

## "Versa2une" FM Antenna

### Features:

- "6800-series" antenna.
- Field-tunable with or without test equipment.
- 2.5 kW per element, up to 5 kW total system power.
- Circular polarization.
- Packed unassembled in a small flat box for cost-effective shipping; requires assembly.

### Specifications:

|                                    |  |
|------------------------------------|--|
| Frequency range:                   | Field Tunable 87.5-108 MHz   |
| VSWR:                              | < 1.1:1 if tuned with transmitter metering for minimum reflected power .<br>< 1.2:1 if tuned with mechanical dimensions and tuning chart |
| Azimuth circular polarity:         | Horizontal component $\pm 1.5$ dB on pole  |
| Polarization:                      | Right-hand circular  |
| Maximum input power:               | 5 kW total (2.5 kW per element).   |
| Bay-to-bay spacing:                | 3.0 m  |
| Input connector on feed-line cable | 7/16 DIN male for single element, 7/8" EIA female on power divider for multiple element arrays.  |
| Standard mounting:                 | Designed to attach to a customer-supplied 38 mm - 90 mm OD pipe.   |
| Power dividers:                    | As required. Feed cables will be FSJ-50A or equivalent with DIN terminations.  |



### Performance specifications, stock configurations:

| No. of Bays        | Elevation Gain |       | Peak Gain |       | Power Rating (kW) |
|--------------------|----------------|-------|-----------|-------|-------------------|
|                    | Power          | dB    | Power     | dB    |                   |
| SLV-1 (1 element)  | 0.46           | -3.40 | 0.65      | -1.19 | 2.5               |
| SLV-2 (2 elements) | 0.99           | -0.04 | 1.40      | 1.46  | 5                 |
| SLV-4 (4 elements) | 2.12           | 3.26  | 3.00      | 4.77  | 5                 |
| SLV-6 (6 elements) | 3.28           | 5.16  | 4.64      | 6.67  | 5                 |
| SLV-8 (8 elements) | 4.46           | 6.50  | 6.31      | 8.00  | 5                 |

### NOTES

1. Half-wave spacing and higher-power arrays are available as special configurations. Contact the factory.

### Document No. ds-SLV (150205)

A Division of Howell Laboratories, Inc., P. O. Box 389, Bridgton, Maine 04009 USA

(207) 647-3327

1-888-SHIVELY

Fax: (207)647-8273

An Employee-Owned Company

www.shively.com

sales@shively.com

Certified to ISO-9001

### Dimensions, stock configurations:

|                    | Tower space required |
|--------------------|----------------------|
| SLV-1 (1 element)  | 0.9 m (2 ft 11 in)   |
| SLV-2 (2 elements) | 3.9 m (12 ft 10 in)  |
| SLV-4 (4 elements) | 9.9 m (32 ft 6 in)   |
| SLV-6 (6 elements) | 16 m (52 ft 6 in)    |
| SLV-8 (8 elements) | 22.1 m (72 ft 6 in)  |

### Weight and windload, no radomes:

| Weight without ice |                  | Windload without ice                       |   |
|--------------------|------------------|--|---|
|                    |                  | $EPA_N$                                    | $EPA_T$                                   |
| SLV-1 (1 element)  | 6.8 kg (15 lb)   | 0.2 m <sup>2</sup> (1.7 ft <sup>2</sup> )  | 0.1 m <sup>2</sup> (1.2 ft <sup>2</sup> ) |
| SLV-2 (2 elements) | 15.9 kg (35 lb)  | 0.3 m <sup>2</sup> (3.3 ft <sup>2</sup> )  | 0.2 m <sup>2</sup> (2.4 ft <sup>2</sup> ) |
| SLV-4 (4 elements) | 34.0 kg (75 lb)  | 0.6 m <sup>2</sup> (6.6 ft <sup>2</sup> )  | 0.4 m <sup>2</sup> (4.8 ft <sup>2</sup> ) |
| SLV-6 (6 elements) | 47.7 kg (105 lb) | 0.9 m <sup>2</sup> (9.9 ft <sup>2</sup> )  | 0.6 m <sup>2</sup> (7.2 ft <sup>2</sup> ) |
| SLV-8 (8 elements) | 68 kg (150 lb)   | 1.2 m <sup>2</sup> (13.2 ft <sup>2</sup> ) | 0.8 m <sup>2</sup> (9.6 ft <sup>2</sup> ) |

| Weight with 13 mm (1/2 in) ice |                   | Windload with 13 mm (1/2 in) ice           |  |
|--------------------------------|-------------------|--|--|
|                                |                   | $EPA_N$                                    | $EPA_T$                                    |
| SLV-1 (1 element)              | 14.1 kg (31 lb)   | 0.3 m <sup>2</sup> (2.7 ft <sup>2</sup> )  | 0.2 m <sup>2</sup> (2 ft <sup>2</sup> )    |
| SLV-2 (2 elements)             | 29.9 kg (66 lb)   | 0.5 m <sup>2</sup> (5.4 ft <sup>2</sup> )  | 0.4 m <sup>2</sup> (4.1 ft <sup>2</sup> )  |
| SLV-4 (4 elements)             | 59.9 kg (132 lb)  | 1.0 m <sup>2</sup> (10.8 ft <sup>2</sup> ) | 0.8 m <sup>2</sup> (8.2 ft <sup>2</sup> )  |
| SLV-6 (6 elements)             | 89.7 kg (198 lb)  | 1.5 m <sup>2</sup> (16.2 ft <sup>2</sup> ) | 1.2 m <sup>2</sup> (12.3 ft <sup>2</sup> ) |
| SLV-8 (8 elements)             | 119.8 kg (264 lb) | 2.0 m <sup>2</sup> (21.5 ft <sup>2</sup> ) | 1.6 m <sup>2</sup> (16.4 ft <sup>2</sup> ) |

| Weight with 51 mm (2 in) ice |                    | Windload with 51 mm (2 in) ice             |  |
|------------------------------|--------------------|--|--|
|                              |                    | $EPA_N$                                    | $EPA_T$                                    |
| SLV-1 (1 element)            | 60.8 kg (134 lb)   | 0.5 m <sup>2</sup> (4.9 ft <sup>2</sup> )  | 0.4 m <sup>2</sup> (4 ft <sup>2</sup> )    |
| SLV-2 (2 elements)           | 124.3 kg (274 lb)  | 0.9 m <sup>2</sup> (9.7 ft <sup>2</sup> )  | 0.7 m <sup>2</sup> (7.9 ft <sup>2</sup> )  |
| SLV-4 (4 elements)           | 248.6 kg (548 lb)  | 1.8 m <sup>2</sup> (19.4 ft <sup>2</sup> ) | 1.5 m <sup>2</sup> (15.8 ft <sup>2</sup> ) |
| SLV-6 (6 elements)           | 372.9 kg (822 lb)  | 2.7 m <sup>2</sup> (29.1 ft <sup>2</sup> ) | 2.1 m <sup>2</sup> (23.7 ft <sup>2</sup> ) |
| SLV-8 (8 elements)           | 497.2 kg (1096 lb) | 3.6 m <sup>2</sup> (38.8 ft <sup>2</sup> ) | 3.0 m <sup>2</sup> (31.6 ft <sup>2</sup> ) |

### Weight and windload with radomes:

| Weight without ice |                   | Windload without ice                       |  |
|--------------------|-------------------|--|--|
|                    |                   | $EPA_N$                                    | $EPA_T$                                    |
| SLV-1 (1 element)  | 17.7 kg (39 lb)   | 0.9 m <sup>2</sup> (9.7 ft <sup>2</sup> )  | 0.7 m <sup>2</sup> (7.4 ft <sup>2</sup> )  |
| SLV-2 (2 elements) | 37.7 kg (83 lb)   | 1.8 m <sup>2</sup> (19.3 ft <sup>2</sup> ) | 1.4 m <sup>2</sup> (14.8 ft <sup>2</sup> ) |
| SLV-4 (4 elements) | 77.6 kg (171 lb)  | 3.6 m <sup>2</sup> (38.6 ft <sup>2</sup> ) | 2.7 m <sup>2</sup> (29.6 ft <sup>2</sup> ) |
| SLV-6 (6 elements) | 113.1 kg (249 lb) | 5.4 m <sup>2</sup> (57.9 ft <sup>2</sup> ) | 4.2 m <sup>2</sup> (44.4 ft <sup>2</sup> ) |
| SLV-8 (8 elements) | 155.2 kg (342 lb) | 7.2 m <sup>2</sup> (77.2 ft <sup>2</sup> ) | 5.4 m <sup>2</sup> (59.2 ft <sup>2</sup> ) |

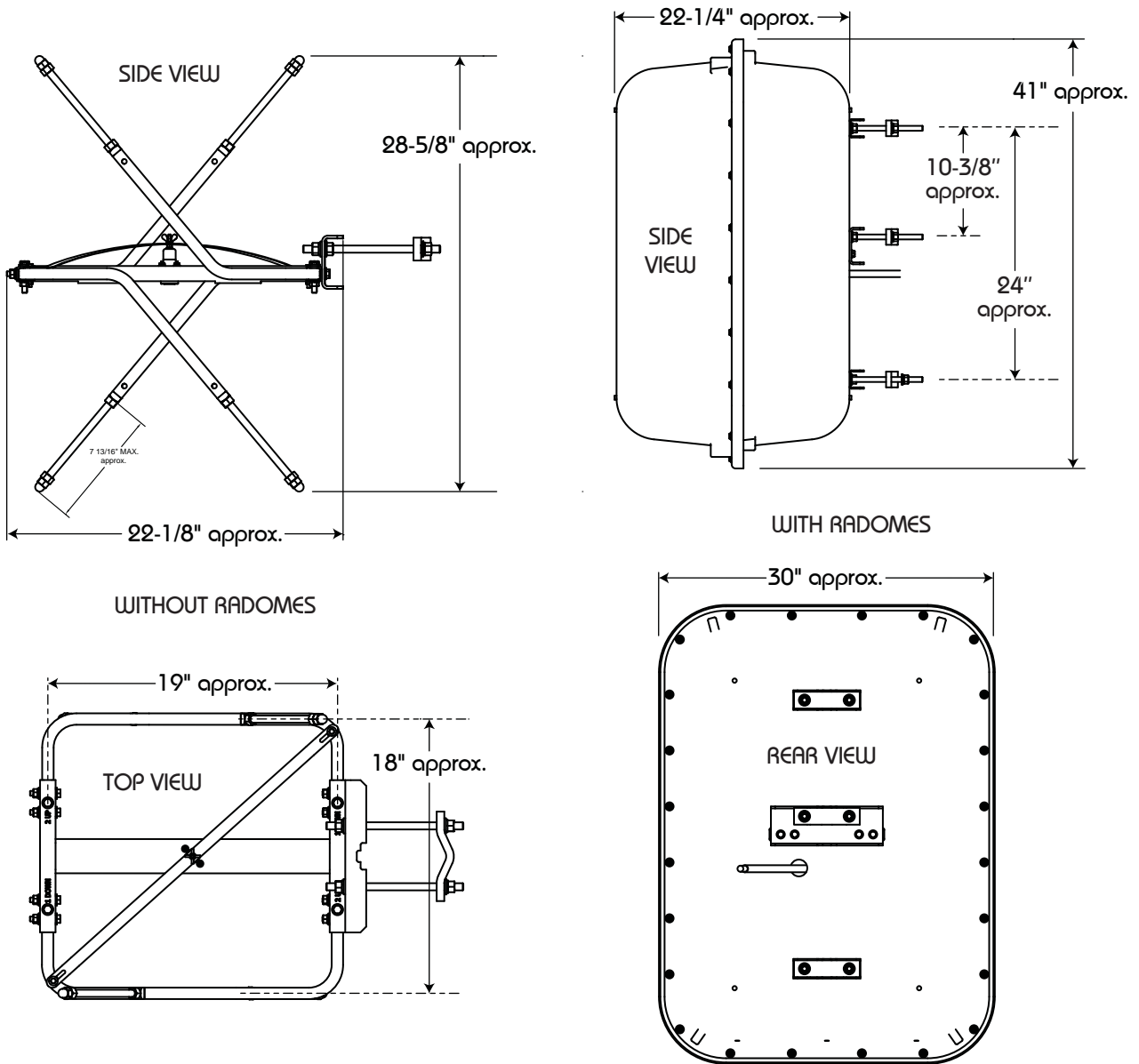
| Weight with 13 mm (1/2 in) ice |                    | Windload with 13 mm (1/2 in) ice           |  |
|--------------------------------|--------------------|--|--|
|                                |                    | $EPA_N$                                    | $EPA_T$                                    |
| SLV-1 (1 element)              | 114 kg (251.3 lb)  | 0.9 m <sup>2</sup> (10.0 ft <sup>2</sup> ) | 0.7 m <sup>2</sup> (7.8 ft <sup>2</sup> )  |
| SLV-2 (2 elements)             | 234 kg (515.7 lb)  | 1.9 m <sup>2</sup> (20.0 ft <sup>2</sup> ) | 1.4 m <sup>2</sup> (15.5 ft <sup>2</sup> ) |
| SLV-4 (4 elements)             | 468 kg (1031.5 lb) | 3.7 m <sup>2</sup> (40.0 ft <sup>2</sup> ) | 2.9 m <sup>2</sup> (31.0 ft <sup>2</sup> ) |
| SLV-6 (6 elements)             | 702 kg (1547 lb)   | 5.7 m <sup>2</sup> (60 ft <sup>2</sup> )   | 4.2 m <sup>2</sup> (46.5 ft <sup>2</sup> ) |
| SLV-8 (8 elements)             | 936 kg (2063 lb)   | 7.4 m <sup>2</sup> (80 ft <sup>2</sup> )   | 5.8 m <sup>2</sup> (62 ft <sup>2</sup> )   |

Weight and windload with radomes (continued):

| Weight with 51 mm (2 in) ice |                   | Windload with 51 mm (2 in) ice             |  |
|------------------------------|-------------------|--|--|
|                              |                   | $EPA_N$                                    | $EPA_T$                                    |
| SLV-1 (1 element)            | 353 kg (778 lb)   | 1.0 m <sup>2</sup> (10.6 ft <sup>2</sup> ) | 0.8 m <sup>2</sup> (8.4 ft <sup>2</sup> )  |
| SLV-2 (2 elements)           | 711 kg (1567 lb)  | 2.0 m <sup>2</sup> (21.3 ft <sup>2</sup> ) | 1.6 m <sup>2</sup> (16.8 ft <sup>2</sup> ) |
| SLV-4 (4 elements)           | 1422 kg (3134 lb) | 4.0 m <sup>2</sup> (42.6 ft <sup>2</sup> ) | 3.1 m <sup>2</sup> (33.6 ft <sup>2</sup> ) |
| SLV-6 (6 elements)           | 2133 kg (4701 lb) | 6 m <sup>2</sup> (63.9 ft <sup>2</sup> )   | 4.8 m <sup>2</sup> (50.4 ft <sup>2</sup> ) |
| SLV-8 (8 elements)           | 2844 kg (6268 lb) | 8 m <sup>2</sup> (85.2 ft <sup>2</sup> )   | 6.2 m <sup>2</sup> (67.2 ft <sup>2</sup> ) |

NOTES

- Weight and windload values include mount. For multiple-bay arrays, these include cables and power divider.
- Ice values calculated per 222/G. Values other than specified can be derived by interpolation.
- Six- and eight-bay array weights and windloads will be higher than the above, depending on power dividers and feed systems used.



Dimensions