2LDF: 1.9 (48)
  - SD310-HF1P4LDF: 1.9 (48)
  - SD310-HF2P2LDF: 1.9 (48)
  - SD310-HF2P4LDF: 1.9 (48)
- **Base pipe mounting length, in (mm)**
  - SD310-HF1P2LDF: 18 (457)
  - SD310-HF1P4LDF: 18 (457)
  - SD310-HF2P2LDF: 18 (457)
  - SD310-HF2P4LDF: 18 (457)
- **Weight, lbs (kg)**
  - SD310-HF1P2LDF: 7 (3.2)
  - SD310-HF1P4LDF: 6.5 (3)
  - SD310-HF2P2LDF: 7 (3.2)
  - SD310-HF2P4LDF: 6.5 (3)
- **Weight iced, lbs (kg)**
  - SD310-HF1P2LDF: 11 (5)
  - SD310-HF1P4LDF: 9.5 (4.3)
  - SD310-HF2P2LDF: 11 (5)
  - SD310-HF2P4LDF: 9.5 (4.3)
- **Actual Shipping weight, lbs (kg)**
  - SD310-HF1P2LDF: 15 (6.8)
  - SD310-HF1P4LDF: 13 (5.9)
  - SD310-HF2P2LDF: 15 (6.8)
  - SD310-HF2P4LDF: 13 (5.9)
- **Shipping dimensions, in (mm)**
  - SD310-HF1P2LDF: 83x5x20 (2108x127x508)
  - SD310-HF1P4LDF: 50x19x4 (1270x483x102)
  - SD310-HF2P2LDF: 83x5x20 (2108x127x508)
  - SD310-HF2P4LDF: 50x19x4 (1270x483x102)
- **Mounting hardware**
  - SD310-HF1P2LDF: clamps not supplied
  - SD310-HF1P4LDF: clamps not supplied
  - SD310-HF2P2LDF: clamps not supplied
  - SD310-HF2P4LDF: clamps not supplied

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<th>Europe, Middle East and Africa</th>
<th>Caribbean and Latin America</th>
<th>Canada and rest of the world</th>
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</thead>
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<tr>
<td>Telephone</td>
<td>USA: 1 800 263 3275</td>
<td>International: +44 (0) 1223 42 03 03</td>
<td>International: +1 905 726 7676</td>
<td>Canada: 1 800 263 3275</td>
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<tr>
<td>E-mail</td>
<td><a href="mailto:salesusa@sinctech.com">salesusa@sinctech.com</a></td>
<td><a href="mailto:salesuk@sinctech.com">salesuk@sinctech.com</a></td>
<td><a href="mailto:salesla@sinctech.com">salesla@sinctech.com</a></td>
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Sinclair's commitment to product leadership may result in improvement or change to this product.
Antennas
UHF and Tetra Antennas
SD310-HL- PIM Certified Series

Electrical Specifications

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