RITZ INSTRUMENT TRANSFORMERS, INC.

Instrument Transformers

Voltage Sensors

VRF25-01

General Description

Ritz manufacturers an extensive line of epoxy resin insulated instrument transformers and sensors across the voltage range of 5.5 kV to 72.5 kV. This brochure describes outdoor voltage sensors in the 25 kV class. Ritz, because of product depth, familiarity with international standards, and custom design capability can also design a solution specific to your needs.

Construction

A resistive voltage divider assembly is encapsulated in cycloaliphatic epoxy resin in a single process, performed under vacuum, using the pressure gelation method. The resin color is grey. Epoxy resin was chosen because of its excellent tracking resistance, high mechanical strength, ability to withstand ultraviolet radiation, superior weathering characteristics, and its noncumbustibility.

Primary Terminals

The primary line terminal and neutral/ground terminal are 3/8-inch threaded studs with a clamping washer and tightening nut. The terminals are designed to accept conductors ranging from #10 to 2/0.

Secondary Terminals

Secondary terminals are made available through a MIL-DTL-5015 threaded type connector rated for harsh environments.

Secondary Cabling

Secondary cable assemblies are available in various lengths. Standard cable assemblies come with a MIL-DTL-5015 threaded type connector suitable for connecting to the standard connector supplied with the sensor. The sensor is designed to meet the rated accuracy when used with cable assembly lengths up to 50 feet. Secondary connections and cable assembly designs can be customized for specific applications.

Mounting

The sensor can be mounted in the vertical, horizontal, or suspended position. A 3/4-inch - 10 UNC mounting insert is provided on the bottom of the unit. An optional aluminum mounting bracket is also available.

Nameplate

Nameplate data is laser-etched on a metallic plate which is affixed to the unit.

Tests

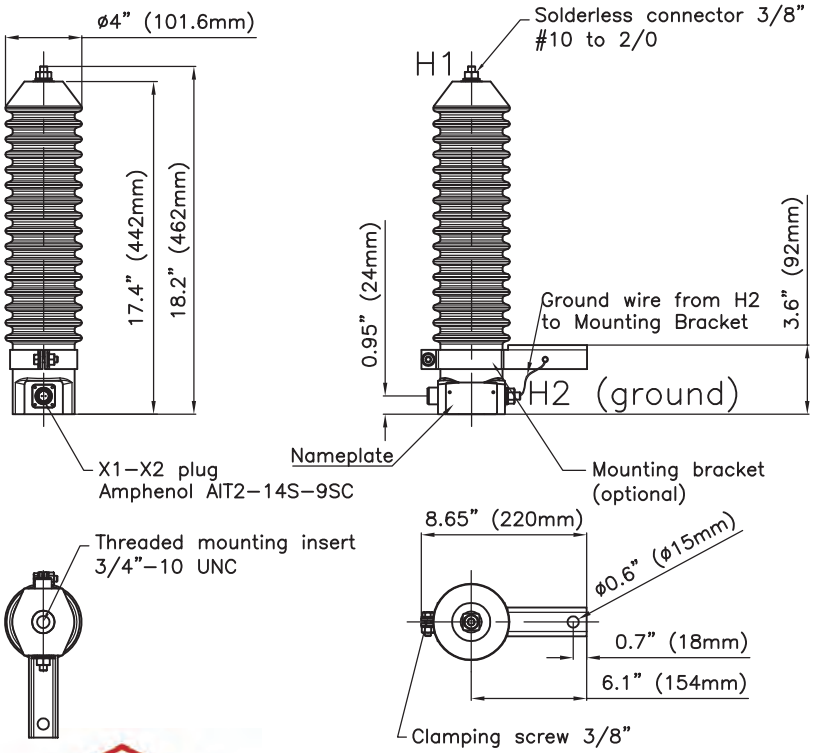
Routine tests in compliance with IEEE and CSA, including partial discharge, are standard. Test cards are included with each unit.

Commissioning and Maintenance

The sensor is supplied ready for service. No special tools are required. Instruction manuals are provided with each shipment.

Voltage Sensor Type: VRF 25-01

Rated Primary Voltage (V)	Rated Secondary Voltage (V)	Ratio	Accuracy	Rated Load/Burden	Catalog Number
14400	1.44	10000:1	1%	1MΩ	122050001.395092
14400	120	120:1	1%	1MΩ	122050001.395300
14400	120	120:1	1%	0.5MΩ	122050001.395301
9480	120	791	1%	5MΩ	122050001.395302
10000	120	83.3:1	1%	1.4MΩ	122050001.395303
13280	120	110.6:1	1%	1MΩ	122050001.395304
14400	6.55	2200:1	1%	1MΩ	122050001.395305
13800	120	115:1	1%	0.5MΩ	122050001.395306
13200	120	110:1	1%	1MΩ	122050001.395307
12000	120	100:1	1%	5MΩ	122050001.395308



Optional Mounting Bracket: Cat# AMB00001
Cable Assembly (Includes MIL Connector):
Cat# ASC00001 - 10 feet
Cat# ASC00002 - 20 feet
Cat# ASC00003 - 30 feet
Cat# ASC00004 - 40 feet
Cat# ASC00005 - 50 feet

Maxium System Voltage	27.5 kV
Power Frequency Withstand Voltage	50 kV
Basic Insulation Level	150 kV
Creepage Distance	21.1"
Strike Distance	13.8"
Weight	12 lbs

Small deviations in weight and dimensions are possible.

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