

# COLLINEAR VHF OMNI 6 dBd (6 MHz Bandwidth - Spec Center Freq @ Order)

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Antennas  
Low Band, Aviation, and VHF Antennas  
SC229 Series

SC229-SFXSNF  
(SRL229NM-xxxx)

Collinear omni antenna, 6 dBd gain, 138-225 MHz

- High gain, omni-directional, rugged fiberglass radome
- Designed to withstand severe environmental conditions
- Broad band (6 MHz Bandwidth with 1.5:1 VSWR, and wider for 2:1 VSWR)
- Recommend using the SMK-225-A3 side mounting kit.

The SC229 series of antennas have been specifically designed for VHF applications requiring high performance, wideband bandwidth and exceptional electrical and mechanical specifications. This series of omni-directional antennas are constructed of a rugged fiberglass radome which allows them to withstand severe environmental conditions. It is enclosed in fiberglass radome with lightning spike projecting through the top of the radome to protect the antenna from a lightning strike. This series of antenna also utilizes a tapered radome, which results in less wind resistance, decreases the overall weight, and results in lower tip deflection at high wind speeds.



**Electrical Specifications**

Bandwidth	MHz	6	
Frequency Range 1 (F1)	MHz	138 to 225	*1
Polarization		vertical	
Gain (nominal)	dBi (dBd)	8.1 (6)	
Impedance	$\Omega$	50	
Lightning protection		DC ground	
Pattern		Omni-directional	
Input VSWR (max)		1.5:1	
Vertical beamwidth	degrees	17	
Average power input (max)	W	300	

**Notes**

- \*1 : "Fixxx" option specifies center frequency to nearest 0.5MHz.
- \*2 : 29.75" (755.65mm) with ground rods.
- \*3 : Value based on 100mph and 0 inches of ice.
- \*4 : Flat plate equivalent.
- \*5 : Flat plate equivalent.
- \*6 : Values based on 100 mph and 0 inches of ice.
- \*7 : Values based on 100 mph and 0 inches of ice.

**Ordering Information**

Specify center frequency band.  
Gain and vertical beamwidth will change with downtilt option.

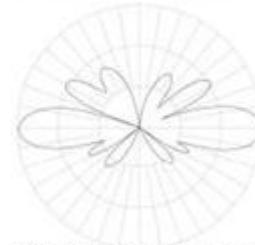
**Mechanical Specifications**

Width	mm (in)	756 (29.8)	*2
Depth	mm (in)	756 (29.8)	
Shipping dimensions	mm (in)	(25'-0x4.0"DIA)	
Weight	kg (lbs)	14.5 (32)	
Shipping weight	kg (lbs)	34.1 (75)	
Length	mm (in)	7061 (278)	
Connector		N (female)	
Weight iced	kg (lbs)	33.1 (73)	
Base pipe diameter	mm (in)	73 (2.9)	
Mounting hardware		#5 clamp	

**Environmental Specifications**

Rated wind velocity (1/2" radial ice)	km/h (mph)	185 (115)	
Rated wind velocity (no ice)	km/h (mph)	242 (150)	
Temperature range	$^{\circ}$ C ( $^{\circ}$ F)	-40 to +60 (-40 to +140)	
Tip deflection	degrees	6	*3
Projected area (Flat Plate Equivalent)	m <sup>2</sup> (ft <sup>2</sup> )	0.26 (2.83)	*4
Projected area (ice)	m <sup>2</sup> (ft <sup>2</sup> )	0.5 (5.36)	*5
Lateral thrust (100mph)	N (lbs)	489.3 (110)	*6
Bending moment	Nm (ft-lbs)	1282.5 (950)	*7

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MEASURED RADIATION PATTERN  
VERTICAL POLARIZATION

Elevation  
Reference Gain - 10 dB over Director

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# COLLINEAR UHF OMNI 10 dBd (6 MHz Bandwidth - Spec Center Freq @ Order)



Antennas  
UHF and Tetra Antennas  
SC320 Series

SC320-SF4SNM  
(SRL320)

Collinear omni antenna, 10 dBd gain, 440-450 MHz

- Wide band, high gain, omni-directional antenna of rugged construction
- DC grounded for lightning protection
- Tapered radome used to reduce wind loading
- Recommend using the SMK-225-A3 side mounting kit

The SC320 is a wideband, high gain, omni-directional antenna of rugged construction. A stub projecting through the top and the antenna feed point are maintained at DC ground potential for lightning protection. Severe weather conditions have been fully considered in its construction. It can be installed with confidence wherever wind, ice and snow will be a problem. The SC320 features an extra long support pipe for ease of mounting, using the rugged clamps supplied.



**Notes**

\*1 : Worst case rated wind and ice.

**Electrical Specifications**

Bandwidth	MHz	10
Frequency Range 1 (F1)	MHz	440 to 450
Polarization		vertical
Gain (nominal)	dBi (dBd)	12.1 (10)
Impedance	$\Omega$	50
Lightning protection		DC ground
Pattern		Omni-directional
Input VSWR (max)		1.5:1
Vertical beamwidth	degrees	6
Average power input (max)	W	250

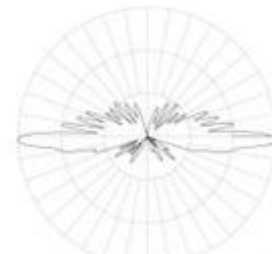
**Ordering Information**

Specify frequency band of operation.  
Recommend using the SMK-225-A3 side mounting kit.

**Mechanical Specifications**

Shipping dimensions	mm (in)	6960x102x102 (274x4x4)
Weight	kg (lbs)	11.4 (25)
Shipping weight	kg (lbs)	38.6 (85)
Length	mm (in)	6706 (264)
Connector		N (male)
Base pipe diameter	mm (in)	73 (2.9)
Mounting hardware		#5 clamp

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MEASURED RADIATION PATTERN  
VERTICAL POLARIZATION

Elevation  
Reference Plane - 10 dB per Decade

**Environmental Specifications**

Rated wind velocity (1/2" radial ice)	km/h (mph)	177 (110)
Rated wind velocity (no ice)	km/h (mph)	233 (145)
Temperature range	$^{\circ}\text{C}$ ( $^{\circ}\text{F}$ )	-30 to +60 (-22 to +140)
Lateral thrust (100mph)	N (lbs)	458.1 (103) *1

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# 4 DIPOLE VHF - 8.5 dBd Gain - 1/4 Wave Offset - 138-174 MHz

**SINCLAIR**  
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Antennas  
Low Band, Aviation, and VHF Antennas  
SD214 Series

SD214-SF2P4SNM 4 dipole antenna, 8.5 dBd gain, offset, 138-174 MHz

(SRL210C4NM\*2-4)

- 4-bay dipole antenna that covers the 138-174MHz band
- 8.5 dBd gain in offset pattern (1/4 wave configuration)
- 300W power handling

**Recommend the SMK-125-A7 side mount kit which is available from Sinclair separately (Spacing from 7' - 18")**

The SD214 series is a rugged 4-bay exposed dipole antenna designed for applications where moderate gain is required. These premium-quality antennas are well suited to public safety/public security applications.

The design of these antennas provides for coverage between 118 to 225 MHz in 3 sub bands, 118-138 MHz for civil aviation applications, 138-174 MHz for private mobile networks, public safety and public security and 220-225 MHz for transportation networks.

The standard connector offered is an N-type male.

## Application Notes

- SD214-SF2P4SNM specifications are shown at the series level



**Electrical Specifications**

Frequency Range 1 (F1)	MHz	138 to 174
Polanzation		vertical
Gain (nominal)	dBi (dBd)	10.6 (8.5)
Electrical tilt (available)		0
Lightning protection		DC ground
Pattern		Offset
Input VSWR (max)		1.5:1
Horizontal beamwidth	degrees	210
Vertical beamwidth	degrees	17
Average power input (max)	W	300

**Mechanical Specifications**

Length/ Height	mm (in)	6096 (240)
Width	mm (in)	584 (23)
Depth	mm (in)	102 (4)
Shipping dimensions	mm (in)	6274x1118x152 (247x44x6)
Weight	kg (lbs)	20.7 (45.5)
Shipping weight	kg (lbs)	29.5 (65)
Connector		N (male)
Base pipe diameter	mm (in)	60 (2.4)
Base pipe mounting length	mm (in)	1829 (72)
Mounting hardware		clamps not supplied <sup>*1</sup>

**Environmental Specifications**

Rated wind velocity (1/2" radial ice)	km/h (mph)	145 (90)
Rated wind velocity (no ice)	km/h (mph)	209 (130)
Projected area (Flat Plate Equivalent)	m <sup>2</sup> (ft <sup>2</sup> )	0.42 (4.51)
Projected area (ice)	m <sup>2</sup> (ft <sup>2</sup> )	0.7 (7.51)
Lateral thrust (100mph)	N (lbs)	676.1 (152)
Torsional moment	Nm (ft-lbs)	212 (157)
Bending moment	Nm (ft-lbs)	1027.4 (761)

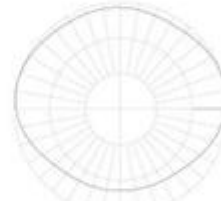
**Notes**

\*1 : #130 clamp recommended

**Ordering Information**

2 x #130 clamps recommended (not included).  
N-female connector available as option.  
Recommend using an SMK-125-A7 side mounting kit

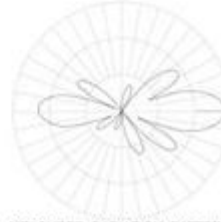
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MEASURED RADIATION PATTERN  
VERTICAL POLARIZATION

Azimuth  
Model No. SD-1130-00-00000

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MEASURED RADIATION PATTERN  
VERTICAL POLARIZATION

Elevation  
Model No. SD-1130-00-00000

**PDF DOWNLOAD >>> [SD 214 VHF 4 DIPOLE](#)**

# 4 DIPOLE UHF - 8.5 dBd Gain - 1/4 Wave Offset - 406-512 MHz



Antennas  
UHF and Tetra Antennas  
SD314-H Series

SD314-HF2P4SNM  
(SRL310C4NM\*2-4)

4 dipole antenna, 8.5 dBd gain, offset, HD, 406-512 MHz

- 4-bay dipole antenna
- 8.5 dBd gain, offset pattern (1/4 wave)
- Heavy duty wind rating, 150W power handling
- Recommend using an SMK-125-A7 side mounting kit

Wideband 4-dipole antenna. High efficiency and wide bandwidth. Half-wave, quarter-wave, heavy-duty and high-power versions available. See SD314-L series for low-PIM version.

## Application Notes

- SD314-HF2P4SNM specifications shown at the series level



**Electrical Specifications**

Frequency Range 1 (F1)	MHz	406 to 512
Polarization		vertical
Gain (nominal)	dBi (dBd)	10.6 (8.5)
Electrical tilt (available)		0
Lightning protection		DC ground
Pattern		Offset
Input VSWR (max)		1.5:1
Horizontal beamwidth	degrees	222
Vertical beamwidth	degrees	16
Average power input (max)	W	200

**Mechanical Specifications**

Length/ Height	mm (in)	2896 (114)
Width	mm (in)	305 (12)
Depth	mm (in)	89 (3.5)
Shipping dimensions	mm (in)	(118x4x20in)
Weight	kg (lbs)	9.5 (21)
Shipping weight	kg (lbs)	9.1 (20)
Connector		N (male) *1
Base pipe diameter	mm (in)	60 (2.4)
Base pipe mounting length	mm (in)	914 (36)
Mounting hardware		clamps not supplied

**Environmental Specifications**

Projected area (Flat Plate Equivalent)	m <sup>2</sup> (ft <sup>2</sup> )	0.16 (1.73)	*2
Projected area (ice)	m <sup>2</sup> (ft <sup>2</sup> )	0.41 (4.38)	*3
Lateral thrust (100mph)	N (lbs)	311.4 (70)	*4
Torsional moment	Nm (ft-lbs)	14.9 (11)	*5
Bending moment	Nm (ft-lbs)	178.2 (132)	*6

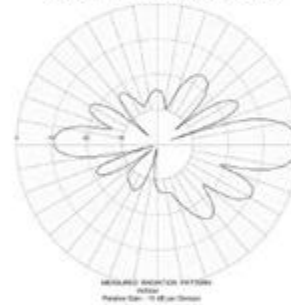
**Notes**

- \*1 : Optional N(female)
- \*2 : Flat plate equivalent.
- \*3 : Flat plate equivalent.
- \*4 : Values based on 100mph and 0 inches of ice.
- \*5 : Values based on 100mph and 0 inches of ice.
- \*6 : Values based on 100mph and 0 inches of ice.

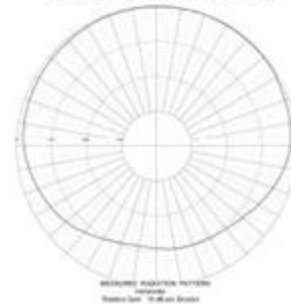
**Ordering Information**

Specify required frequency when ordering.  
2 x #130 clamps recommended (not included).  
Available in 2, 4, 6, 8, 10 degree downtilts- Order time

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# 8 DIPOLE UHF - 10.2 dBd Gain - 1/4 Wave Offset - 406-512 MHz



Antennas  
UHF and Tetra Antennas  
SD318-H Series

SD318-HF2P4SNM  
(SRL310C8NM\*2-4)

8 dipole antenna, 10.2 dBd gain, offset, HD, 406-512 MHz

- 8-bay dipole antenna
- 10.2 dBd gain offset pattern (1/4 wave)
- Heavy duty wind rating and 150W power handling
- Recommend using an SMK-125-A7 side mounting kit

The SD318-H series is an extremely rugged 8-bay exposed dipole antenna designed for applications where moderate gain is required. These premium-quality antennas are well suited to public safety/public security applications.

The design of these antennas provides for coverage between 370 to 512 MHz in 2 sub bands, 370-460 MHz and 406-512 MHz for private mobile networks, public safety and public security networks.

The standard connector offered is N-type (male).

Clamps are not included but recommended is the set of #5 clamps.



**Electrical Specifications**

Frequency Range 1 (F1)	MHz	406 to 512	*1
Polanzation		vertical	
Gain (nominal)	dBi (dBd)	12.3 (10.2)	
Lightning protection		DC ground	
Pattern		Offset	
Input VSWR (max)		1.5:1	
Horizontal beamwidth	degrees	222	
Vertical beamwidth	degrees	8	
Average power input (max)	W	150	

**Notes**

- \*1: TB=360-430MHz, F2=406-512MHz
- \*2: Flat plate equivalent.
- \*3: Flat plate equivalent.
- \*4: Values based on 100mph and 0 inches of ice.
- \*5: Values based on 100mph and 0 inches of ice.
- \*6: Values based on 100mph and 0 inches of ice.

**Ordering Information**

2 x #130 clamps recommended (not included).  
Available in 12 degree downtilt. Order time may vary,  
please contact Sinclair customer service.

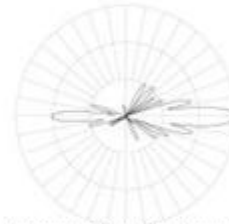
**Mechanical Specifications**

Length/ Height	mm (in)	5182 (204)
Width	mm (in)	305 (12)
Depth	mm (in)	89 (3.5)
Shipping dimensions	mm (in)	(209x5x24in)
Weight	kg (lbs)	20.9 (46)
Shipping weight	kg (lbs)	36.3 (80)
Connector		N (male)
Base pipe diameter	mm (in)	60 (2.4)
Base pipe mounting length	mm (in)	1219 (48)
Mounting hardware		clamps not supplied

**Environmental Specifications**

Projected area (Flat Plate Equivalent)	m <sup>2</sup> (ft <sup>2</sup> )	0.3 (3.19)	*2
Projected area (ice)	m <sup>2</sup> (ft <sup>2</sup> )	0.49 (5.25)	*3
Lateral thrust (100mph)	N (lbs)	573.8 (129)	*4
Torsional moment	Nm (ft-lbs)	28.4 (21)	*5
Bending moment	Nm (ft-lbs)	1009.8 (748)	*6

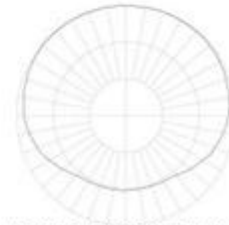
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MEASURED RADIATION PATTERN  
VERTICAL POLARIZATION

Elevation  
Pattern Date: 11-04-08 09:00am

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MEASURED RADIATION PATTERN  
VERTICAL POLARIZATION

Azimuth  
Pattern Date: 11-04-08 09:00am

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