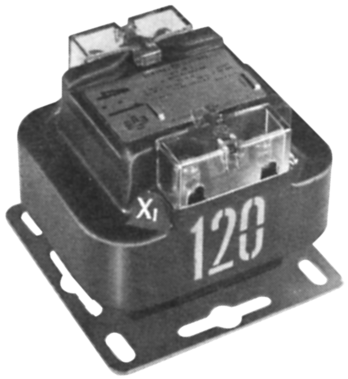
Section 2

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
			Primary		Burden ①		Burden ②			Indoor Use Only		600 V
Δ①	Y②	Y④	Voltage	Ratio	W, X, M	Y	W	X	Unfused	One Primary	Two Primary	Class
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.

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_1 and H_2, 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_1 and X_2, 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.

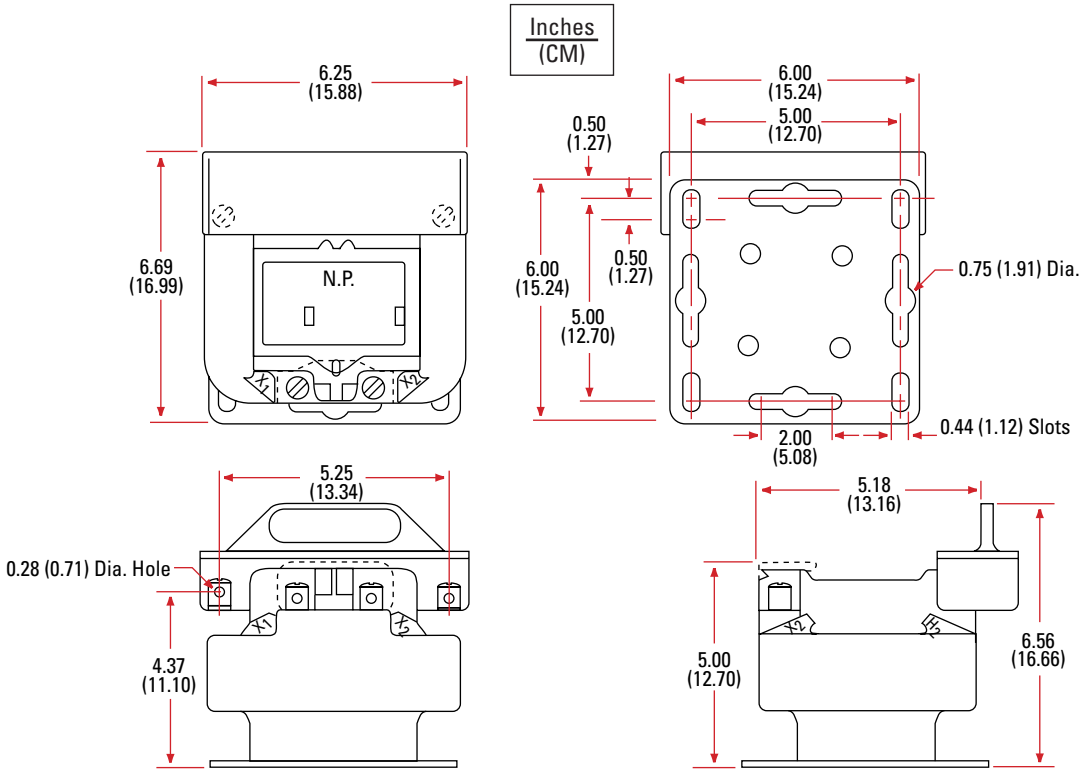
Cover
A transparent, LEXAN® secondary-terminal cover is furnished without charge when ordered with the transformer. This cover provides a safe means of observing the electrical connections without requiring its removal.

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.



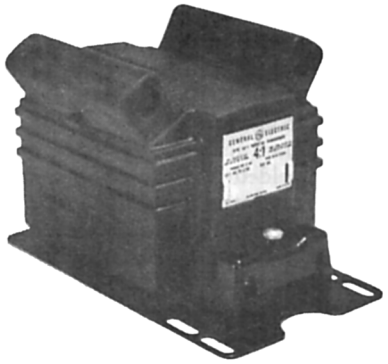
JVA-0 mechanical dimensions

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
			Primary		Burden ①		Burden ②	Unfused Primary Terminal		Two Fuses,	600 V
Δ ①	Y ②	Y ①	Voltage	Ratio	W, X, M, Y	Z	W, X	Bushings	Cover	Indoor Use	Class
240	240	416	240	2:1	0.3	1.2	0.6	**761X030001**	**761X030006**	**761X020001**	5A
--	--	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.

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 ¼ 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 taping 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 ¼ 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 ¾ 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

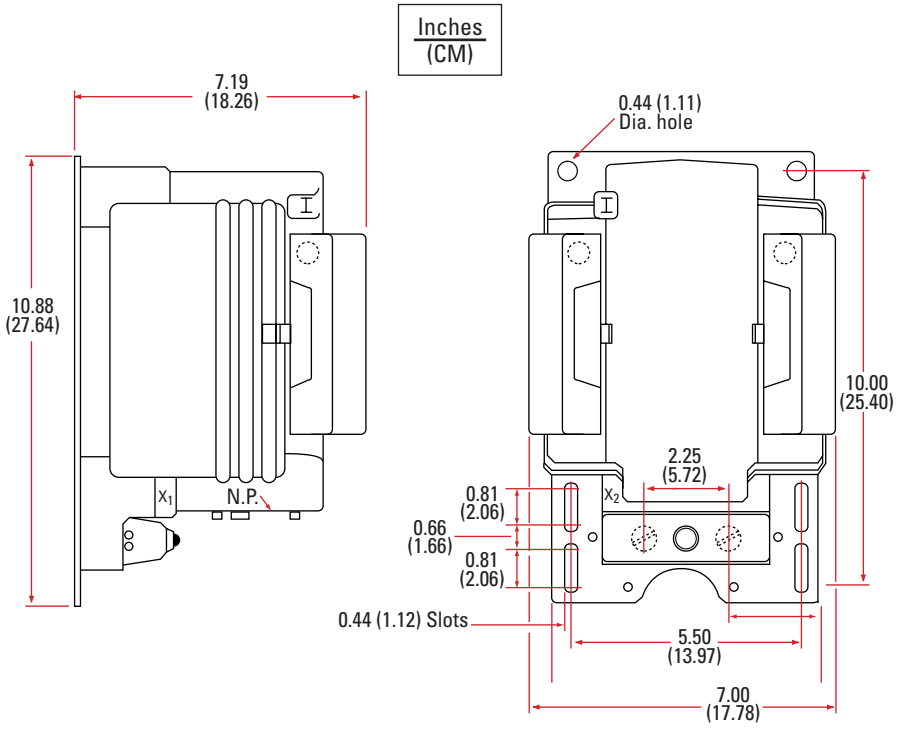
Please refer to General Product Information, item 5.1.

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)

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	
Δ	Y	Y Only	Primary Voltage	Ratio	Operated at Rated Voltage	Operated at 58% of Rated Voltage ②		
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'	**763X030001**
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'	**763X030002**
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'	**763X030003**

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.

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.

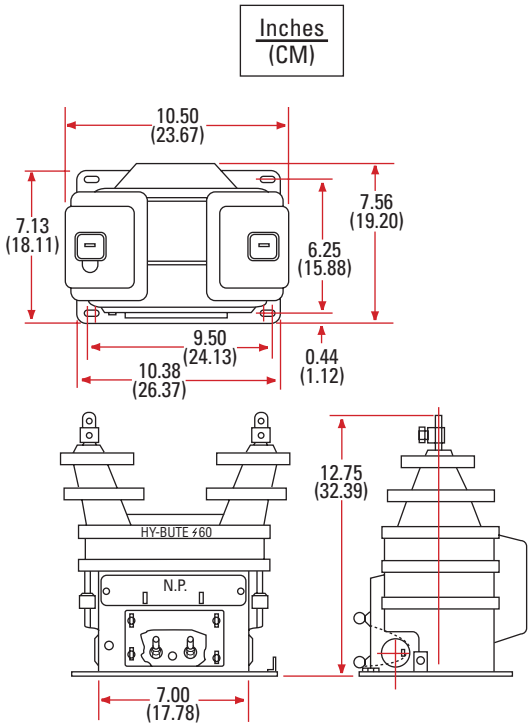
Conduit Box
Please refer to General Product Information, item 12.1.

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.



JVW-3 mechanical dimensions

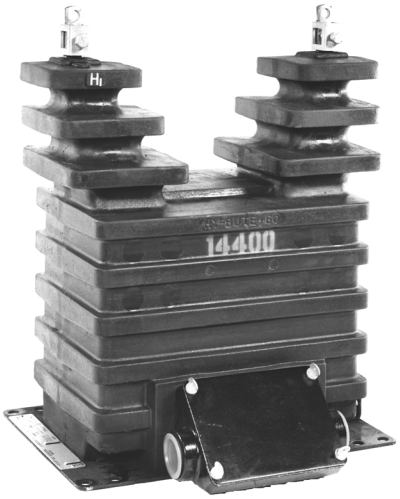
2,400 V to 14,400 V BIL 75 kV to 110 kV
Outdoor Voltage

JVW-4/JVW-5

60 Hz

ACCUBUTE AVAILABLE

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	
						BIL 75 kV	BIL 110 kV	
Δ	Y	Y Only	GY Only ④	Primary Voltage	Ratio	Two-Bushing Model	Single-Bushing Model	Two-Bushing Model
2,400	2,400	4,160	---	2,400	20:1	**764X030011**	---	---
4,200	4,200	7,280	---	4,200	35:1	**764X030012**	---	---
4,800	4,800	8,320	---	4,800	40:1	**764X030013**	---	---
7,200	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	12,000	---	12,000	100:1	---	---	**765X030045**
14,400	14,400	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.

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JVW-5

Accuracy Curve at
120 Secondary Volts, 60 Hz 9689241659
Excitation Curves:
60:1 & 70:1 9689241591
100:1 & 120:1 9689241629
OutlineDrawings:
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

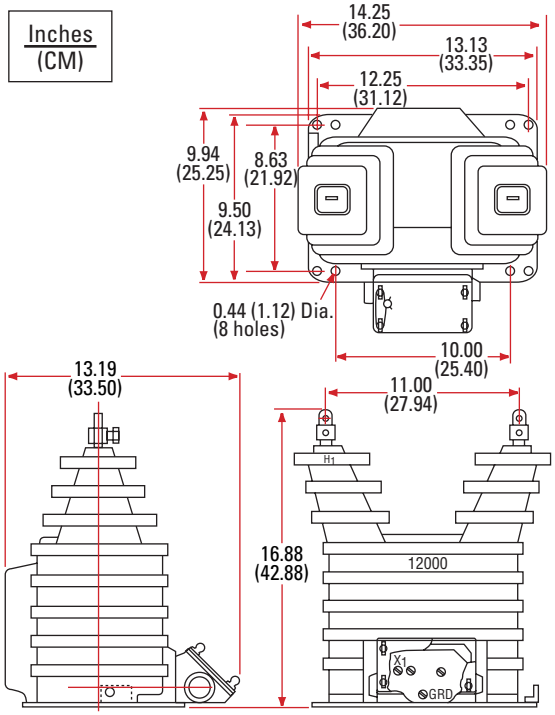
Please refer to General Product Information, item 13.1.

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.



JVW-4/JVW-5 mechanical dimensions

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 ±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	
Δ	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.

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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.

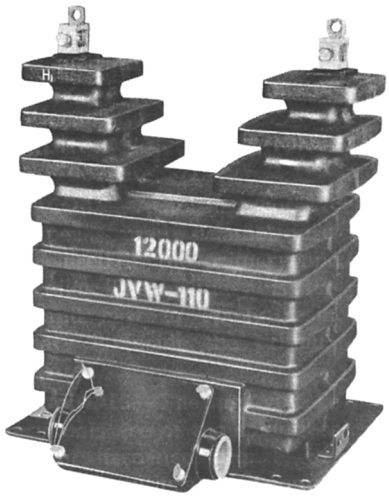
Maintenance

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				Transformer Rating ①		ANSI Accuracy Classification, 60 Hz			Catalog Number	
						Burden Per ANSI		Burden Impedence as at		
Δ	Y	Y Only	GY Only ④	Primary Voltage	Ratio	Operated at Rated Voltage	Operated at 58% of Rated Voltage ②	Rate Voltage but Operated @ 58% Rated Voltage ③	Single-Bushing Model	Two-Bushing Model
---	---	---	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.

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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.

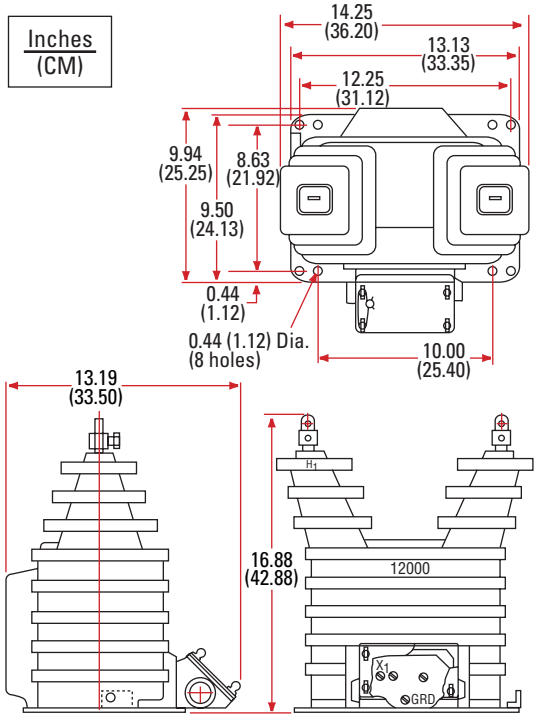
Polarity
Please refer to General Product Information, item 7.2.

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

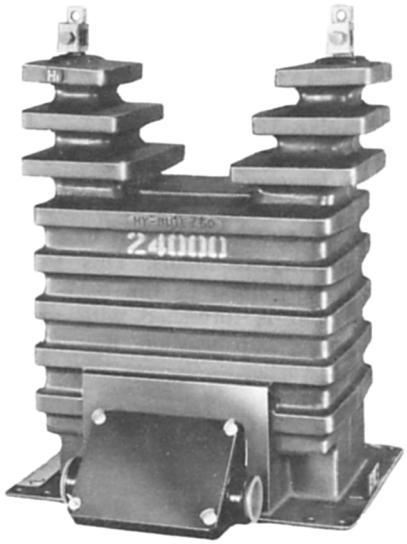
12,000 V to 24,000 V BIL 125 kV
Outdoor Voltage

JVW-6

60 Hz

ACCUBUTE AVAILABLE

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% Rated Voltage ③		
Δ	Y	Y Only	GY Only ①	Primary Voltage	Ratio	Operated at Rated Voltage	Operated at 58% of Rated Voltage		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.

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Construction and Insulation
Please refer to General Product Information, item 1.4.

Core
Please refer to General Product Information, item 2.6.

Coils
Please refer to General Product Information, item, 3.20.

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.

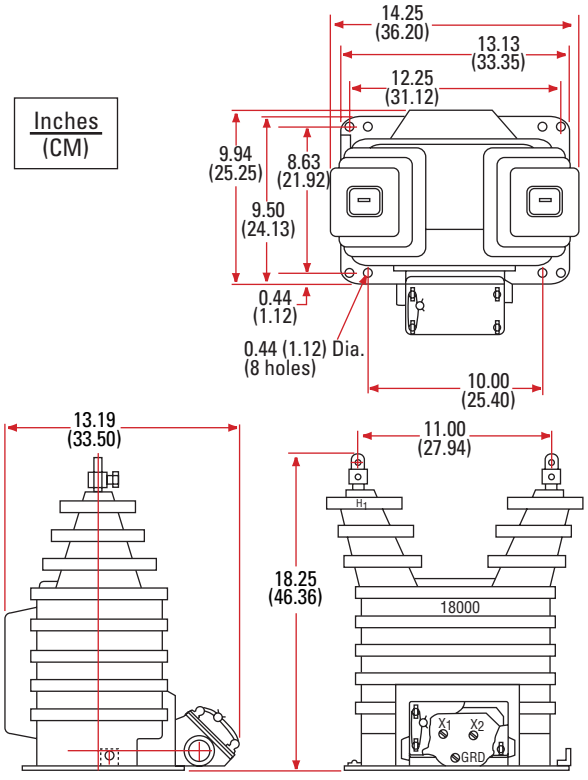
Baseplate and Mounting
Please refer to the General Product Information, item 5.3, and the Applications Information Section of this volume.

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.



JVW-6 mechanical dimensions

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
Δ	Y	Y Only	GY Only ①	Primary Voltage	Ratio	Operated at Rated Voltage	Operated at 58% of 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.

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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.

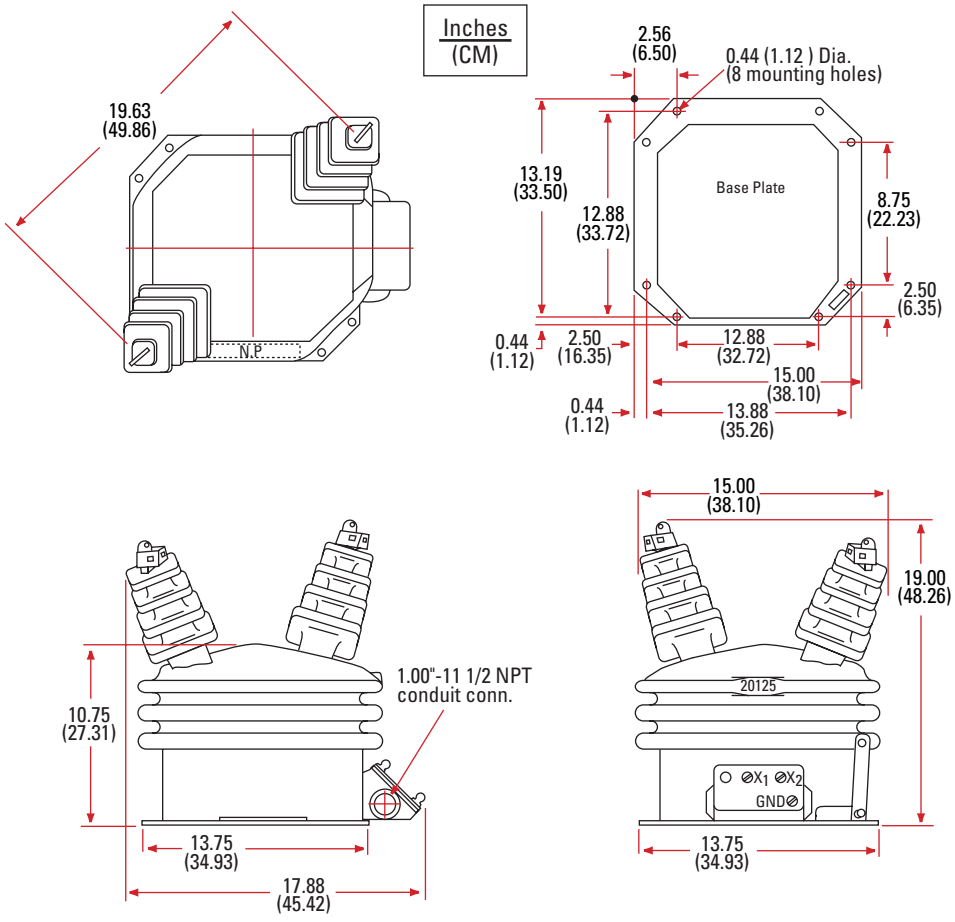
Baseplate and Mounting
Please refer to General Product Information, items 5.3, 5.15 and the Application Information Section of this volume.

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.



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

20,125 V to 34,500 V Outdoor Voltage

JVW-7

60 Hz

ACCUBUTE AVAILABLE

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			
							Burden Per ANSI		Burden Impedance as at Rate Voltage but Operated at 58% Rated Voltage ③	
Δ	Y	Y Only	GY Only ①	Primary Voltage	Ratio	BIL (kV)	Operated at Rated Voltage	Operated at 58% of Rated Voltage		Catalog Number
Single Bushing Model										
---	---	---	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**
Two-Bushing Model										
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.

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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.

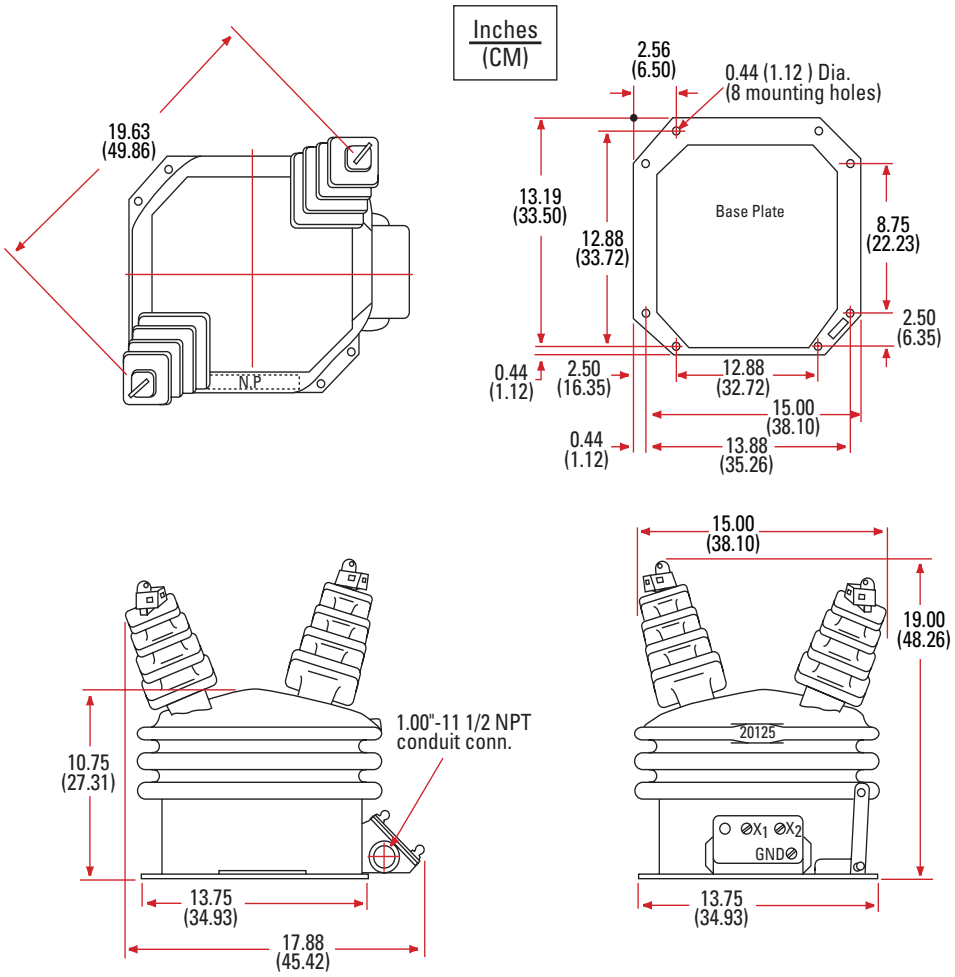
Baseplate and Mounting
Please refer to General Product Information, item 5.3, 5.15 and the Applications Information Section of this volume.

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.



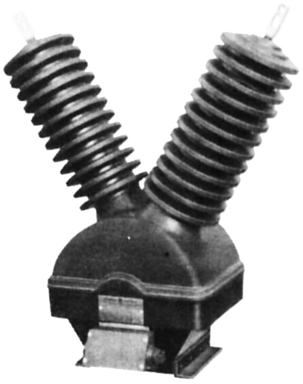
JVW-7 mechanical dimensions (two-bushing model shown)

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 Burden Per ANSI			Thermal Rating 30°C Ambient		
						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	kVA	Type	Catalog Number
---	---	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 valve 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.

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.