

**Section 2**  
**Outdoor**  
**Voltage Transformers**



120 V to 600 V BIL 10 kV  
Outdoor Voltage

**JVA-0**

50/60 Hz



JVA-0 voltage transformer (unfused)

### Application

Designed for indoor and outdoor service; suitable for operating meters, instruments, relays, control devices, either singly or in combination.

### Regulatory Agency Approvals

Unfused Model ..... UL Recognized, File E96707

### Thermal Ratings (Volt-Amperes)

55°C Rise Above 30°C Ambient ..... 500  
30°C Rise Above 50°C Ambient ..... 300

### Weight - Shipping/Net

(approximate, in pounds)

Unfused, with Primary and Secondary Covers ... 19/16  
Fused, with Secondary Cover ..... 20/17

### Reference Drawings

Accuracy Curve ..... 9689241470  
Outline Drawings:  
Unfused ..... 9926353  
One or two fuses ..... 9926354  
Wiring Diagram ..... refer to page 42, figure 5

### Accessories ..... Catalog Number

Fuse Accessory Kit ..... 8944637078  
(Following parts are included in Kit)  
Primary Fuse Tub Assembly ..... 9926349001  
Primary Fuse Cover ..... 8944637079  
Fuses (not included in Fuse Accessory Kit):  
10 A, 600 V Fuse ..... 9926358001  
6 A, 600 V Fuse ..... 9926358002  
3 A, 600 V Fuse ..... 9926358003

JVA-0 DATA TABLE												
Line-To-Line Circuit Voltage			Transformer Rating ③		Accuracy Classification, 60 Hz				Catalog Number			Fuse 600 V Class
					Burden ①		Burden ②		Unfused	Indoor Use Only		
					W, X, M	Y	W	X		One Primary	Two Primary	
Δ①	Y②	Y④	Primary Voltage	Ratio								
120	120	208	120	1:1	0.3	0.6	0.3	0.6	760X034001	760X034064	760X034022	10A
240	240	416	240	2:1	0.3	0.6	0.3	0.6	760X034002	760X034065	760X034023	6A
--	--	480	288	2.4:1	0.3	0.6	--	--	760X034004	760X034067	760X034025	6A
--	--	480	300	2.5:1	0.3	0.6	--	--	760X034005	760X034068	760X034026	6A
480	480	--	480	4:1	0.3	0.6	0.3	0.6	760X034006	760X034069	760X034027	3A
600	600	--	600	5:1	0.3	0.6	0.3	0.6	760X034007	760X034070	760X034028	3A

Notes:

- ① Operated at rated voltage; secondary at 120 V.
- ② Operated at 58% of rated voltage; secondary at 69.4 V.
- ③ For continuous operation, the transformer rated primary voltage should not be exceeded by more than 10%. Under emergency conditions, overvoltage must be limited to 1.25 times the transformer primary voltage rating.
- ④ For Y connections, it is preferred practice to connect one lead from each voltage transformer directly to the grounded neutral, using a fuse only in the line side of the primary. By this connection a transformer can never be "alive" from the line side by reason of a blown fuse on the grounded side.



Data subject to change without notice.

**Construction and Insulation**

Please refer to General Product Information, item 1.7.

**Core and Coils**

The primary and secondary coils are precision wound on an insulated spool. The primary is sandwiched between two secondary coils that are connected in parallel. The primary and secondary coils are then cast in epoxy resin. A dispersed-gap silicon core is then positioned through the center and around the outside of this combined coil.

**Primary Terminals**

These compression terminals, identified as H<sub>1</sub> and H<sub>2</sub>, are conveniently located on top of the transformer. They are fixed, tin-plated, brass posts with holes to accommodate No. 6 to No. 14 wire sizes. The brass screws for securing wires to the posts are tin-plated.

To provide an easy means of establishing voltage identification, each transformer has the primary and secondary voltages stenciled in large, orange digits on the butyl surface, directly below the terminal locations.

**Fusing**

An accessory kit consisting of a primary fuse tab, primary fuse and cover can be supplied, without the fuses. When added to the unfused design, the transformer is converted to a fused model. These parts are made of LEXAN® resin, with the primary fuse cover transparent for added safety. Refer to the Fuses

information under the Accessories in this data sheet for catalog numbers.

**Secondary Terminals**

These compression terminals, identified as X<sub>1</sub> and X<sub>2</sub>, are conveniently located on top of the transformer. They are fixed, tin-plated, brass posts with holes to accommodate No. 6 to No. 14 wire sizes. The brass screws for securing wires to the posts are tin-plated.

**Cover**

A transparent, LEXAN® secondary-terminal cover is furnished without charge when ordered with the transformer. This cover provides a safe means of observing the electrical connections without requiring its removal.

**Polarity**

Please refer to General Product Information, item 7.1.

**Baseplate and Mounting**

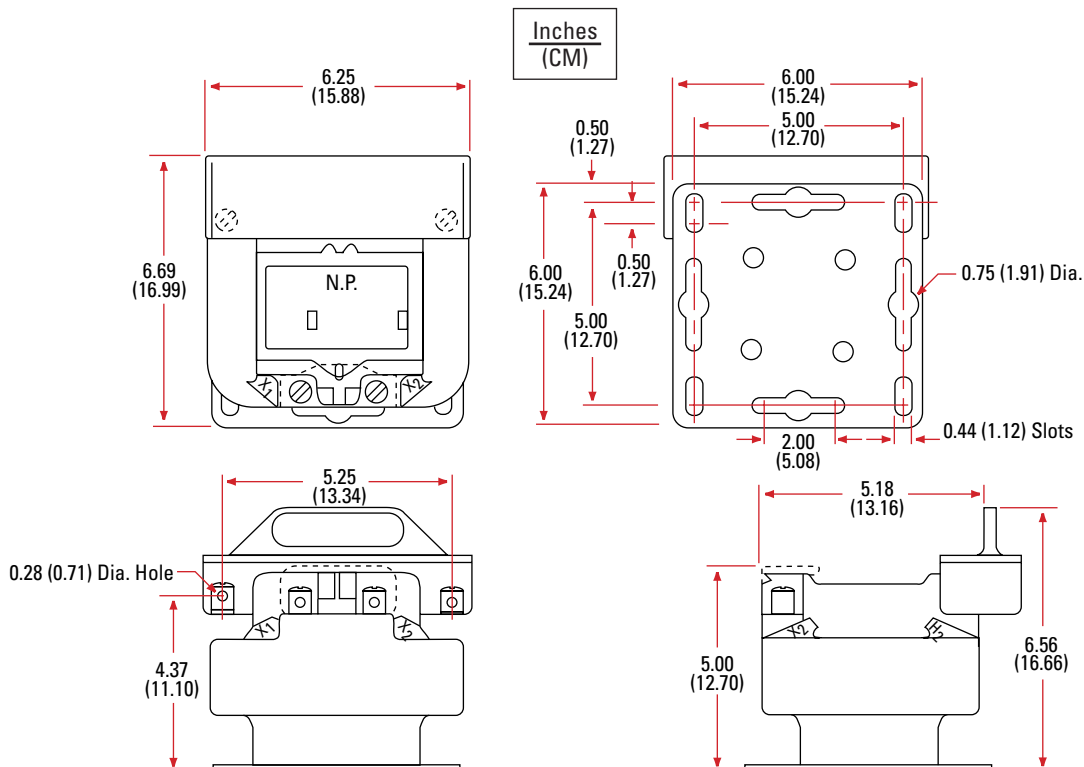
The unfused unit has a removable stainless-steel base. This unit is usable for either gang or cluster mounting on special brackets manufactured for this purpose. Special brackets, Types TMB-3, TMB-3W, and QTMB are available.

**Nameplate**

Please refer to General Product Information, item 6.1.

**Maintenance**

Please refer to General Product Information, item 10.1 and pages 24-27.



**JVA-0 mechanical dimensions**



*Data subject to change without notice.*

240 V to 600 V BIL 30 kV  
**Outdoor Voltage**  
**JVP-1**  
 50/60 Hz



**JVP-1 voltage transformer**  
*(two primary fuses with fuse covers)*

**Application**

Designed for indoor and outdoor service; suitable for operating meters, instruments, relays, and control devices.

**Thermal Ratings (Volt-Amperes)**

55°C Rise Above 30°C Ambient ..... 750  
 30°C Rise Above 50°C Ambient ..... 500

**Weight - Shipping/Net**

*(approximate, in pounds)*

Unfused ..... 35/30  
 With Two Primary Fuses ..... 38/33

**Reference Drawings**

Accuracy Curve ..... 9689241831

Outline Drawings:

Unfused with Primary Terminal Bushing . A9925192

Unfused with Primary Terminal Cover ..... A9925193

Two Fuse ..... A9925195

Wiring Diagram ..... refer to page 42, figure 5

**Accessories ..... Catalog Number**

Fuses; 5 A, 600 V ..... 9F60AAA005

Secondary Terminal Conduit Box ..... 9925183001

**JVP-1 DATA TABLE**

Line-To-Line Circuit Voltage ④			Transformer Rating ③		Accuracy Classification, 60 Hz			Catalog Number			Fuse 600 V Class
					Burden ①		Burden ②	Unfused		Two Fuses, Indoor Use	
Δ ①	Y ②	Y ①	Primary Voltage	Ratio	W, X, M, Y	Z	W, X	Primary Terminal Bushings	Primary Terminal Cover		761X020001
240	240	416	240	2:1	0.3	1.2	0.6	761X030001	761X030006	761X020001	
--	--	480	288	2.4:1	0.3	1.2	--	761X030002	761X030007	761X020002	5A
--	--	480	300	2.5:1	0.3	1.2	--	761X030003	761X030008	761X020003	5A
480	480	--	480	4:1	0.3	1.2	0.6	761X030004	761X030009	761X020004	5A
600	600	--	600	5:1	0.3	1.2	0.6	761X030005	761X030010	761X020005	5A

Notes:

① Operated at rated voltage; secondary at 120 V.

② Operated at 58% of rated voltage; secondary at 69.4 V.

③ For continuous operation, the transformer rated primary voltage should not be exceeded by more than 10%. Under emergency conditions, overvoltage must be limited to 1.25 times the transformer primary voltage rating.

④ For Y connections, it is preferred practice to connect one lead from each voltage transformer directly to the grounded neutral, using a fuse only in the line side of the primary. By this connection a transformer can never be "alive" from the line side by reason of a blown fuse on the grounded side.



*Data subject to change without notice.*

**Construction and Insulation**

Please refer to General Product Information, items 1.2 and 1.8.

**Core and Coils**

The core is made of high quality grain-oriented silicon steel strip which is carefully selected, tested, and annealed under rigidly controlled conditions. It is wound into a rectangular shape to fit the coils. Both primary and secondary coils are layer wound and designed to give a low regulation to achieve high accuracy levels.

**Primary Terminals**

The primary terminals are located on the top of the transformer. They consist of 1/4 inch-20 screws, with lock washers and cup washers.

Unfused models are available with either a primary terminal cover or primary terminal bushings. The terminal cover is a sealable, molded-phenolic cover, which fits over the primary terminals to provide primary circuit insulation and to prevent tampering. When bushings are provided, the primary terminals are located on top of raised, cylindrical tapping bushings to improve ease of taping the connection between the primary circuit conductors and the terminals. When primary terminal bushings are provided, a terminal cover cannot be accommodated.

On the two-fuse models, the primary terminals are attached directly to the fuse supports.

**Fuse Covers**

Fuse covers with seal tabs are furnished assembled on the two-fuse model of the JVP-1. These covers are molded of HY-BUTE/60 insulation.

**Secondary Terminals**

The secondary terminals are located at the lower front of the transformer, and are specifically designed to be accessible from the top of the transformer. The secondary terminals are 1/4 inch-20 screws with lock washers. The secondary terminal cover is molded of black phenolic resin, and is completely waterproof.

**Conduit Box**

A secondary terminal conduit box is available as an option in place of the standard secondary terminal cover. The conduit box and cover are made of corrosion-resistant, zinc-coated steel. The conduit box is fitted with two 1 inch conduit hubs, a 3/4 inch and 1 inch knockout, one pipe plug, polarity markers, and a gasketed cover, secured by four sealable captive thumbscrews.

**Polarity**

Please refer to General Product Information, item 7.1.

**Baseplate and Mounting**

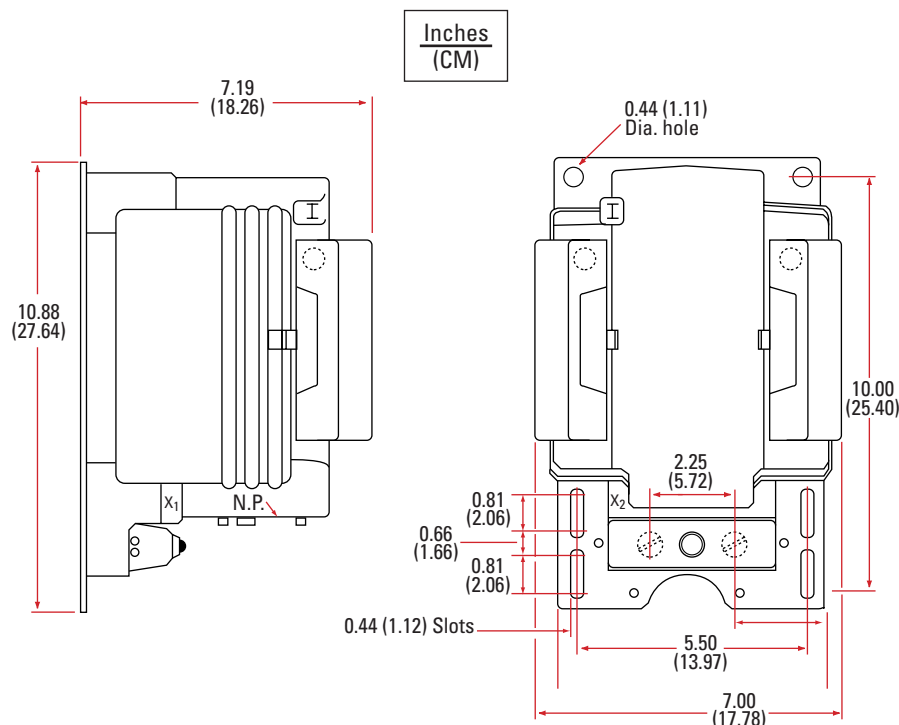
Please refer to General Product Information, item 5.1.

**Nameplate**

Please refer to General Product Information, item 6.9.

**Maintenance**

Please refer to General Product Information, item 10.1 and pages 24-27.



JVP-1 voltage transformer (unfused)



Data subject to change without notice.

**2,400 V to 4,800 V BIL 60 kV**  
**Outdoor Voltage**  
**JVW-3**  
**50/60 Hz**



*JVW-3 voltage transformer*

**Application**

Designed for outdoor service; suitable for operating meters, instruments, relays, and control devices.

**Thermal Rating (Volt-Amperes)**

55°C Rise above 30°C Ambient ..... 750

**Weight - Shipping/Net**

(approximate, in pounds)

Transformer ..... 48/44

**Reference Drawings**

Accuracy Curve at

120 Secondary Volts, 60 Hz ..... 9689241268

Excitation Curve ..... 5454043

Outline Drawing ..... 8949945

Wiring Diagram ..... refer to page 42, figure 5

**Accessories ..... Catalog Number**

Mounting Hardware

“L” Mounting Brackets ..... 8944634001

Auxiliary “L” Mounting Brackets ..... 8944270

Suspension Hooks ..... 8944630

Channel Bracket ..... 5466227001

Secondary Conduit Box ..... 9689897001

**JVW-3 DATA TABLE**

Line-To-Line Circuit Voltage For Permissible Primary Connection			Transformer Rating ①		ANSI Accuracy Classification, 60 Hz			Catalog Number
					Burden Per ANSI		Burden Impedance as at Rated Voltage but Operated at 58% Rated Voltage ③	
					Operated at Rated Voltage	Operated at 58% of Rated Voltage ②		
Δ	Y	Y Only	Primary Voltage	Ratio				
2400	2400	4160	2400	20:1	0.3 W, X, M, Y; 1.2 Z	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'	<b>763X030001</b>
4200	4200	---	4200	35:1	0.3 W, X, M, Y; 1.2 Z	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'	<b>763X030002</b>
4800	4800	---	4800	40:1	0.3 W, X, M, Y; 1.2 Z	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'	<b>763X030003</b>

Notes:

- ① For continuous operation, the transformer-rated primary voltage should not be exceeded by more than 10%. Under emergency conditions, over-voltage must be limited to 1.25 times the transformer primary-voltage rating.
- ② Applies to transformers connected Y-Y on a circuit in which the line-to-line voltage is the same as the transformer-rated primary voltage. In each case, the transformer is operated with reduced voltage and reduced excitation (58% of normal). In

determining the accuracy classification under such conditions, the Volt-Ampere rating of the burden is maintained constant, regardless of the transformer secondary voltage.

- ③ The prime symbol (') is used to signify that these burdens do not correspond to standard ANSI definitions.



*Data subject to change without notice.*

**Construction and Insulation**

Please refer to General Product Information, item 1.4.

**Core and Coils**

Please refer to General Product Information, item 3.8.

**Primary  
Terminals**

Please refer to General Product Information, item 4.6.

**Secondary  
Terminals**

Please refer to General Product Information, item 4.21.

**Ground Terminal**

Please refer to General Product Information, item 4.24.

**Conduit Box**

Please refer to General Product Information, item 12.1.

**Polarity**

Please refer to General Product Information, item 7.2.

**Baseplate and Mounting**

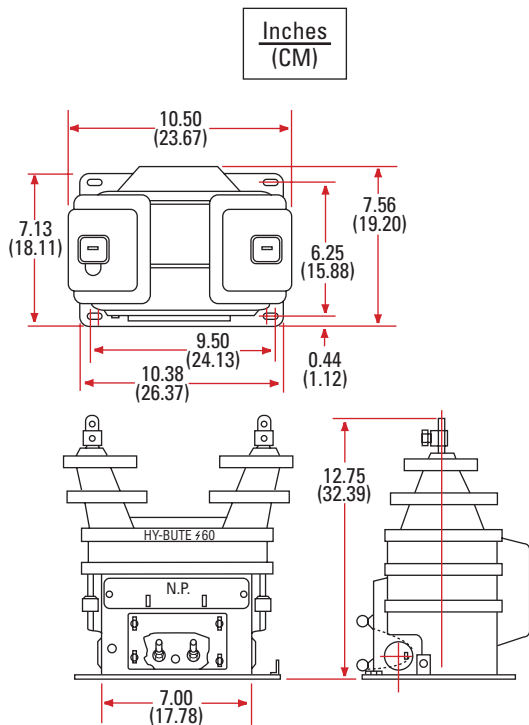
Please refer to General Product Information, item 5.3, 5.15, and the Applications Information Section of this volume.

**Nameplate**

Please refer to General Product Information, item 6.4.

**Maintenance**

Please refer to General Product Information, item 10.1 and pages 24-27.



**JWV-3 mechanical dimensions**



Data subject to change without notice.

**2,400 V to 14,400 V BIL 75 kV to 110 kV**  
**Outdoor Voltage**  
**JVW-4/JVW-5**  
**60 Hz**



When choosing your GE Instrument Transformer, don't forget to explore the benefits of using GE's 0.15 accuracy class AccuBute line. See page 2.10.



*JVW-4 -5, two-bushing model*

**Application**

Designed for outdoor service; suitable for operating meters, instruments, relays, and control devices.

**Thermal Rating (Volt-Amperes)**

55°C Rise above 30°C Ambient ..... 1500

**ANSI Meter Accuracy Classification, 60 Hz**

Operated at rated voltage  
 W, X, M, Y, Z; all models ..... 0.3  
 ZZ; all models ..... 1.2  
 Operated at 58% of rated voltage ②  
 W, X, M, Y; all models ..... 0.3  
 Z; all models ..... 1.2  
 Burden impedance as at rated voltage, but operated at 58% of rated voltage ③  
 W', X' M', Y', Z'; all models ..... 0.3

**Weight - Shipping/Net**

(approximate, in pounds)

Transformer ..... 120/105

**Reference Drawings**

**JVW-4**

Accuracy Curve at  
 120 Secondary Volts, 60 Hz ..... 9689241659  
 Excitation Curves:  
 60:1 & 70:1 ..... 9689241591  
 100:1 & 120:1 ..... 9689241629  
 Outline Drawing; Two-Bushing  
 Transformer ..... 9932529  
 Wiring Diagram ..... refer to page 42, figure 5

**JVW-4/JVW-5 DATA TABLE**

Line-To-Line Circuit Voltage For Permissible Primary Connection				Transformer Rating ①		Catalog Number			
						JVW-4	JVW-5		
Δ				Primary Voltage		BIL 75 kV	BIL 110 kV		
						Two-Bushing Model	Single-Bushing Model	Two-Bushing Model	
2,400				2,400	20:1	764X030011	---	---	
4,200				4,200	35:1	764X030012	---	---	
4,800				4,800	40:1	764X030013	---	---	
7,200				7,200	60:1	764X030014	---	---	
---				7200 ⑤	7,200	60:1	---	765X030051	765X030042
---				8400 ⑥	8,400	70:1	---	765X030052	765X030044
12,000				12,000	100:1	---	---	765X030045	---
14,400				14,400	120:1	---	---	765X030046	---

Notes:

- ① For continuous operation, the transformer-rated primary voltage should not be exceeded by more than 10%. Under emergency conditions, over-voltage must be limited to 1.25 times the transformer primary-voltage rating for two-bushing models, and 1.40 times the rating for single-bushing models.
- ② Applies to transformers connected Y-Y on a circuit in which the line-to-line voltage is the same as the transformer-rated primary voltage. In each case, the transformer is operated with reduced voltage and reduced excitation (58% of normal). In

determining the accuracy classification under such conditions, the Volt-Ampere rating of the burden is maintained constant, regardless of the transformer secondary voltage.

- ③ The prime symbol (') is used to signify that these burdens do not correspond to standard ANSI definitions.
- ④ Single-bushing design with removable grounding strap.
- ⑤ 12,470 in Y configuration.
- ⑥ 14,560 in Y configuration.



Data subject to change without notice.

**JVV-5**

Accuracy Curve at  
120 Secondary Volts, 60 Hz ..... 9689241659

Excitation Curves:  
60:1 & 70:1 ..... 9689241591  
100:1 & 120:1 ..... 9689241629

Outline Drawings:  
Two-Bushing Model ..... 9932529  
Single-Bushing Model ..... 9932530

Wiring Diagram ..... refer to page 42, figure 5

**Accessories ..... Catalog Number**

Mounting Hardware

“L” Mounting Brackets ..... 8944634002  
Channel Bracket ..... 5466227001  
Suspension Hooks ..... 8944630001

Secondary Conduit Box ..... 9689897001

**Construction and Insulation**

Please refer to General Product Information, item 1.4.

**Core and Coils**

Please refer to General Product Information, item 3.8.

**Primary Terminals**

Please refer to General Product Information, item 4.6.

**Secondary Terminals**

Please refer to General Product Information, item 4.18.

**Ground Terminal**

Please refer to General Product Information, item 4.23.

**Conduit Box**

Please refer to General Product Information, item 12.1.

**Polarity**

Please refer to General Product Information, item 7.2.

**Baseplate and Mounting**

Please refer to General Product Information, items 5.3, 5.15, and the Applications Information Section of this volume.

**Nameplate**

Please refer to General Product Information, item 6.4.

**Rating Identification**

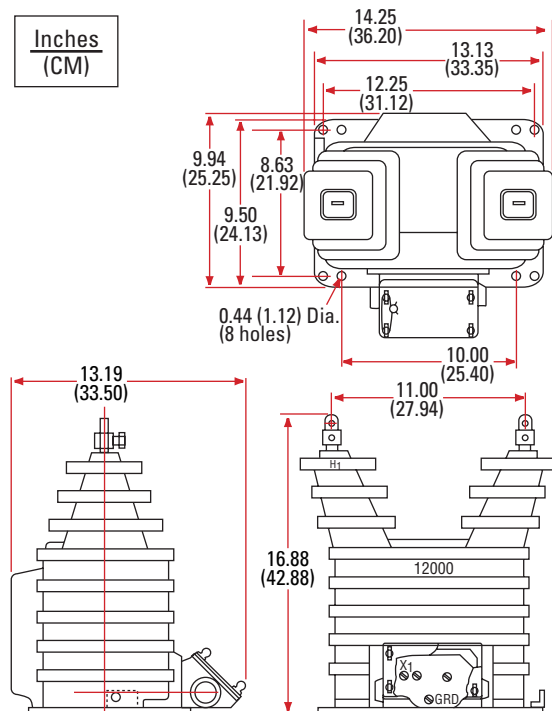
Please refer to General Product Information, item 13.1.

**Maintenance**

Please refer to General Product Information, item 10.1 and pages 24-27.

**Note:**

1. Voltage transformers of this type are available for use in 50 Hz applications in many ratings. However, Industry Standard IEEE 57.13 to which we test transformers does not apply at 50 Hz. Customers who order voltage transformers for 50 Hz application should provide an accuracy specification including Burden VA and Power Factor. If an accuracy specification is not made available, the transformer(s) will be tested at 60 Hz with test burdens as defined in IEEE 57.13 for 60 Hz application.



JVV-4/JVV-5 mechanical dimensions



Data subject to change without notice.

2,400 V to 14,400 V BIL 75 kV to 110 kV  
Outdoor Voltage

# JVW-4A/JVW-5A

60 Hz



JVW-4A -5A, two-bushing transformer

## Application

Designed for outdoor service; suitable for operating meters, instruments, relays, and control devices. These transformers have 0.15 accuracy when operated within  $\pm 10$  percent of rated voltage within their burden capability.

## Thermal Rating (Volt-Amperes)

55°C Rise above 30°C Ambient ..... 2000

## ANSI Meter Accuracy Classification, 60 Hz

W, X, M, Y, Z; all models ..... 0.3

## ACCUBUTE Accuracy Classification, 60 Hz

W, X, M, Y, all models ..... 0.15

## Weight - Shipping/Net

(approximate, in pounds)

Transformer ..... 120/105

## Reference Drawings

### JVW-4A

Accuracy Curve at

120 Secondary Volts, 60 Hz ..... 9932600132

Excitation Curve ..... 9932600134

Outline Drawing:

Two-Bushing Model ..... 9935466

Wiring Diagram ..... refer to page 42, figure 5

### JVW-5A

Accuracy Curve at

120 Secondary Volts, 60 Hz ..... 9932600132

Excitation Curve ..... 9932600134

Outline Drawings:

Two-Bushing Model ..... 9935466

Single-Bushing Model ..... 9935467

Wiring Diagram ..... refer to page 42, figure 5

JVW-4A/JVW-5A DATA TABLE

Line-To-Line Circuit Voltage For Permissible Primary Connection			Transformer Rating ①		Catalog Number		
					JVW-4A	JVW-5A	
					BIL 75 kV	BIL 110 kV	
$\Delta$	Y	Y Only	Primary Voltage	Ratio	Two-Bushing Model	Single-Bushing Model	Two-Bushing Model
2,400	2,400	4,160	2,400	20:1	764X031011	---	---
4,200	4,200	7,280	4,200	35:1	764X031012	---	---
4,800	4,800	8,320	4,800	40:1	764X031013	---	765X032041
7,200	7,200	---	7,200	60:1	764X031014	---	---
7,200	7,200	12,470	7,200	60:1	---	765X032051	765X032042
7,620	7,620	13,200	7,620	63.5:1	---	---	765X032043
8,400	8,400	14,550	8,400	70:1	---	765X032052	765X032044
---	---	12,000	12,000	100:1	---	---	765X032045
14,400	14,400	14,400	---	120:1	---	---	765X032046

Note

① For continuous operation, the transformer-rated primary voltage should not be exceeded by more than 10%. Under emergency conditions, over-voltage must be limited to 1.25 times the transformer primary-voltage rating for two-bushing models, and 1.40 times the rating for single-bushing models.



Data subject to change without notice.

**Accessories ..... Catalog Number**

Mounting Hardware	
“L” Mounting Brackets .....	8944634002
Suspension Hooks .....	5466227001
Channel Bracket .....	8944630001
Secondary Conduit Box .....	9689897001

**Construction and Insulation**

Please refer to General Product Information, item 1.4.

**Core and Coils**

Please refer to General Product Information, item 3.8.

**Primary**

**Terminals**

Please refer to General Product Information, item 4.6.

**Secondary**

**Terminals**

Please refer to General Product Information, item 4.18.

**Ground Terminal**

Please refer to General Product Information, item 4.23.

**Conduit Box**

Please refer to General Product Information, item 12.1.

**Polarity**

Please refer to General Product Information, item 7.2.

**Baseplate and Mounting**

Please refer to General Product Information, items 5.3, 5.15, and the Applications Information Section of this volume.

**Nameplate**

Please refer to General Product Information, item 6.4.

**Rating Identification**

Please refer to General Product Information, item 13.1.

**Maintenance**

Please refer to General Product Information, item 10.1 and pages 24-27.



**7,200 V to 14,400 V BIL 110 kV**  
**Outdoor Voltage**  
**JVW-110**  
**60 Hz**



**JVW-110 two-bushing model**

**Application**

Designed for outdoor service; the Type JVW-110 is a metering voltage transformer specifically designed to meet the requirements of 15 kV outdoor metering applications.

**Thermal Rating (Volt-Amperes)**

55°C Rise above 30°C Ambient; all models ..... 1,000

**Weight - Shipping/Net**

(approximate, in pounds)

Transformer ..... 120/105

**Reference Drawings**

Accuracy Curve at

120 Secondary Volts, 60 Hz ..... 9932600214

Excitation Curve; 60:1 ..... 9689241980

Outline Drawings:

Two-Bushing Model ..... 9932529

Single-Bushing Model ..... 9932530

Wiring Diagram ..... refer to page 42, figure 5

**Accessories ..... Catalog Number**

Mounting Hardware:

“L” Mounting Brackets ..... 8944634002

Channel Bracket ..... 5466227001

Suspension Hooks ..... 8944630001

Secondary Conduit Box ..... 9689897001

JVW-110 DATA TABLE												
Line-To-Line Circuit Voltage For Permissible Primary Connection				ANSI Accuracy Classification, 60 Hz							Catalog Number	
				Transformer Rating ①		Burden Per ANSI		Burden Impedance as at Rate Voltage but Operated @ 58% Rated Voltage ③	Single- Bushing Model	Two- Bushing Model		
						Operated at Rated Voltage	Operated at 58% of Rated Voltage ②					
Δ	Y	Y Only	GY Only ④	Primary Voltage	Ratio							
---	---	---	7,200 ⑤	7,200	60:1	0.3 W, X, M, Y	0.3 W, X, M, Y	0.3 W', X', M', Y'	765X031115	765X031111		
---	---	---	8,400 ⑥	8,400	70:1	0.3 W, X, M, Y	0.3 W, X, M, Y	0.3 W', X', M', Y'	765X031116	765X031112		
12,000	12,000	12,000	---	12,000	100:1	0.3 W, X, M, Y	0.3 W, X, M, Y	0.3 W', X', M', Y'	---	765X031113		
14,400	14,400	14,400	---	14,400	120:1	0.3 W, X, M, Y	0.3 W, X, M, Y	0.3 W', X', M', Y'	---	765X031114		

Notes:

① For continuous operation, the transformer-rated primary voltage should not be exceeded by more than 10%. Under emergency conditions, over-voltage must be limited to 1.25 times the transformer primary-voltage rating for two-bushing models, and 1.40 times the rating for single-bushing models.

② Applies to transformers connected Y-Y on a circuit in which the line-to-line voltage is the same as the transformer-rated primary voltage. In each case, the transformer is operated with reduced voltage and reduced excitation (58% of normal). In determining the accuracy classification under such conditions, the Volt-Ampere rating of the burden is maintained constant, regardless of the transformer secondary voltage.

③ The prime symbol (') is used to signify that these burdens do not correspond to standard ANSI definitions.

④ Single-bushing design with removable grounding strap.

⑤ 12,470 in Y configuration.

⑥ 14,560 in Y configuration.



Data subject to change without notice.

**Construction and Insulation**

Please refer to General Product Information, item 1.4.

**Core and Coils**

A formed core of the shell type is used. Enamel insulated wire is used in the primary and secondary coils. The primary is lattice-wound and cast in epoxy resin. The secondary is inside the primary next to the core.

**Primary**

**Terminals**

Please refer to General Product Information, item 4.6.

**Secondary**

**Terminals**

Please refer to General Product Information, item 4.18.

**Ground Terminal**

Please refer to General Product Information, item 4.23.

**Conduit Box**

Please refer to General Product Information, item 12.1.

**Polarity**

Please refer to General Product Information, item 7.2.

**Baseplate and Mounting**

Please refer to General Product Information, items 5.3, 5.15, and the Applications Information Section of this volume.

**Nameplate**

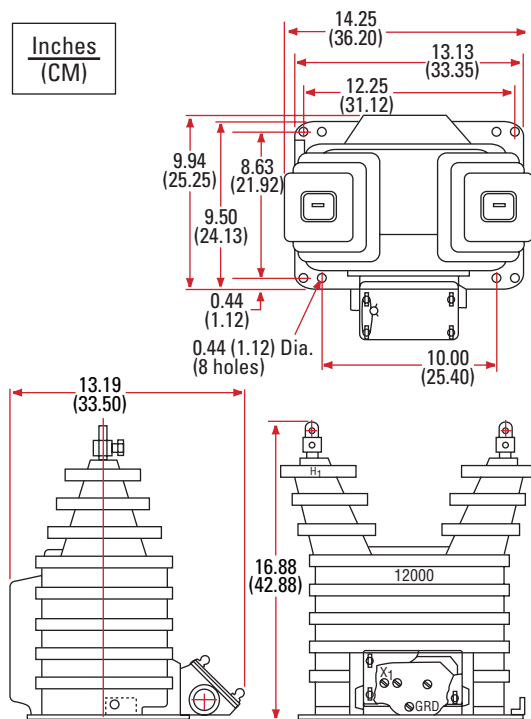
Please refer to General Product Information, item 6.4.

**Rating Identification**

Please refer to General Product Information, item 13.1.

**Maintenance**

Please refer to General Product Information, item 10.1 and pages 24-27.



JVW-110 mechanical dimensions



Data subject to change without notice.

12,000 V to 24,000 V BIL 125 kV  
Outdoor Voltage  
**JVW-6**  
60 Hz



When choosing your GE Instrument Transformer, don't forget to explore the benefits of using GE's 0.15 accuracy class AccuBute line. See page 37.



JVW-6 two-bushing model

### Application

Designed for outdoor service; the Type JVW-6 is a metering voltage transformer specifically designed to meet the requirements of 25 kV outdoor metering applications.

### Thermal Rating (Volt-Amperes)

55°C Rise Above 30°C Ambient; all models ..... 750

### Weight - Shipping/Net

(approximate, in pounds)  
Transformer ..... 120/105

### Reference Drawings

Accuracy Curve at  
120 Secondary Volts, 60 Hz ..... 9689241738  
Excitation Curve ..... 9689241788  
Outline Drawings:  
Two-Bushing Model ..... 9930950  
Single-Bushing Model ..... 9930949  
Wiring Diagram ..... refer to page 42, figure 5

### Accessories ..... Catalog Number

Mounting Hardware:  
"L" Mounting Brackets ..... 8944634002  
Channel Bracket ..... 5466227001  
Suspension Hooks ..... 8944630001  
Secondary Conduit Box ..... 9689897001

JVW-6 DATA TABLE

Line-To-Line Circuit Voltage For Permissible Primary Connection	Transformer Rating ①		ANSI Accuracy Classification, 60 Hz			Catalog Number			
			Burden Per ANSI		Burden Impedance as at Rate Voltage but Operated at 58%	Single- Bushing Model	Two- Bushing Model		
			Operated at Rated Voltage	Operated at 58% of Rated Voltage					
Δ	Y	Y Only	GY Only ①	Primary Voltage Ratio	Operated at Rated Voltage	Operated at 58% of Rated Voltage	Burden Impedance as at Rate Voltage but Operated at 58%	Single- Bushing Model	Two- Bushing Model
---	---	---	12,000 ④	12,000 100:1	0.3 W, X, M, Y	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'	766X031001	---
---	---	---	14,400 ⑤	14,400 120:1	0.3 W, X, M, Y	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'	766X031002	766X031006
18,000 ②	18,000 ②	18,000 ②	---	18,000 150:1	0.3 W, X, M, Y	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'	---	766X031003
24,000 ②	24,000 ②	24,000 ②	---	24,000 200:1	0.3 W, X, M, Y	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'	---	766X031004

Notes:

- ① These single bushing 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 the transformer-rated voltage for one minute. If it should become necessary to apply these grounded wye voltage transformers to an ungrounded system, refer to the nearest General Electric Sales Office for a system analysis study.
- ② These two-bushing transformers are designed for operation line-to-line. They may also be operated line-to-ground or line-to-neutral at reduced voltage (58% of rated voltage).

- ③ The prime symbol (') is used to signify that these burdens do not correspond to standard ANSI definitions.
- ④ 20,780 in Y configuration.
- ⑤ 24,940 in Y configuration.



Data subject to change without notice.



**12,000 V to 24,000 V BIL 150 kV**  
**Outdoor Voltage**  
**JVW-150**  
**60 Hz**



*JVW-150 single-bushing model*

**Application**

Designed for outdoor service; the Type JVW-150 is a metering voltage transformer specifically designed to meet the requirements of 25 kV outdoor metering applications.

**Thermal Rating (Volt-Amperes)**

55°C Rise Above 30°C Ambient; all models ..... 750

**Weight - Shipping/Net**

*(approximate, in pounds)*

Transformer ..... 155/140

**Reference Drawings**

Accuracy Curve at

120 Secondary Volts, 60 Hz ..... 9932600220

Excitation Curve ..... 9932600167

Outline Drawings:

Two-Bushing Model ..... 9935492

Single-Bushing Model ..... 9935491

Wiring Diagram ..... refer to page 42, figure 5

**Accessories ..... Catalog Number**

Mounting Hardware:

“L” Mounting Brackets ..... 8944634002

Channel Bracket ..... 5466227001

Suspension Hooks ..... 8944630001

Secondary Conduit Box ..... 9689970001

**JVW-150 DATA TABLE**

Line-To-Line Circuit Voltage For Permissible Primary Connection				Transformer Rating ①	ANSI Accuracy Classification, 60 Hz			Catalog Number	
					Burden Per ANSI		Burden Impedance as at Rate Voltage but Operated at 58% Rated Voltage ③	Single Bushing Model	Two- Bushing Model
					Operated at Rated Voltage	Operated at 58% of Rated Voltage			
Δ	Y	Y Only	GY Only ④	Primary Voltage Ratio	Operated at Rated Voltage	Operated at 58% of Rated Voltage	Operated at Rated Voltage		
---	---	---	12,000 ④	12,000 100:1	0.3 W, X, M, Y	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'	766X034001	---
---	---	---	14,400 ⑤	14,400 120:1	0.3 W, X, M, Y	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'	766X034002	766X034006
18,000 ②	18,000 ②	18,000 ②	---	18,000 150:1	0.3 W, X, M, Y	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'	---	766X034003
24,000 ②	24,000 ②	24,000 ②	---	24,000 200:1	0.3 W, X, M, Y	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'	---	766X034004

Notes:

- ① These single bushing 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 the transformer-rated voltage for one minute. If it should become necessary to apply these grounded wye voltage transformers to an ungrounded system, refer to the nearest General Electric Sales Office for a system analysis study.
- ② These two-bushing transformers are designed for operation line-to-line. They may also be operated line-to-ground or line-to-neutral at reduced voltage (58% of rated voltage).

- ③ The prime symbol (') is used to signify that these burdens do not correspond to standard ANSI definitions.
- ④ 20,780 in Y configuration.
- ⑤ 24,940 in Y configuration.



*Data subject to change without notice.*

**Construction and Insulation**

Please refer to General Product Information, item 1.4.

**Core**

Please refer to General Product Information, item 2.4.

**Coils**

Please refer to General Product Information, item, 3.2.

**Primary Terminals**

Please refer to General Product Information, item 4.6.

**Secondary Terminals**

Please refer to General Product Information, item 4.18.

**Ground Terminal**

Please refer to General Product Information, item 4.23.

**Conduit Box**

Please refer to General Product Information, item 12.1.

**Polarity**

Please refer to General Product Information, item 7.1.

**Baseplate and Mounting**

Please refer to General Product Information, items 5.3, 5.15 and the Application Information Section of this volume.

**Nameplate**

Please refer to General Product Information, item 6.2.

**Rating Identification**

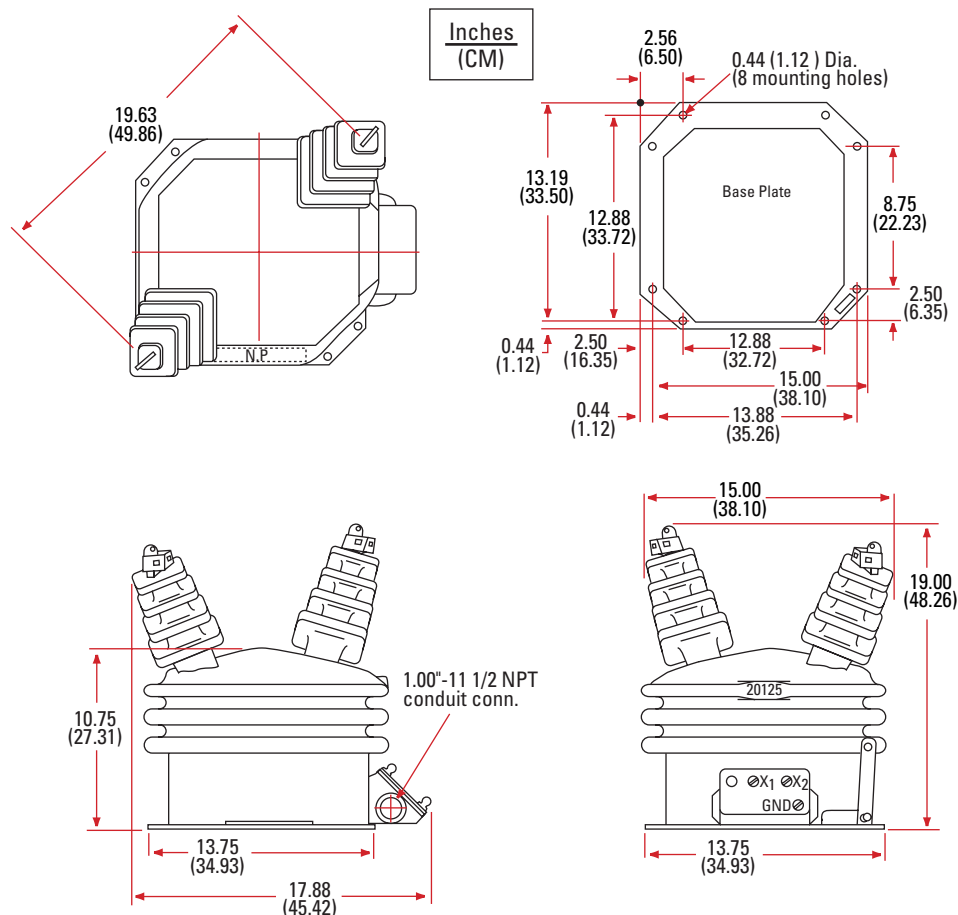
Please refer to General Product Information, item 13.1.

**Maintenance**

Please refer to General Product Information, item 10.1 and pages 24-27.

Note:

1. Voltage transformers of this type are available for use in 50 Hz applications in many ratings. However, Industry Standard IEEE 57.13 to which we test transformers does not apply at 50 Hz. Customers who order voltage transformers for 50 Hz application should provide an accuracy specification including Burden VA and Power Factor. If an accuracy specification is not made available, the transformer(s) will be tested at 60 Hz with test burdens as defined in IEEE 57.13 for 60 Hz application.



JVV-150 mechanical dimensions (two-bushing model shown)



Data subject to change without notice.

**20,125 V to 34,500 V  
Outdoor Voltage  
JVW-7  
60 Hz**



When choosing your GE Instrument Transformer, don't forget to explore the benefits of using GE's 0.15 accuracy class AccuBute line. See page 37.



*JVW-7 single-bushing model*

**Application**

Designed for outdoor service; the Type JVW-7 is a metering voltage transformer specifically designed to meet the requirements of outdoor metering applications.

**Thermal Rating (Volt-Amperes)**

55°C Rise Above 30°C Ambient; all models ..... 750

**Weight - Shipping/Net**

(approximate, in pounds)

Transformer ..... 155/140

**Reference Drawings**

Accuracy Curve at

120 Secondary Volts, 60 Hz ..... 9689241894

Excitation Curve ..... 9932600160

Outline Drawings:

Model Number 767X031001 ..... 9932423

Model Number 767X031002 ..... 9932424

Model Number 767X031003 ..... 9932424

Model Number 767X031004 ..... 9932424

Model Number 767X031005 ..... 9935406

Model Number 767X031006 ..... 9935406

Model Number 767X031007 ..... 9935406

Model Number 767X031011 ..... 9935407

Model Number 767X031012 ..... 9935408

Wiring Diagram ..... refer to page 42, figure 5

**Accessories ..... Catalog Number**

Mounting Hardware:

“L” Mounting Brackets ..... 8944634002

Channel Bracket ..... 5466227001

Suspension Hooks ..... 8944630001

Secondary Conduit Box ..... 9689897001

**JVW-7 DATA TABLE**

Line-To-Line Circuit Voltage For Permissible Primary Connection				Transformer Rating ①			ANSI Accuracy Classification, 60 Hz			Catalog Number	
							Burden Per ANSI		Burden Impedance as at Rate Voltage but Operated at 58% Rated Voltage ③		
							Operated at Rated Voltage	Operated at 58% of Rated Voltage			
Δ	Y	Y Only	GY Only ①	Primary Voltage	Ratio	BIL (kV)	Operated at Rated Voltage	Operated at 58% of Rated Voltage	Operated at 58% Rated Voltage ③		
<b>Single Bushing Model</b>											
---	---	---	34,500	20,125	175:1	200	0.3 W, X, M, Y	---	---	---	767X031001
---	---	---	34,500	20,125	175/300:1	200	0.3 W, X, M, Y	---	---	---	767X031011
---	---	---	34,500	20,125	175 & 300:1	200	0.3 W, X, M, Y	---	---	---	767X031012
<b>Two-Bushing Model</b>											
27,600 ②	27,600 ②	---	---	27,600	240:1	150	0.3 W, X, M, Y	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'	---	767X031002
34,500 ②	34,500 ②	---	---	34,500	300:1	150	0.3 W, X, M, Y	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'	---	767X031003
23,000 ②	23,000 ②	---	---	23,000	200:1	150	0.3 W, X, M, Y	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'	---	767X031004
27,600 ②	27,600 ②	---	---	26,700	240 & 240:1	150	0.3 W, X, M, Y	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'	---	767X031005
34,500 ②	34,500 ②	---	---	34,500	300 & 300:1	150	0.3 W, X, M, Y	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'	---	767X031006
23,000 ②	23,000 ②	---	---	23,000	200 & 200:1	150	0.3 W, X, M, Y	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'	---	767X031007

**Notes:**

① These single bushing transformers are suitable for operation line-to-ground only on effectively grounded systems. They are the grounded-neutral terminal type, and are capable of operation at 1.40 times the transformer-rated voltage for one minute without exceeding 175°C temperature rise. If it should become necessary to apply these grounded wye voltage transformers to an ungrounded system, refer to the nearest General Electric Sales Office for a system analysis study.

② These two-bushing transformers are designed for operation line-to-line. They may also be operated line-to-ground or line-to-neutral at reduced voltage (58% of rated voltage).

③ The prime symbol (') is used to signify that these burdens do not correspond to standard ANSI definitions.



Data subject to change without notice.

**Construction and Insulation**

Please refer to General Product Information, item 1.4.

**Core**

Please refer to General Product Information, item 2.4.

**Coils**

Please refer to General Product Information, item 3.2.

**Primary Terminals**

Please refer to General Product Information, item 4.6.

**Secondary Terminals**

Please refer to General Product Information, item 4.18.

**Ground Terminal**

Please refer to General Product Information, item 4.23.

**Conduit Box**

Please refer to General Product Information, item 12.1.

**Polarity**

Please refer to General Product Information, item 7.1.

**Baseplate and Mounting**

Please refer to General Product Information, item 5.3, 5.15 and the Applications Information Section of this volume.

**Nameplate**

Please refer to General Product Information, item 6.2.

**Rating Identification**

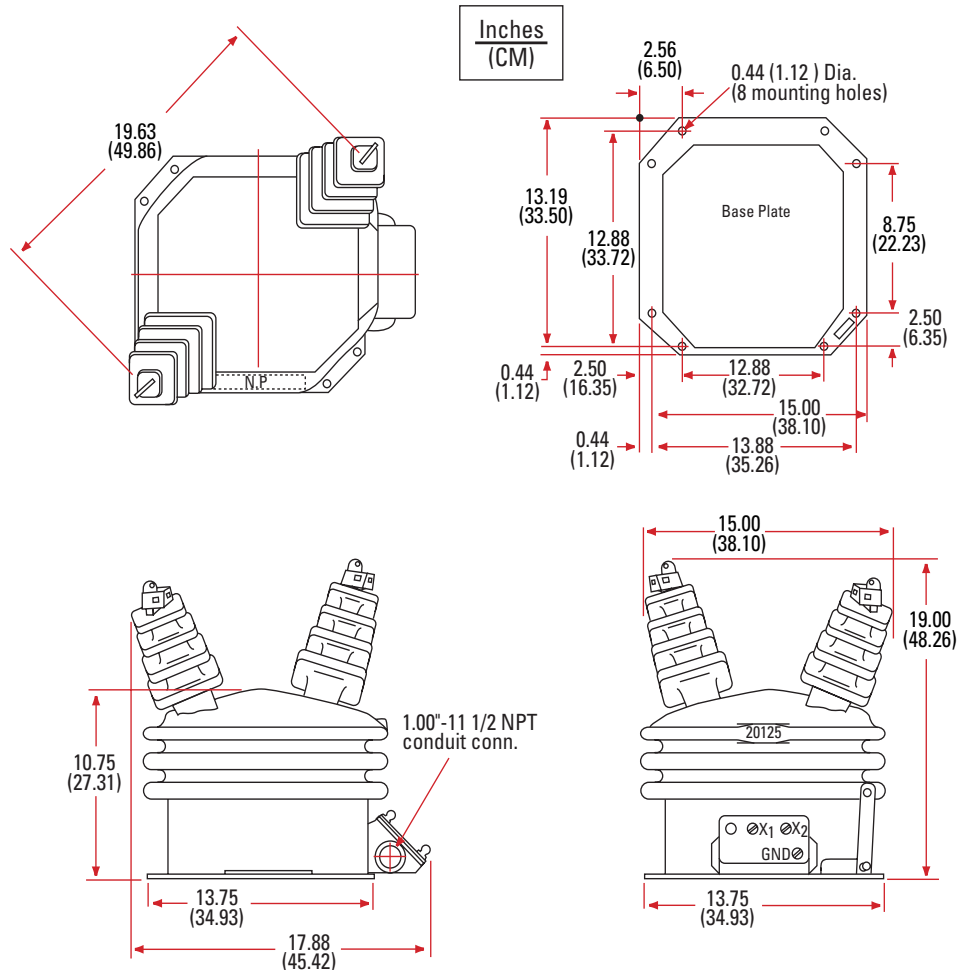
Please refer to General Product Information, item 13.1.

**Maintenance**

Please refer to General Product Information, item 10.1 and pages 24-27.

Note:

1. Voltage transformers of this type are available for use in 50 Hz applications in many ratings. However, Industry Standard IEEE 57.13 to which we test transformers does not apply at 50 Hz. Customers who order voltage transformers for 50 Hz application should provide an accuracy specification including Burden VA and Power Factor. If an accuracy specification is not made available, the transformer(s) will be tested at 60 Hz with test burdens as defined in IEEE 57.13 for 60 Hz application.



JVV-7 mechanical dimensions (two-bushing model shown)



Data subject to change without notice.

**24,000 V to 69,000 V**  
**Outdoor Voltage, Dry-Type**  
**JVS/JVT**  
**60 Hz**



*JVS single-bushing SUPER-BUTE  
voltage transformer*



*JVT two-bushing SUPER-BUTE  
voltage transformer*

**Application**

Designed for outdoor service; suitable for operating meters, relays, and control devices.

**ANSI Meter Accuracy Classification; 60 Hz**

JVS Model

Burden Per ANSI W, X, M, Y, Z, ZZ; all models ..... 0.3

Note: Accuracy is for tap as well as full winding

**Weight - Shipping/Net**

(approximate, in pounds)

JVS below 27,600 V; JVT below 46,000 V ..... 280/240

JVS 27,600 V and above ..... 490/430

JVT 46,000 V and above ..... 620/560

**Reference Drawings**

**JVS**

Accuracy Fan Curves at 120 Secondary Volts, 60 Hz:

JVS-150/JVS-200 ..... 9689241521

JVS-250/JVS-350 ..... 9689241485

Excitation Curves:

JVS-150 ..... 9689241716

JVS-200 ..... 9689241718

JVS-250 ..... 9689241721

JVS-350 ..... 9689241723

Outline Drawings:

JVS-150/JVS-200 ..... 9926176

JVS-250/JVS-350 ..... 9926369

Wiring Diagram JVS ..... refer to page 43, figure 8

**JVS/JVT DATA TABLE**

Line-To-Line Circuit Voltage For Permissible Primary Connection			Transformer Rating			ANSI Accuracy			Thermal Rating 30°C Ambient kVA	Type	Catalog Number
						Burden Per ANSI					
						Operated at Rated Primary Voltage	Operated at 58% of Rated Primary Voltage ④				
Δ ③	Y ③	GY Only ②	Primary Voltage	Ratio	BIL (kV)	W, X, M, Y	Z	ZZ			
---	---	24,000	14,400	120/200 & 120/200:1 ①	150	---	---	---	3.0	JVS-150	766X030002
24,000	24,000	---	24,000	200 & 200:1	150	0.3	0.6	1.2	3.0 ⑤	JVT-150	766X030001
27,600	27,600	---	27,600	240 & 240:1	200	0.3	0.6	1.2	3.0 ⑤	JVT-200	767X030003
---	---	34,500	20,125	175/300 & 175/300:1 ①	200	---	---	---	3.0	JVS-200	767X030002
34,500	34,500	---	34,500	300 & 300:1	200	0.3	0.6	1.2	3.0 ⑤	JVT-200	767X030001
---	---	46,000	27,600	240/400 & 240/400:1 ①	250	---	---	---	5.0	JVS-250	768X030002
46,000	46,000	---	46,000	400:1	250	0.3	0.3	0.6	4.5	JVT-250	768X030001
---	---	69,000	40,250	350/600 & 350/600:1 ①	350	---	---	---	5.0	JVS-350	769X030002
69,000	69,000	---	69,000	600:1	350	0.3	0.3	0.6	4.5	JVT-350	769X030001

**Notes:**

- ① Two tapped secondaries are provided, each with the ratio as shown.
- ② The single-bushing transformers are suitable for operation line-to-ground only on grounded systems. If it should become necessary to apply these voltage transformers to systems which are ungrounded or provided through high impedance, refer to the nearest General Electric Sales Office for a system analysis study. These voltage transformers are capable of operating at 173% of rated voltage for one minute without exceeding 175°C temperature rise.
- ③ These two-bushing transformers are designed for operation line-to-line. They may also be operated line-to-ground or line-to-neutral at reduced voltage (58% of rated voltage).

- ④ Applies to transformers wye-connected on a circuit in which the line-to-line voltage is the same as the transformer-rated primary voltage. In such cases the transformer is operated at 58% of the normal voltage. In determining the accuracy classification under such conditions, the burden volt-amperes are maintained at the value obtained at full rated voltage.
- ⑤ With both secondary windings in parallel. When windings are used separately the value is 1.5 kVA per winding. If only one winding is used separately, the value is 2.0 kVA.



*Data subject to change without notice.*

**JVT**

Accuracy Curves at 120 Secondary Volts, 60 Hz:

JVT-150/JVT-200 .....	9689241520
JVT-250/JVT-350 .....	9689241488

Excitation Curves:

JVT-150 .....	9689241717
JVT-200 .....	9689241720
JVT-250 .....	9689241722
JVT-350 .....	9689241724

Outline Drawings:

JVT-150/JVS-200 .....	9926175
JVT-250/JVS-350 .....	9926391

Wiring Diagram ..... refer to page 43, figure 7

**Construction and Insulation**

Please refer to General Product Information, item 1.3.

**Bushing**

Please refer to General Product Information, item 8.1.

**Core**

Please refer to General Product Information, item 2.1.

**Coils**

Please refer to General Product Information, item 3.1.

**Primary**

**Terminals**

Please refer to General Product Information, item 4.7.

**Secondary**

**Terminals**

Please refer to General Product Information, item 4.19.

**Ground Pad**

Please refer to General Product Information, item 4.25.

**Conduit Box**

Please refer to General Product Information, item 12.3.

**Polarity**

Please refer to General Product Information, item 7.1.

**Baseplate and Mounting**

Please refer to General Product Information, items 5.2 and 5.14.

**Nameplate**

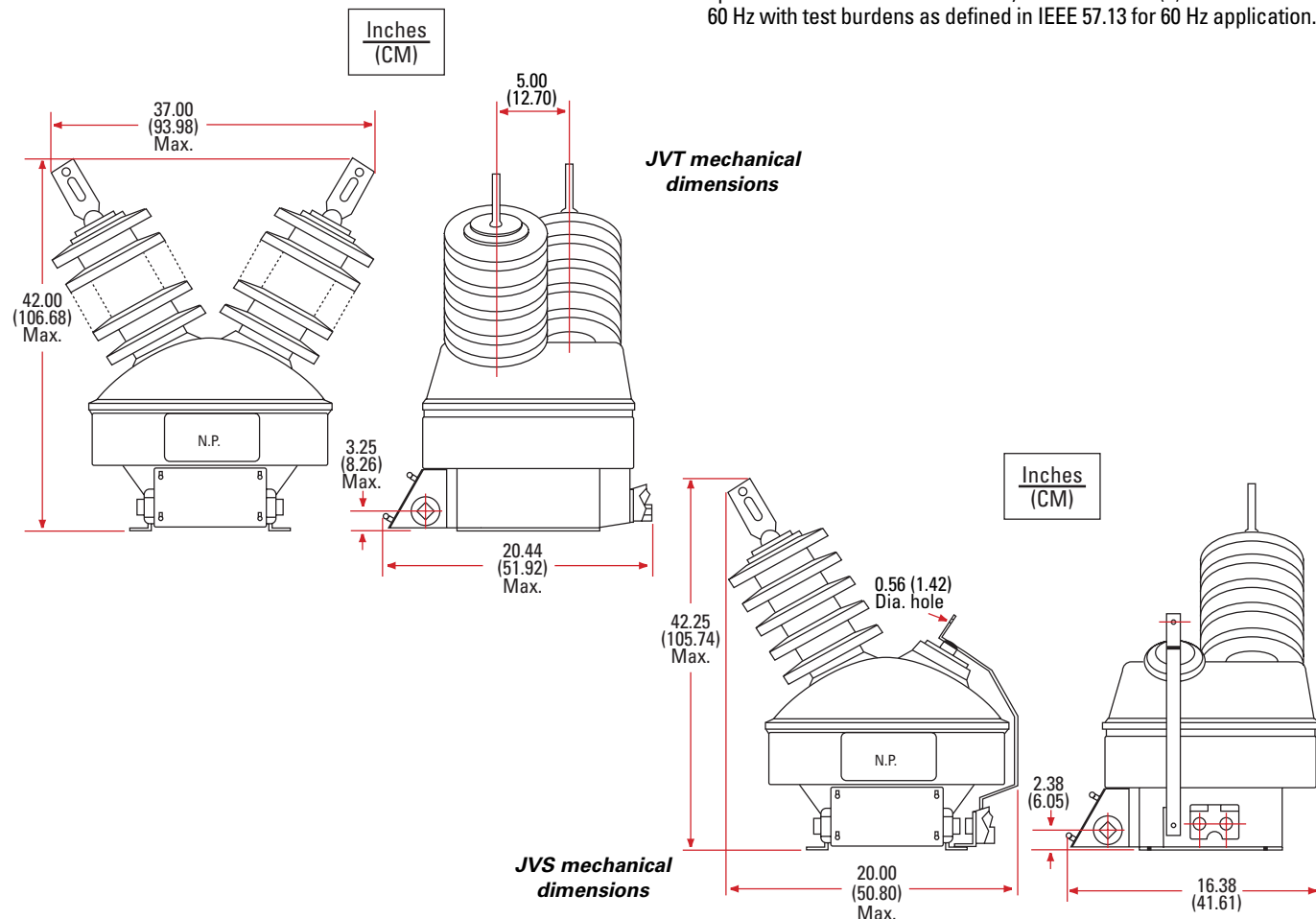
Please refer to General Product Information, item 6.1.

**Maintenance**

Please refer to General Product Information, item 10.1 and pages 24-27.

Note:

1. Voltage transformers of this type are available for use in 50 Hz applications in many ratings. However, Industry Standard IEEE 57.13 to which we test transformers does not apply at 50 Hz. Customers who order voltage transformers for 50 Hz application should provide an accuracy specification including Burden VA and Power Factor. If an accuracy specification is not made available, the transformer(s) will be tested at 60 Hz with test burdens as defined in IEEE 57.13 for 60 Hz application.



Data subject to change without notice.