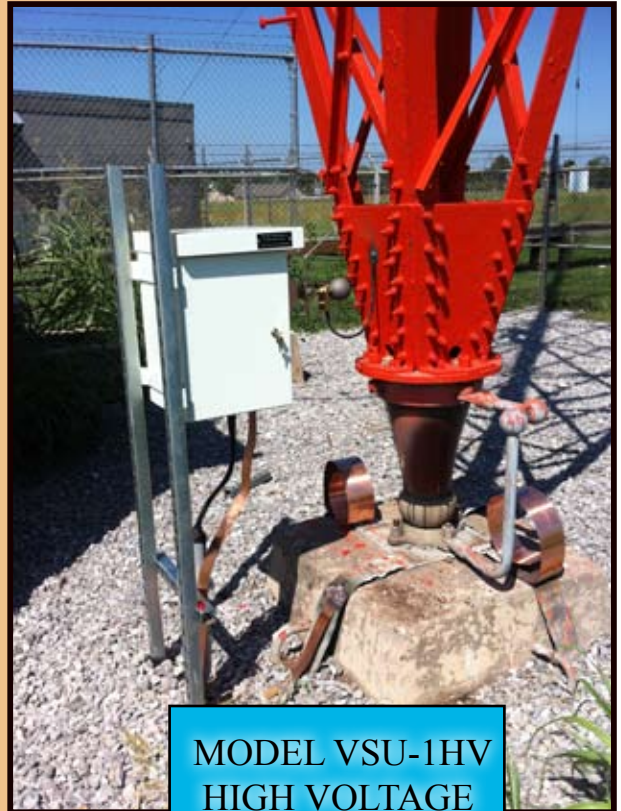


KINTRONIC LABS INC.

AM DIRECTIONAL ANTENNA VOLTAGE SAMPLING UNIT



MODEL VSU-1
SAMPLING UNIT



MODEL VSU-1HV
HIGH VOLTAGE
SAMPLING UNIT

FCC APPROVED AND
AVAILABLE NOW

*ROBUST DESIGN TO WITHSTAND
SEVERE LIGHTNING ENVIRONMENT

*FACILITATES METHOD OF MOMENTS
PROOF OF DIRECTIONAL ANTENNAS
WITH TOWER ELECTRICAL HEIGHT $> 105^\circ$

*REPLACES TOWER SAMPLING LOOPS
AND REDUCES MAINTENANCE COST



*MODELS AVAILABLE FOR TOWER
BASE PEAK VOLTAGES UP TO 30KV

In accordance with FCC 08-228 Second Report and Order and Second Further Notice of Proposed Rulemaking released on September 26, 2008, Section 73.151 of the FCC Rules entitled "Directional Antenna Performance Verification" was modified to add among other things the following: "Samples may be obtained from base voltage sampling devices at the output of the antenna coupling and matching equipment for the base-fed towers whose actual electrical height is greater than 105 degrees." In response to this FCC Rule making Kintronic Labs has developed our new VSU-1 and VSU-1HV voltage sampling systems.

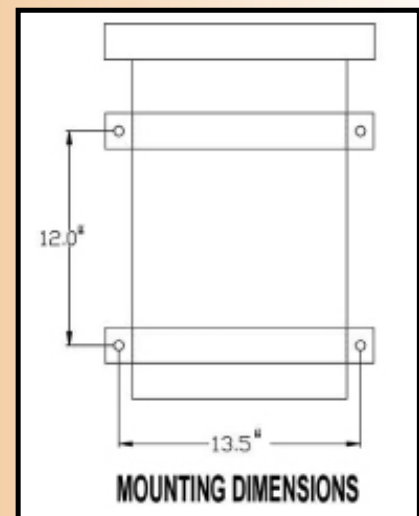
The Kintronic Labs voltage sampling units (VSU's) are designed for installation at the base of each tower in an AM directional array and serve to replace the current sampling loops that are typically used for the sampling of electrically tall towers. As a result the servicing of the sample system can be accomplished at the ground level without the cost of tower riggers that would be needed to repair and maintain sample loops.

The VSU's utilize precision voltage dividers from which the relative magnitude and phase of each tower is supplied to a directional antenna monitor. The VSU's are designed to accommodate the specific requirements for each pattern of the directional array for both single or multiple frequency operation. Two models of the VSU's are available dependent on the peak AM base voltage to which they will be subjected – Model VSU-1 is designed for 20kV peak voltage and the Model VSU-1HV for 30kV peak voltage.

The VSU's are housed in a painted aluminum weatherproof enclosure with a hinged, key locked access door and provisions for mounting on two vertical uprights. The RF connection to the tower is made via a porcelain feed through bowl assembly with brass stud. A bracket on the exterior bottom of the housing is provided for interconnection with the RF ground. The sampling line connection is via a Type N female connector on the exterior bottom of the unit.



FREQUENCY RANGE: 0.5 TO 2MHz
FREQUENCY RESPONSE: FLAT TO WITHIN +/- 0.25 db
OUTPUT IMPEDANCE: 50 Ohms - type N female
OUTPUT AMPLITUDE: At a Nominal 51.5dB below Sampled
RF Voltage with multiple-unit factory calibration available
ABSOLUTE MAGNITUDE ACCURACY: +/- 2%
ABSOLUTE PHASE ACCURACY: +/- 2°
MAGNITUDE TRACKING ACCURACY: +/-1%
PHASE TRACKING ACCURACY: +/-1°
MAX.VOLTAGE RATING: 20kV peak (VSU-1)/30kV peak (VSU-1HV)
TEMPERATURE: -40 to +50C
HUMIDITY: 0 - 95%
DIMENSIONS: 15"W x 14.5"D x 19"H (38.1cm x 36.8cm x 48.25cm)
WEIGHT: 28 (12.7 kg)



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