

## SC420

Collinear omni antenna, 7.5 dBd gain, HD, 806-960 MHz

- Medium-gain antenna covering 806-960 MHz in 4 sub-bands
- Light and compact, but built to withstand severe weather conditions
- Available with optional electrical downtilts
- Recommend using the SMK-325-A3 side mounting kit.

The SC420 collinear omni-directional antenna offers 7.5 dBd gain in an extremely rugged package. This lightweight antenna (only 12.5 lbs excluding mounting clamps) is wind rated per EIA standards at 150 mph.

Available with electrical downtilts.

Model	Description	Pattern
<a href="#">SC420-HF1LDF</a>	7.5 dBd gain, 7/16 DIN connector, 806-869 MHz	Omni-directional
<a href="#">SC420-HF1LNF</a>	7.5 dBd gain, N (female) connector, 806-869 MHz	Omni-directional
<a href="#">SC420-HF2LDF</a>	7.5 dBd gain, 7/16 DIN female connector, 827-896 MHz	Omni-directional
<a href="#">SC420-HF2LNF</a>	7.5 dBd gain, N (female) connector, 827-896 MHz	Omni-directional
<a href="#">SC420-HF2LNF(D02)</a>	Collinear omni antenna, 7.5 dBd gain, low PIM, 2° DT, HD, 827-896 MHz	Omni-directional
<a href="#">SC420-HF2LNF(D04)</a>	Collinear omni antenna, 7.0 dBd gain, low PIM, 4° DT, HD, 827-896 MHz	Omni-directional
<a href="#">SC420-HF2SNF</a>	7.5 dBd gain, N (female) connector, 827-896 MHz	Omni-directional
<a href="#">SC420-HF3LDF</a>	7.5 dBd gain, 7/16 DIN connector, 890-940 MHz	Omni-directional
<a href="#">SC420-HF3LDF(D02)</a>	Collinear omni antenna, 7.5 dBd gain, low PIM, 2° DT, HD, 890-940 MHz	Omni-directional
<a href="#">SC420-HF3LDF(D04)</a>	Collinear omni antenna, 7.5 dBd gain, low PIM, 4° DT, HD, 890-940 MHz	Omni-directional
<a href="#">SC420-HF3LNF</a>	7.5 dBd gain, N (female) connector, 890-940 MHz	Omni-directional
<a href="#">SC420-HF3SNF</a>	7.5 dBd gain, N (female) connector, 890-940 MHz	Omni-directional
<a href="#">SC420-HF4SNF</a>	7.5 dBd gain, N (female) connector, 928-960 MHz	Omni-directional



Region	United States	Europe, Middle East and Africa	Caribbean and Latin America	Canada and rest of the world
<b>Telephone</b>	USA: 1 800 263 3275	International: +44 (0) 1223 42 03 03	International: +1 905 726 7676	Canada: 1 800 263 3275 International: +1 905 727 0165
<b>E-mail</b>	salesusa@sinctech.com	salesuk@sinctech.com	salesla@sinctech.com	salescan@sinctech.com
Product Specification Sheet		SC420		Dated: 05-02-10

SC420-HF1LDF

SC420-HF1LNF

SC420-HF2LDF

SC420-HF2LNF

**Electrical Specifications**

Frequency Range, MHz	806 to 869	806 to 869	827 to 896	827 to 896
Gain (nominal), dBd (dBi)	7.5 (9.6)	7.5 (9.6)	7.5 (9.6)	7.5 (9.6)
Input VSWR (max)	1.5:1	1.5:1	1.5:1	1.5:1
Polarization	vertical	vertical	vertical	vertical
Pattern	Omni-directional	Omni-directional	Omni-directional	Omni-directional
Vertical beamwidth, degrees	11	11	11	11
Average Power Input (max), W	750	500	750	500
Passive intermod. (2x20W, 3rd ord.), dBc	-150	-138	-150	-138
Lightning protection	DC ground	DC ground	DC ground	DC ground
Electrical tilt (available)	0	0, 2, 4, or 6 degrees available	0	0

**Mechanical Specifications**

Connector	7/16 DIN (female)	N (female)	7/16 DIN (female)	N (female)
Length/ Height, in (mm)		102.5 (2604)		
Width, in (mm)	2.5 (64)	2.5 (64)	2.5 (64)	2.5 (64)
Depth, in (mm)	2.5 (64)	2.5 (64)	2.5 (64)	2.5 (64)
Base pipe diameter, in (mm)	2.5 (64)	2.5 (64)	2.5 (64)	2.5 (64)
Base pipe mounting length, in (mm)	18 (457)	18 (457)	18 (457)	18 (457)
Weight, lbs (kg)	15 (6.8)	15.6 (7.1)	15 (6.8)	15 (6.8)
Weight iced, lbs (kg)		30.1 (13.7)		
Actual Shipping weight, lbs (kg)	50 (22.7)		50 (22.7)	50 (22.7)
Shipping dimensions, in (mm)	157x4x4 (3988x102x102)	120x4.5x4.5 (3048x114x114)	157x4x4 (3988x102x102)	157x4x4 (3988x102x102)
Length, in (mm)	102.5 (2604)		102.5 (2604)	102.5 (2604)
Mounting hardware	#130 clamp	#130 clamp	#130 clamp	#130 clamp

**Environmental Specifications**

Temperature range, °F (°C)	-22 to +140 (-30 to +60)	-22 to +140 (-30 to +60)	-22 to +140 (-30 to +60)	-22 to +140 (-30 to +60)
Wind Loading Area (Flat Plate Equivalent), ft <sup>2</sup> (m <sup>2</sup> )	1.1 (0.1)	1.1 (0.1)	1.1 (0.1)	1.1 (0.1)

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[SC420-HF2LNF\(D02\)](#)

[SC420-HF2LNF\(D04\)](#)

[SC420-HF2SNF](#)

[SC420-HF3LDF](#)

**Electrical Specifications**

	SC420-HF2LNF(D02)	SC420-HF2LNF(D04)	SC420-HF2SNF	SC420-HF3LDF
Frequency Range, MHz	827 to 896	827 to 896	827 to 896	890 to 940
Gain (nominal), dBd (dBi)	7.5 (9.6)	7 (9.1)	7.5 (9.6)	7.5 (9.6)
Input VSWR (max)	1.5:1	1.5:1	1.5:1	1.5:1
Polarization	vertical	vertical	vertical	vertical
Pattern	Omni-directional	Omni-directional	Omni-directional	Omni-directional
Vertical beamwidth, degrees	11	11	11	11
Average Power Input (max), W	750	750	500	750
Passive intermod. (2x20W, 3rd ord.), dBc	-138	-138		-150
Lightning protection	DC ground	DC ground	DC ground	DC ground
Electrical tilt (available)	2	4	0	0

**Mechanical Specifications**

	SC420-HF2LNF(D02)	SC420-HF2LNF(D04)	SC420-HF2SNF	SC420-HF3LDF
Connector	N (female)	N (female)	N (female)	7/16 DIN (female)
Length/ Height, in (mm)				
Width, in (mm)	2.5 (64)	2.5 (64)	2.5 (64)	2.5 (64)
Depth, in (mm)	2.5 (64)	2.5 (64)	2.5 (64)	2.5 (64)
Base pipe diameter, in (mm)	2.5 (64)	2.5 (64)	2.5 (64)	2.5 (64)
Base pipe mounting length, in (mm)	18 (457)	18 (457)	18 (457)	18 (457)
Weight, lbs (kg)	15 (6.8)	15 (6.8)	15 (6.8)	15 (6.8)
Weight iced, lbs (kg)				
Actual Shipping weight, lbs (kg)	50 (22.7)	50 (22.7)	50 (22.7)	50 (22.7)
Shipping dimensions, in (mm)	157x4x4 (3988x102x102)	157x4x4 (3988x102x102)	157x4x4 (3988x102x102)	157x4x4 (3988x102x102)
Length, in (mm)	102.5 (2604)	102.5 (2604)	102.5 (2604)	102.5 (2604)
Mounting hardware	#130 clamp	#130 clamp	#130 clamp	#130 clamp

**Environmental Specifications**

	SC420-HF2LNF(D02)	SC420-HF2LNF(D04)	SC420-HF2SNF	SC420-HF3LDF
Temperature range, °F (°C)	-22 to +140 (-30 to +60)	-22 to +140 (-30 to +60)	-22 to +140 (-30 to +60)	-22 to +140 (-30 to +60)
Wind Loading Area (Flat Plate Equivalent), ft <sup>2</sup> (m <sup>2</sup> )	1.1 (0.1)	1.1 (0.1)	1.1 (0.1)	1.1 (0.1)

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[SC420-HF3LDF\(D02\)](#)

[SC420-HF3LDF\(D04\)](#)

[SC420-HF3LNF](#)

[SC420-HF3SNF](#)

**Electrical Specifications**

	SC420-HF3LDF(D02)	SC420-HF3LDF(D04)	SC420-HF3LNF	SC420-HF3SNF
Frequency Range, MHz	890 to 940	890 to 940	890 to 940	890 to 940
Gain (nominal), dBd (dBi)	7 (9.1)	7 (9.1)	7.5 (9.6)	7.5 (9.6)
Input VSWR (max)	1.5:1	1.5:1	1.5:1	1.5:1
Polarization	vertical	vertical	vertical	vertical
Pattern	Omni-directional	Omni-directional	Omni-directional	Omni-directional
Vertical beamwidth, degrees	11	11	11	11
Average Power Input (max), W	750	750	500	500
Passive intermod. (2x20W, 3rd ord.), dBc	-150	-150	-138	
Lightning protection	DC ground	DC ground	DC ground	DC ground
Electrical tilt (available)	2	4	0, 2, 4, or 6 degrees available	0

**Mechanical Specifications**

	SC420-HF3LDF(D02)	SC420-HF3LDF(D04)	SC420-HF3LNF	SC420-HF3SNF
Connector	7/16 DIN (female)	7/16 DIN (female)	N (female)	N (female)
Length/ Height, in (mm)			102.5 (2604)	
Width, in (mm)	2.5 (64)	2.5 (64)	2.5 (64)	2.5 (64)
Depth, in (mm)	2.5 (64)	2.5 (64)	2.5 (64)	2.5 (64)
Base pipe diameter, in (mm)	2.5 (64)	2.5 (64)	2.5 (64)	2.5 (64)
Base pipe mounting length, in (mm)	18 (457)	18 (457)	18 (457)	18 (457)
Weight, lbs (kg)	15 (6.8)	15 (6.8)	15.6 (7.1)	15 (6.8)
Weight iced, lbs (kg)			30.1 (13.7)	
Actual Shipping weight, lbs (kg)	50 (22.7)	50 (22.7)		50 (22.7)
Shipping dimensions, in (mm)	157x4x4 (3988x102x102)	157x4x4 (3988x102x102)	120x4.5x4.5 (3048x114x114)	157x4x4 (3988x102x102)
Length, in (mm)	102.5 (2604)	102.5 (2604)		102.5 (2604)
Mounting hardware	#130 clamp	#130 clamp	#130 clamp	#130 clamp

**Environmental Specifications**

	SC420-HF3LDF(D02)	SC420-HF3LDF(D04)	SC420-HF3LNF	SC420-HF3SNF
Temperature range, °F (°C)	-22 to +140 (-30 to +60)	-22 to +140 (-30 to +60)	-22 to +140 (-30 to +60)	-22 to +140 (-30 to +60)
Wind Loading Area (Flat Plate Equivalent), ft <sup>2</sup> (m <sup>2</sup> )	1.1 (0.1)	1.1 (0.1)	1.1 (0.1)	1.1 (0.1)

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SC420-HF4SNF

**Electrical Specifications**

Frequency Range, MHz	928 to 960
Gain (nominal), dBd (dBi)	7.5 (9.6)
Input VSWR (max)	1.5:1
Polarization	vertical
Pattern	Omni-directional
Vertical beamwidth, degrees	11
Average Power Input (max), W	500
Passive intermod. (2x20W, 3rd ord.), dBc	
Lightning protection	DC ground
Electrical tilt (available)	0

**Mechanical Specifications**

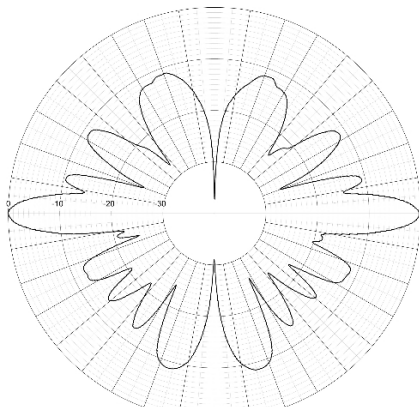
Connector	N (female)
Length/ Height, in (mm)	
Width, in (mm)	2.5 (64)
Depth, in (mm)	2.5 (64)
Base pipe diameter, in (mm)	2.5 (64)
Base pipe mounting length, in (mm)	18 (457)
Weight, lbs (kg)	15 (6.8)
Weight iced, lbs (kg)	
Actual Shipping weight, lbs (kg)	50 (22.7)
Shipping dimensions, in (mm)	157x4x4 (3988x102x102)
Length, in (mm)	102.5 (2604)
Mounting hardware	#130 clamp

**Environmental Specifications**

Temperature range, °F (°C)	-22 to +140 (-30 to +60)
Wind Loading Area (Flat Plate Equivalent), ft <sup>2</sup> (m <sup>2</sup> )	1.1 (0.1)

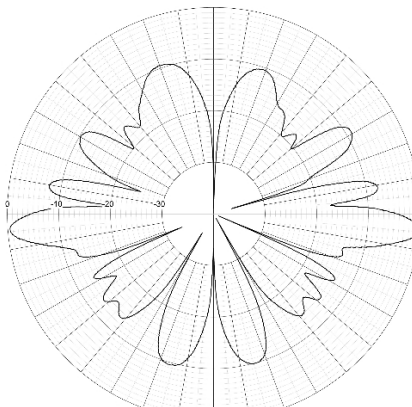
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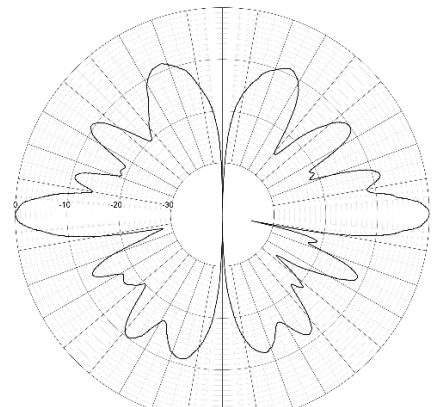
MEASURED RADIATION PATTERN  
Vertical  
Relative Gain - 10 dB per Division  
**SC420-HF1LDF**

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MEASURED RADIATION PATTERN  
Vertical  
Relative Gain - 10 dB per Division  
**SC420-HF2LNF(D04)**

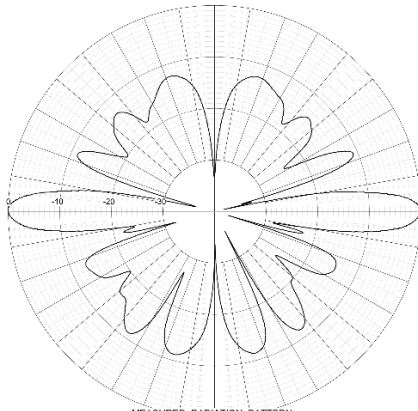
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MEASURED RADIATION PATTERN  
Vertical  
Relative Gain - 10 dB per Division  
**SC420-HF2SNF**

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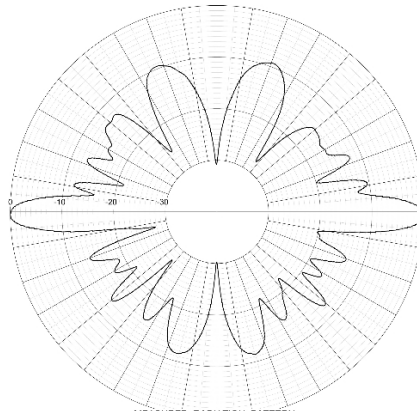
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MEASURED RADIATION PATTERN  
 Vertical  
 Relative Gain - 10 dB per Division

**SC420-HF3SNF**

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MEASURED RADIATION PATTERN  
 Vertical  
 Relative Gain - 10 dB per Division

**SC420-HF4SNF**

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