

 Metricom®		Design Specification, Four Sector Panel Antenna, 15 dBi 2.4 GHz nom., 6 dBi 902-928 MHz, Larsen		1 (4)
Prepared		Date	Rev.	Document No.
		03-01-99	B	108426-200
Approved	Checked	Directory	File	
D. Dalton			108426200.doc	

Larsen
Four Sector
15 dBi 2.310 to 2.490 GHz
6 dBi 902 MHz to 928 MHz
Dual Band
Panel Antenna

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Revision History

Rev	Date	Author	Revisions
A	10-07-98	R. Sherry	Initial Draft
B	03-01-99	R. Sherry	Revised to become Larsen part, was 108069

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1.0 Electrical

Section	Parameter	Value
1.1	Frequency	
1.1.1		902 to 928 MHz
1.1.2		2.310 to 2.490 GHz
1.3	Gain	
1.3.1	902 to 928 MHz	6.0 dBi $\pm$ 0.5 dB
1.3.2	2.310 to 2.490 GHz	15.0 dBi $\pm$ 0.5 dB
1.4	VSWR at 50 Ω	2.0:1 Maximum
1.5	Half Power Beam Width	
1.5.1	902 to 928 MHz	70° $\pm$ 3° H-plane
1.5.2		60° $\pm$ 3° E-plane
1.5.3	2.310 to 2.490 GHz	65° $\pm$ 3° H-plane
1.5.4		12° $\pm$ 3° E-plane
1.6	Polarization	Linear, vertical
1.7	Front/Back Ratio	>20 dB
1.8	Side Lobe Level	>13 dB down from main beam
1.9	Null Fill	TBD
1.10	Maximum Power Input	
1.10.1	902 to 928 MHz	10 Watts
1.10.2	2.310 to 2.490 GHz	100 Watts
1.11	Isolation Between Bands	>30 dB, Free Space

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2.0 Mechanical and Environmental

Section	Parameter	Value
2.1	Weight	
2.1.1	Pole Mount	<19 Lbs. Maximum, including mounting hardware
2.1.2	Wall Mount	<17 Lbs. Maximum, including mounting hardware
2.2	Connectors	N-type, female (2), lower end mounting desired
2.3	Mounting	Vertical polarization, drain holes if used at bottom
2.4	Configuration	Flat Panel
2.5	Length	<36.5 inches
2.6	Width	<6.25 inches
2.7	Depth	<3.5 inches, excluding mounting hardware
2.8	Depth	<6.75 inches with wall brackets
2.9	Temperature	
2.9.1	Operating	-40° C to +50° C
2.9.2	Storage	-50° C to +70° C

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Section	Parameter	Value	
2.10	Humidity	100% Condensing, seven days, no visible corrosion	
2.11	Moisture Seal	Must withstand driving rain, sleet, snow	
2.11.1		If not submersible, drain hole required	
2.12	UV Radiation	Intended for outdoor installation, 20 year life	
2.13	Wind Speed	100 MPH in specification operation, 125 MPH survival	
2.14	Wind Load	Force information calculated per TIA/EIA-222F or latest revision	
		33 ft above average ground	100 ft above average ground
	100 MPH	<105 Lb.	<144 Lb.
	100 MPH + ½ inch Ice	<125 Lb.	<172 Lb.
	125 MPH	<163 Lb.	<224 Lb.
	125 MPH + ½ inch Ice	<194 Lb.	<268 Lb.
2.15	Mounting Bracket		
2.16	Pipe Mount	Galvanized steel, mount to 1.25" to 3.5" OD pipe, Up to +0° to -20° (down tilt).	
2.17	Wall Mount	Galvanized steel, +0° to -20° (down tilt), ± 60° laterally. Wall thickness: 14" maximum.	
2.18	Note	At 125 MPH wind speed, deflection of antenna beam less than ± 4°.	

3.0 Qualified Vendor

3.1 Larsen, 3611 NE 112th Avenue, Vancouver WA, 98682.

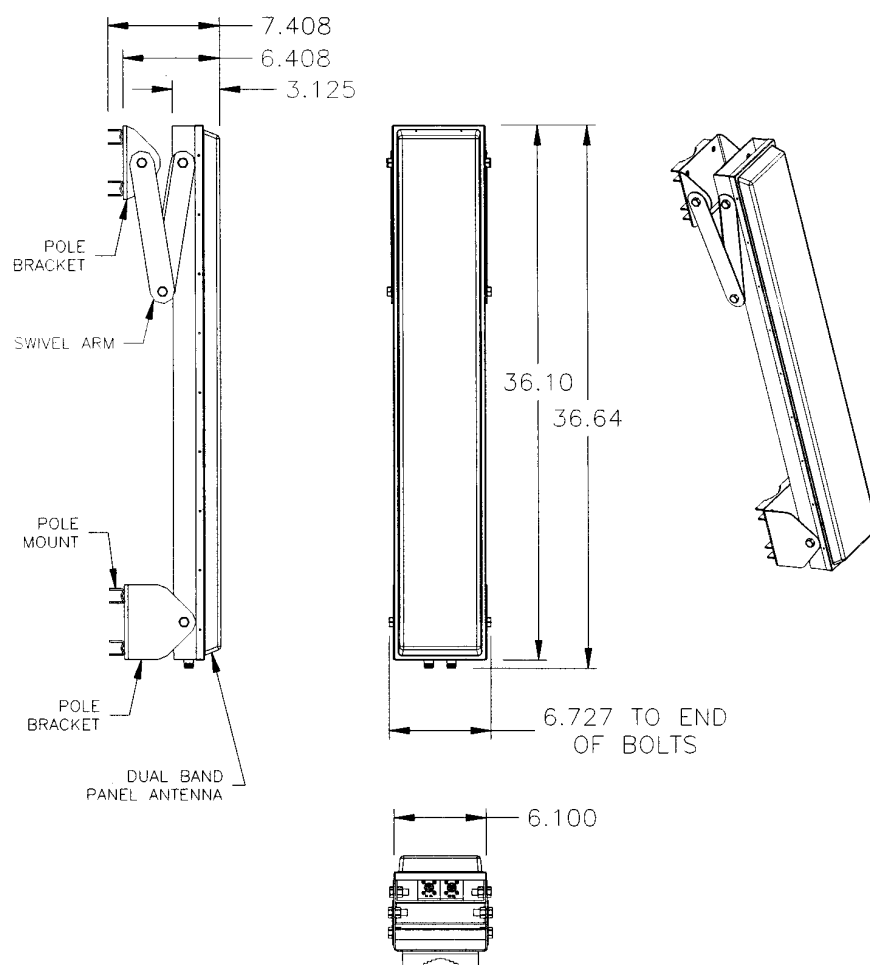
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NOTES:

1. SECOND SET OF POLE MOUNTS, HARDWARE, AND POLE NOT SHOWN.
2. TOTAL WEIGHT OF COMPONENTS SHOWN IS LESS THAN 19 LBS.



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