

MODEL JVW-7 SUPERBUTE™

Outdoor Voltage Transformer

20.125 kV to 34.5 kV,
60 Hz, 150-200 kV BIL



Application

Model JVW-7 is designed for outdoor service and suitable for operating meters, instruments, relays, and control devices. JVW-7 is rated Distribution Class with lighter burden and thermal rating for more efficient application to solid-state metering and other modern relay and control power installations. This model is available in a variety of voltage, ratio and bushing types as outlined in the unit selection table below. Additional designs are available upon request.

Features

- Thermal Rating: 750 VA (55°C rise above 30°C)
- Weight: 140 lbs (unit), 155 lbs (shipping)
- Dimensions: 19" (h) x 13.88" (w) x 17.88" (d)
- Creep Distance: 26.5" [673.1 mm]
- Strike Distance: 17" [431.8 mm]
- Insulation: HY-BUTE 60" Butyl Rubber
- Insulation Class: 150-200 kV BIL, Outdoor
- Primary Winding Style: Lattice-Type
- Design Standard: IEEE C57.13



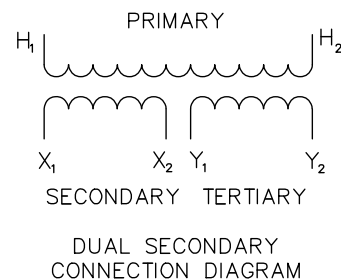
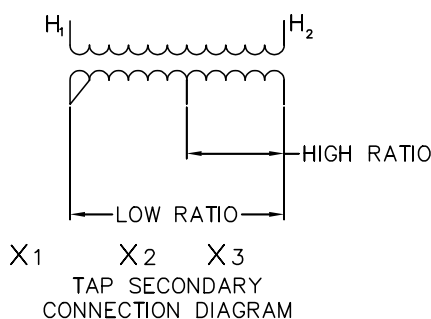
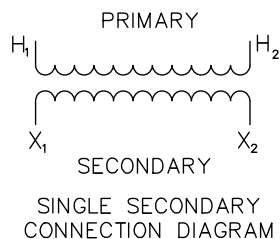
461 Boston Street, Unit E6, Topsfield, MA 01983
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JVW-7 Unit Selection

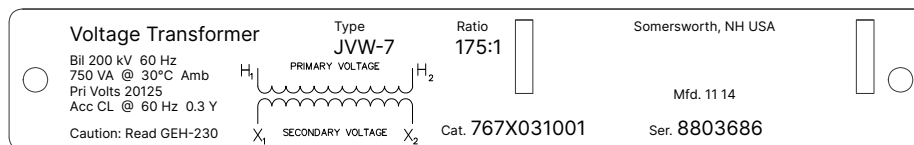
RATED PRIMARY VOLTAGE	RATIO	BIL (kV)	IEEE ACCURACY CLASS, 60 Hz BURDEN ¹	CATALOG NUMBER
Single Bushing Style²				
20,125/34,500GY	175:1	200	0.3 W, X, M, Y	767X031001
20,125/34,500GY	175/300:1	200	0.3 W, X, M, Y	767X031011
20,125/34,500GY	175 & 300:1	200	0.3 W, X, M, Y	767X031012
Double Bushing Style³				
23,000/23,000Y	200:1	150	0.3 W, X, M, Y	767X031004
27,600/27,600Y	240:1	150	0.3 W, X, M, Y	767X031002 ⁴
34,500/34,500Y	300:1	150	0.3 W, X, M, Y	767X031003
23,000/23,000Y	200 & 200:1	150	0.3 W, X, M, Y	767X031007
27,600/27,600Y	240 & 240:1	150	0.3 W, X, M, Y	767X031005
34,500/34,500Y	300 & 300:1	150	0.3 W, X, M, Y	767X031006

1. Voltage transformers of this type are available for use in 50 Hz applications for many ratings. However, IEEE C57.13 to which the transformers were designed and tested to does not apply to 50 Hz. When ordering voltage transformers for 50 Hz applications, provide an accuracy specification including Burden VA and Power Factor. If not specified, the transformer(s) will be tested per standard 60Hz test burdens.
2. Single bushing voltage transformers are suitable for application to grounded systems, for operation line-to-ground only. They will operate without damage connected line-to-ground at 1.40 times former-rated voltage for one minute. If it should become necessary to apply these grounded units to an ungrounded system, please contact for application analysis.
3. Double bushing voltage transformers are suitable for operating line-to-line, line-to-ground or line-to neutral at voltage under line-to-ground operation is the line-to-line voltage divided by $\sqrt{3}$, or approximately 58%. Contact for accuracy rating at reduced operating voltage.
4. Measurement Canada Approval: AE-1056

Wiring Diagrams



Typical Nameplate



Reference Drawings & Accessories

Reference Drawings

- Accuracy Curve at 120 Secondary Volts, 60 Hz - 9689241738
- Excitation Curve - 9689241788
- Outline Drawing - 9932423

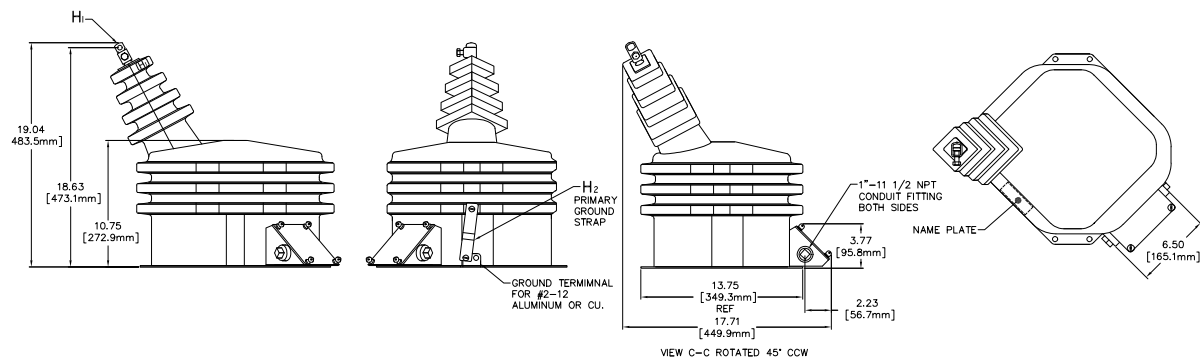
Accessories

- "L" Mounting Brackets - 8944634002
- Channel Bracket - 5466227001
- Suspensions Hooks - 894463001
- Secondary Conduit Box - 9689897001

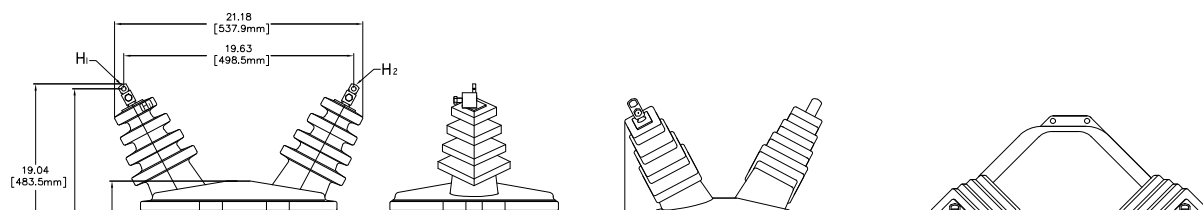
JVW-7 Selection Guide

PRODUCT CLASS	5 kV	8.7 kV	15 kV	25 kV	35 kV	46 kV	69 kV
Station Class		JVW-4	JVW-5	JVS-150	JVS-200	JVS-250	JVS-350
				JVT-150	JVT-200	JVT-250	JVT-350
BIL		75 kV BIL	110 kV BIL	150 kV BIL	200 kV BIL	250 kV BIL	350 kV BIL
Accuracy, kVA Rating		0.3Z, 1.5 kVA	0.3Z, 1.5 kVA	0.3ZZ, 3 kVA	0.3ZZ, 3 kVA	0.3ZZ, 4.5-5 kVA	0.3ZZ, 4.5-5 kVA
Creep Distance		20.4" Creep	20.4" Creep	27-27.5" Creep	35-36" Creep	48-50" Creep	64-66" Creep
Net Weight		105 lbs	105 lbs	225-230 lbs	235-240 lbs	420 - 520 lbs	430-560 lbs
Distribution Class	JVW-3		JVW-110	JVW-6	JVW-7		
BIL	60 kV BIL		110 kV BIL	125-150 kV BIL	150-200 kV BIL		
Accuracy, kVA Rating	0.3Y, 0.75 kVA		0.3Y, 1 kVA	0.3Y, 0.75 kVA	0.3Y, 0.75 kVA		
Creep Distance	13.5" Creep		20.4" Creep	21" Creep	26.5" Creep		
Net Weight	44 lbs		100 lbs	105 lbs	140 lbs		

Single Bushing Dimension Drawing



Two Bushing Dimension Drawing



Conduit Box

A detachable secondary conduit box is provided with the transformer. This die-cast aluminum conduit box is furnished attached to the transformer. Its use permits easy change out of transformers without dismantling rigid conduit structures. The box is provided with two 1 inch threaded conduit hubs on the sides and a 1 inch conduit knockout in the bottom. Each box is furnished complete with aluminum cover, gasket, four sealable cover screws, seal wire, four mounting screws with lock washers, and plastic pipe plugs.

Polarity

The permanently molded primary polarity markings H1 and H2 and the secondary polarity markings X1 and X2 are situated adjacent to their respective terminals. The polarity terminal is designated by use of the subscript 1, and the mark is painted white for better visibility

Baseplate and Mounting

The base is made of stainless-steel. A stainless-steel grounding lug is welded to the baseplate and provides a hole for attaching the grounding connector. Mounting holes or slots are located in each corner of the baseplate. Mounting hardware is supplied with the transformer. The transformer can be mounted with the primary terminals in any position—up, down, or horizontal. It can be bolted directly to a cross-arm attached by “U” bolts or suspension hooks, or mounted on double cross-arms, using channel brackets.

Nameplate

The nameplate is made of stainless-steel and located on the base of the transformer. Information is per IEEE designation, laser-engraved for easy-to-read form. Custom barcoding available upon request.

Rating Identification

The high-voltage rating is identified by large orange digits located on the insulation surface near the top of the transformer. This provides permanent identification that is clearly visible from a distance, and is resistant to fading and abrasion.

Maintenance

These transformers require no maintenance other than an occasional cleaning if installed in an area where air contamination is severe.

