Indoor Electrical Utility Industry MV Voltage Transformers (IEEE)

Model JVM-2

Indoor Voltage Transformer
2,400 V, BIL 45 kV, 50/60 Hz

Application

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

Thermal Rating (Volt-Amperes)

55 °C Rise above 30 °C Ambient 750
30 °C Rise above 55 °C Ambient 500

Weight

(approximate, in pounds)
Unfused 35/30
With one primary fuse 37/32
With two primary fuses 38/33

Reference Drawings

Accuracy Curve 9689241267
Excitation Curve 5454043

Outline Drawings:

Unfused with Primary Bushings ...9925196
Unfused with Primary Terminal Cover.....
.....9925197
Single Fuse.....9925198
Two Fuse 9925199
Wiring Diagram ..... refer to page 42, fig. 5

Accessories - Catalog Number

Fuses, 600 Volt Class, 1 Ampere .....
.....9F60AAB001
Secondary Terminal Conduit Box.....
..... 9925183001

JVM-2 Voltage Transformer (two primary fuses with fuse covers)

JVM-2

Line-To-Line Circuit Voltage for Permissible Primary Connection			Transformer Rating [1]		ANSI Accuracy Class, 60 Hz			Catalog Number [6]	Fuse Ratings	
Δ	Y	Y Only[3]	Primary Voltage	Ratio	Operated at Rated Voltage	Operated at 58 % of Rated Voltage	Burden Impedances at Rated Voltage, but Operated at 58 % Rated Voltage [2]		Amps	Volts
Primary Terminal Bushings										
2,400	2,400	4160	2,400	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'; 1.2 Z'	762X022003	---	---
Primary Terminal Cover										
2,400	2,400	4160	2,400	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'; 1.2 Z'	762X022004	---	---
One Fuse [5]										
2,400	2,400	4160 [4]	2,400	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'; 1.2 Z'	762X022002	1A	2,400
Two Fuses										
2,400	2,400	4160 [4]	2,400	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'; 1.2 Z'	762X022001	1A	2,400

Notes:
(1) For continuous operation, the transformer's 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) Operated at 58% of Rated Voltage; the prime symbol (') is used to signify that these burdens do not correspond to standard ANSI definitions
(3) The insulation strength of these transformers is below the impluse level of 60 kV recommended by ANSI for 5 kV service.
(4) The circuit must be solidly grounded with a 4160 V Y primary connection, since the fuse is rated only to 2,400 volts.
(5) On transformers with one primary fuse, the neutral terminal insulation to ground is 2,500 volts
(6) Measurement Canada Approval: AE-0311

Primary Terminals

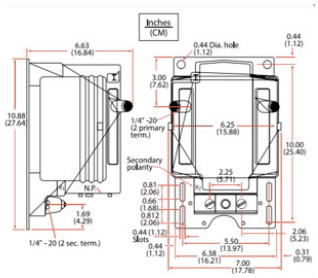
The primary terminals are located on the top of the transformer. They consist of 1/4 inch-20 screws, with lock washers and cup washers.

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 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.

Models with a single fuse have their line terminals located on the left side of the fuse support, and the neutral terminal is located on top of the right side of the transformer. The neutral terminal has full primary voltage insulation. On models with two fuses, the primary terminals are attached directly to the fuse supports. Both single and dual fuse models are provided with fuse covers with seal tabs pre-assembled on the transformer. The covers are molded of HY-BUTEI60 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.



Model JVM-2C/3C

Indoor Voltage Transformer
60 kV BIL, 2,400-4,800 V

Application

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

Regulatory Agency Approvals

UL Recognized .....File E145172

Thermal Rating

55 °C Rise above 30 °C Ambient .....750 VA
30 °C Rise above 55 °C Ambient .....500 VA

Weight

Unfused .....34 lbs
Fused .....37 lbs

Reference Drawings

Outline.....0142C33852

JVM-2C/3C Data Table

Circuit Line to Line Voltage	Permissible Transformer Primary Connection	Transformer Rating		ANSI Accuracy Classification 60 Hz			Catalog Number	Primary Fuse Rating	
		Primary[1] Voltage	Ratio	Burden Per ANSI: Operated at Rated Voltage	Burden Per ANSI: Operated at 58 % of Rated Voltage	Operated at 58 % of Rated [2] Voltage, but Burden Impedance as at Rated Voltage		Amps	Volts
Unfused									
2,400 4,160	Δ or Y Y only	2,400	20:1	0.3 W,X,M,Y; 1.2Z	0.3 W,X; 1.2 M,Y	0.3 W', X', M', Y'; 1.2 Z'	763X121001	---	---
4,200	Δ or Y	4,200	35:1	0.3 W,X,M,Y; 1.2Z	0.3 W,X; 1.2 M,Y	0.3 W', X', M', Y'; 1.2 Z'	763X121002	---	---
4,800	Δ or Y	4,800	40:1	0.3 W,X,M,Y; 1.2Z	0.3 W,X; 1.2 M,Y	0.3 W', X', M', Y'; 1.2 Z'	763X121003	---	---
With One Primary Fuse									
2,400	Y only	2,400[4]	20:1	---	0.3 W,X; 1.2 M,Y	0.3 W', X', M', Y'; 1.2 Z'	763X121042	2 A	2,400
4,160	Y only	2,400[4]	20:1	0.3 W,X,M,Y; 1.2Z	---	---	763X121033	2 A	4,800
4,200	Y only	4,200	35:1	---	0.3 W,X; 1.2 M,Y	0.3 W', X', M', Y'; 1.2 Z'	763X121031	1 A	4,800
4,800	Y only	4,800	40:1	---	0.3 W,X; 1.2 M,Y	0.3 W', X', M', Y'; 1.2 Z'	763X121032	1 A	4,800
With Two Primary Fuses									
2,400	Δ or Y [3]	2,400[4]	20:1	0.3 W,X,M,Y; 1.2Z	0.3 W,X; 1.2 M,Y	0.3 W', X', M', Y'; 1.2 Z'	763X121040	2 A	2,400
4,160	Y only	2,400[4]	20:1	0.3 W,X,M,Y; 1.2Z	---	---	763X121024	2 A	4,800
4,200	Δ or Y [3]	4,200	35:1	0.3 W,X,M,Y; 1.2Z	0.3 W,X; 1.2 M,Y	0.3 W', X', M', Y'; 1.2 Z'	763X121018	1 A	4,800
4,800	Δ or Y [3]	4,800	40:1	0.3 W,X,M,Y; 1.2Z	0.3 W,X; 1.2 M,Y	0.3 W', X', M', Y'; 1.2 Z'	763X121019	1 A	4,800

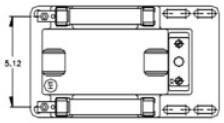
Notes:
(1) For continuous operation, the transformer's rated primary voltage should not be exceeded by more than 10 %. Under emergency conditions, over-voltage must be limited to 1.25 times the transformer primary voltage rating.
(2) The prime symbol (') is used to signify that these burdens do not correspond to standard ANSI definitions.
(3) 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.
(4) Although these pairs of transformers have the same voltage rating and turns ratio and are otherwise identical, they are supplied with fuses having different voltage ratings to suit the operating voltage of the application. This difference necessitates a separate catalog number to differentiate them.

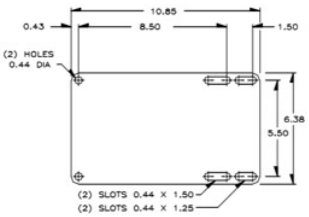
Primary Terminals

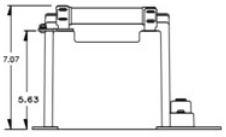
Primary terminals on unfused units are 1/4"-20 brass screws with one flat washer and one lock washer. On fused units, primary terminals are 1/4"-20 brass studs with one flat washer, one lock washer and two nuts.

Secondary Terminals

Secondary terminals are No. 10-32 brass screws with one flatwasher and one lock washer.







Model JVM-3

Indoor Voltage Transformer
2,400 V to 4,800 V, BIL 60 kV, 50/60 Hz

Application

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

Regulatory Agency Approvals

UL Recognized ..... File E178265

Thermal Rating (Volt-Amperes)

55 °C Rise above 30°C Ambient 750
55 °C Rise above 30°C Ambient 500

Weight

(approximate, in pounds)
Unfused 35/30
With Fuses 38/33

Reference Drawings

Accuracy Curve 9689241268
Excitation Curve 5454043

Outline Drawings:

Unfused 8949739
One/Two Fuse; -040 and -042 9926292
One Fuse; -033, -31, -32 8949740
Two Fuse; -024, -18, -19 8949741
Wiring Diagram ..... refer to page 42, figure 5

Accessories - Catalog Number

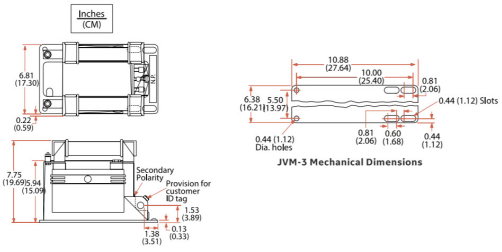
Fuses:
2,400 Volt Class, 1 Ampere 9F60AAB001
4,800 Volt Class, 1 Ampere 9F60BBD001
4,800 Volt Class, 0.5 Ampere 9F60BBD905
Secondary Terminal Conduit Box 9925183001

JVM-2 Voltage Transformer (two-fuse design)

JVM-3 Data Table

Line-To-Line Circuit Voltage for Permissible Primary Connection			Transformer Rating [1]		ANSI Accuracy Classification, 60 Hz				Primary Fuse Ratings	
Δ	Y	Y Only	Primary Voltage	Ratio	Operated at Rated Voltage	Operated at 58 % of Rated Voltage	Burden Impedance at Rated Voltage, but Operated at 58 % Rated Voltage [2]	Catalog Number [4]	Amps	Volts
Unfused										
2,400	2,400	4,160	2,400	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'; 1.2 Z	763X021001	---	---
4,200	4,200	--	4,200	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'; 1.2 Z	763X021002	---	---
4,800	4,800	--	4,800	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'; 1.2 Z	763X021003	---	---
With One Primary Fuse										
--	--	2,400	2,400	20:1	--	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'; 1.2 Z	763X021042	1 A	2,400
--	--	4,160	2,400	20:1	0.3 W, X, M, Y; 1.2 Z	--	--	763X021033	1 A	4,800
--	--	4,200	4,200	35:1	--	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'; 1.2 Z	763X021031	0.5 A	4,800
--	--	4,800	4,800	40:1	--	0.3 W, X; 1.2 M, Y	0.3 W', X', M', Y'; 1.2 Z	763X021032	0.5 A	4,800
With Two Primary Fuses										
2,400	--	2,400 [3]	2,400	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'; 1.2 Z	763X021040	1 A	2,400
--	--	4,160	2,400	20:1	0.3 W, X, M, Y; 1.2 Z	--	--	763X021024	1 A	2,400
4,200	--	4,200 [3]	4,200	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'; 1.2 Z	763X021018	0.5 A	4,800
4,800	--	4,800 [3]	4,800	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'; 1.2 Z	763X021019	0.5 A	4,800

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) Operated at 58 % of Rated Voltage; the prime symbol (') is used to signify that these burdens do not correspond to standard ANSI definitions.
3) 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.
4) Measurement Canada Approval: AE-0372



JVM-3 Mechanical Dimensions

Models JVM-4/JVM-5

Indoor Voltage Transformer
4,200 V to 14,400 V, BIL 75 kV to 110 kV, 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.

Application

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

Regulatory Agency Approvals

UL Recognized ..... File E178265

Thermal Rating

55 °C Rise above 30 °C Ambient....1,500 VA
30 °C Rise above 55 °C Ambient ...1,000 VA

ANSI Meter Accuracy Classification, 60 Hz

Operated at Rated Voltage
0.3 W, X, M, Y, Z; 1.2 ZZ ...Data Table - Accuracy 1

Operated at 58 % of Rated Voltage
0.3 W, X, M, Y; 1.2 Z .....Data Table - Accuracy 2

Burden Impedance as at Rated Voltage, Operated at 58 % of Rated Voltage(2)
0.3 W', X', M', Y', Z' .....Data Table - Accuracy 3

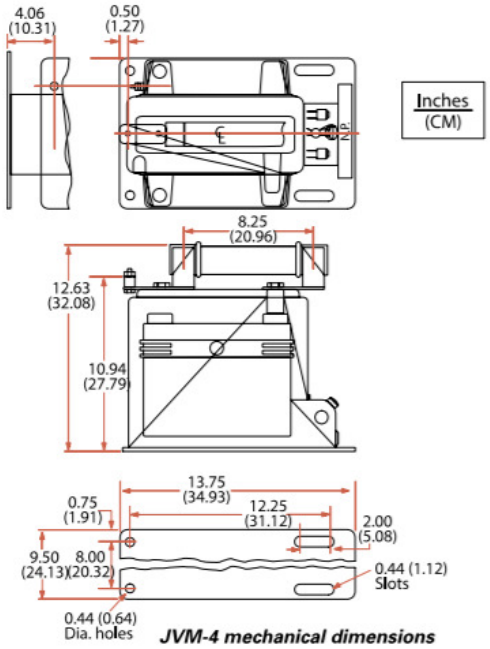
JVM-4, -5 Voltage Transformer (unfused design)

JVM-4/JVM-5

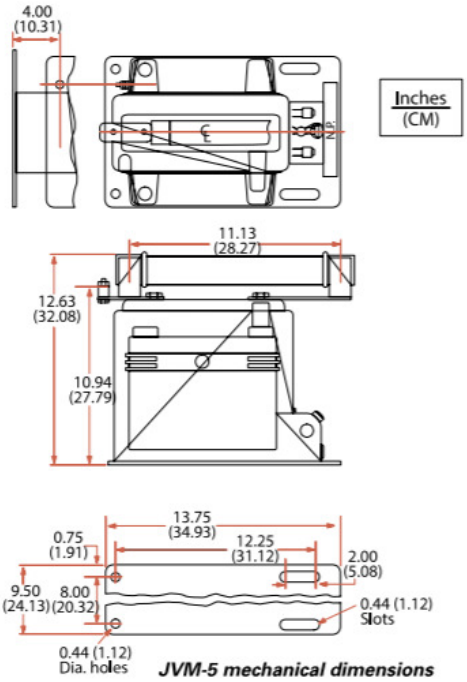
Line-To-Line Circuit Voltage for Permissible Primary Connection			Transformer Rating [1]		ANSI Accuracy Classification 60 Hz			BIL	Catalog Number Supplied with Fuses [8]	Catalog Number Supplied without Fuse [8]	Primary Fuse Rating	
					Burden Per ANSI							
Δ	Y	Y Only	Primary Voltage	Ratio	Operated at Rated Voltage	Operated at 58% of Rated Voltage	Burden Imp as at Rated Voltage; Operated at 58% of Rated Voltage [2]				Amps	Volts
Unfused - JVM-4												
4,200	4,200	7,200	4,200	35:1	Accuracy 1	Accuracy 2	Accuracy 3	75 kV	---	764X020001	---	---
4,800	4,800	8,320 [3]	4,800	40:1	Accuracy 1	Accuracy 2	Accuracy 3	75 kV	---	764X020002	---	---
7,200	7,200	---	7,200	60:1	Accuracy 1	Accuracy 2	Accuracy 3	75 kV	---	764X020003	---	---
One Primary Fuse - JVM-4												
---	---	4,200	4,200 [4]	35:1	---	Accuracy 2	Accuracy 3	75 kV	764X020021	---	2 A	4,800
---	---	7,200	4,200 [7]	35:1	Accuracy 1	---	---	75 kV	764X020023	---	2 A	7,200
---	---	4,800	4,800	40:1	---	Accuracy 2	Accuracy 3	75 kV	764X020022	---	2 A	4,800
---	---	7,200	7,200	60:1	---	Accuracy 2	Accuracy 3	75 kV	764X020024	---	1 A	7,200
Two Primary Fuses - JVM-4												
4,200	---	4,200 [3]	4,200 [7]	35:1	Accuracy 1	Accuracy 2	Accuracy 3	75 kV	764X020012	---	2 A	4,800
---	---	7,200 [3]	4,200	35:1	Accuracy 1	---	---	75 kV	764X020015	---	2 A	7,200
4,800	---	4,800 [3]	4,800	40:1	Accuracy 1	Accuracy 2	Accuracy 3	75 kV	764X020013	---	2 A	4,800
7,200	---	7,200 [3]	7,200	60:1	Accuracy 1	Accuracy 2	Accuracy 3	75 kV	764X020016	---	1 A	7,200
Unfused – JVM-5												
7,200	7,200	12,470	7,200	60:1	Accuracy 1	Accuracy 2	Accuracy 3	110 kV	765X021001	---	---	---
8,400	8,400	14,400	8,400	70:1	Accuracy 1	Accuracy 2	Accuracy 3	110 kV	765X021002	---	---	---
12,000	12,000	---	12,000	100:1	Accuracy 1	Accuracy 2	Accuracy 3	110 kV	765X021003	---	---	---
14,400	14,400	---	14,400	120:1	Accuracy 1	Accuracy 2	Accuracy 3	110 kV	765X021004	---	---	---
One Primary Fuse – JVM-5												
---	---	7,200	7,200 [5]	60:1	---	Accuracy 2	Accuracy 3	110 kV	765X021053	765X021061	1 A	7,200
---	---	12,470	7,200	60:1	Accuracy 1	---	---	110 kV	765X021048	765X021056	1 A	14,400
---	---	14,400	8,400	70:1	Accuracy 1	---	---	110 kV	765X021049	765X021057	1 A	14,400
---	---	12,000	12,000	100:1	---	Accuracy 2	Accuracy 3	110 kV	765X021050	765X021058	0.5 A	14,400
---	---	14,400	14,400	120:1	---	Accuracy 2	Accuracy 3	110 kV	765X021051	765X021059	0.5 A	14,400
Two Primary Fuses – JVM-5												
7,200	---	7,200 [3]	7,200 [6]	60:1	Accuracy 1	Accuracy 2	Accuracy 3	110 kV	765X021031	765X021047	1 A	7,200
7,200	7,200	12,470 [3]	7,200	60:1	Accuracy 1	---	---	110 kV	765X021027	765X021043	1 A	14,400
8,400	8,400	14,400 [3]	8,400	70:1	Accuracy 1	Accuracy 2	Accuracy 3	110 kV	765X021028	765X021044	1 A	14,400
12,000	---	12,000 [3]	12,000	100:1	Accuracy 1	Accuracy 2	Accuracy 3	110 kV	765X021029	765X021045	0.5 A	14,400
14,400	---	14,400 [3]	14,400	120:1	Accuracy 1	Accuracy 2	Accuracy 3	110 kV	765X021030	765X021046	0.5 A	14,400

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) Operated at 58 % of Rated Voltage; the prime symbol (') is used to signify that these burdens do not correspond to standard ANSI definitions.
(3) 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.
(4) This transformer is similar to Catalog Number 764X020023 except for the voltage rating of the fuse.
(5) This transformer is similar to Catalog Number 765X021048 except for the voltage rating of the fuse.
(6) This transformer is similar to Catalog Number 765X021027 except for the voltage rating of the fuse.
(7) This transformer is similar to Catalog Number 764X020015 except for the voltage rating of the fuse.
(8) Measurement Canada Approval: AE-0853 or AE-0314

JVM-4/JVM-5 Dimensions



JVM-4 mechanical dimensions



JVM-5 mechanical dimensions

Weight - Shipping/Net
(approximate, in pounds)
Unfused 105/85
With fuses 110/90
Reference Drawings
Accuracy Curve 9689241655
Excitation Curves:
60:1 and 70:1 9689241591
100:1 and 120:1 9689241629
Outline Drawings:
JVM-4
Unfused Models 8949818
One Fuse Models 8949938
Two Fuse Models 8949820
JVM-5
Unfused Models 8949818
One Fuse Models:
Model 765X021053 only 8949938
All except Model 756X021053 8949939
Two Fuse Models:
Model 765X021031 only 8949825
All except Model 765X021031 8949824
Wiring Diagram ..... refer to page 42, figure 5
Accessories ..... Catalog Number
Fuses, Current-limiting, Type EJ-1:
4,800 Volt Class, 2 Ampere 9F60BDD002
7,200 Volt Class, 1 Ampere 9F60BDE001
7,200 Volt Class, 2 Ampere 9F60BDE002
14,400 Volt Class, 0.5 Ampere 9F60BHH905
14,400 Volt Class, 1 Ampere 9F60BHH001

Primary and Secondary Coils
Please refer to General Product Information, item 3.2

Primary Terminals
Please refer to General Product Information, item 4.2.

Fuses
Current-limited, Type EJ-1 fuses are used.

Secondary Terminals
Please refer to General Product Information, item 4.12.

Polarity
Please refer to General Product Information, item 7.2.

Baseplate and Mounting
Please refer to General Product Information, item 5.5.

Nameplate
Please refer to General Product Information, item 6.5.

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.

Models JVM-4A/JVM-5A

Indoor Voltage Transformer
4,200 V to 14,400 V, BIL 75 kV to 110 kV, 60 Hz

JVM-4A, -5A Voltage Transformer (two-fuse design)

Application

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

Regulatory Agency Approvals

UL Recognized .....File E178265

Thermal Rating (Volt-Amperes)

55 °C Rise above 30 °C Ambient 2,000
30 °C Rise above 55 °C Ambient 1,400

Weight (Approximate in Pounds)

Unfused 105/85
Fused 110/90

Reference Drawings

Accuracy Curve 9932600137
Excitation Curves:
JVM-4A; 60:1 and 70:1.....9689241591
JVM-4A; 100:1 and 120:1 9689241629
JVM-5A 9932600139

JVM-4A/JVM-5A (two-fuse design)

Line-To-Line Circuit Voltage for Permissible Primary Connection			Transformer Rating (1)		Accuracy Classification 60 Hz		BIL	Catalog Number	Primary Fuse Ratings	
Δ	Y	Y Only	Primary Voltage	Ratio	ACCUBUTE	ANSI			Amps	Volts
Unfused – JVM-4A										
4,200	4,200	7,200	4,200	35:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	75 kV	764X021001	---	---
4,800	4,800	8,320	4,800	40:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	75 kV	764X021002	---	---
7,200	7,200	---	7,200	60:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	75 kV	764X021003	---	---
One Primary Fuse – JVM4A										
---	---	4,200	4,200 (3)	35:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z (2)	75 kV	764X021010	2 A	4,800
---	---	7,200	4,200	35:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	75 kV	764X021011	2 A	7,200
---	---	4,800	4,800	40:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z(2)	75 kV	764X021012	2 A	4,800
---	---	7,200	7,200	60:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z(2)	75 kV	764X021013	1 A	7,200
Two Primary Fuses – JVM-4A										
4,200	---	4,200 (4)	4,200	35:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	75 kV	764X021021	2 A	4,800
4,800	---	4,800 (4)	4,800	40:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	75 kV	764X021022	2 A	4,800
7,200	---	7,200 (4)	7,200	60:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	75 kV	764X021023	1 A	7,200
Unfused – JVM-5A										
7,200	7,200	12,470	7,200	60:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X023001	---	---
7,620	7,620	13,200	7,620	63.5:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X023002	---	---
8,400	8,400	14,400	8,400	70:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X023003	---	---
12,000	12,000	---	12,000	100:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X023004	---	---
13,200	13,200	---	13,200	110:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X023005	---	---
14,400	14,400	---	14,400	120:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X023006	---	---
One Primary Fuse – JVM5A										
---	---	7,200	7,200 (5)	60:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z (2)	110 kV	765X023010	1 A	7,200
---	---	12,470	7,200	60:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X023011	1 A	14,400
---	---	7,620	7,620	63.5:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X023012	1 A	14,400
---	---	8,400	8,400	70:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X023013	1 A	14,400
---	---	12,000	12,000	100:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z (2)	110 kV	765X023014	0.5 A	14,400
---	---	13,200	13,200	110:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z (2)	110 kV	765X023015	0.5 A	14,400
---	---	14,400	14,400	120:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z (2)	110 kV	765X023016	0.5 A	14,400
Two Primary Fuses – JVM-5A										
7,200	---	7,200 (4)	7,200	60:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X023020	1 A	7,200
12,000	---	12,000 (4)	12,000	100:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X023024	0.5 A	14,400
13,200	---	13,200 (4)	13,200	110:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X023025	0.5 A	14,400
14,400	---	14,400 (4)	14,400	120:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X023026	0.5 A	14,400

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) ANSI 69 Volt burden.
(3) This transformer is similar to Catalog Number 764X021011 except for the voltage rating of the fuse.
(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.
(5) This transformer is similar to Catalog Number 765X023011 except for the voltag rating of the fuse.

Model JVM-4C/5C

Indoor Voltage Transformer
75-110 kV BIL, 4,200-14,400 V

Application

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

Thermal Rating

55 °C Rise above 30 °C Ambient...1,500 VA
30 °C Rise above 55 °C Ambient...1,000 VA

Weight

Unfused .....85 lbs
Fused .....88 lbs

Regulatory Agency Approvals

UL Recognized .....File E145172

Reference Drawings

Outline 0162C33853

JVM-4C/5C Data Table

Circuit Line to Line Voltage	Permissible Transformer Primary Connection	Transformer Rating		ANSI Accuracy Classification 60 Hz			BIL	Catalog Number Supplied with Fuses	Catalog Number Supplied without Fuse	Primary Fuse Rating	
				Burden Per ANSI							
		Primary Voltage (1)	Ratio	Operated at Rated Voltage	Operated at 58 % of Rated Voltage	Operated at 58 % of Fuse Rating Rated Voltage, but Burden Impedance as at Rated Voltage (2)				Amps	Volts
JVM-4C Unfused											
4,200 7,200	Δ or Y Y only	4,200	35:1	Accuracy 1	Accuracy 2	Accuracy 3	75 kV	---	764X120001	---	---
4,800 8,320	Δ or Y Y only	4,800	40:1	Accuracy 1	Accuracy 2	Accuracy 3	75 kV	---	764X120002	---	---
7,200	Δ or Y	7,200	60:1	Accuracy 1	Accuracy 2	Accuracy 3	75 kV	---	764X120003	---	---
JVM-4C With One Primary Fuse											
4,200	Y only	4,200 (4)	35:1	---	Accuracy 2	Accuracy 3	75 kV	764X120021	---	2 A	4800
7,200	Y only	4,200 (4)	35:1	Accuracy 1	---	---	75 kV	764X120023	764X120025	2 A	7200
4,800	Y only	4,800	40:1	---	Accuracy 2	Accuracy 3	75 kV	764X120022	764X120026	2 A	4800
7,200	Y only	7,200	60:1	---	Accuracy 2	Accuracy 3	75 kV	764X120024	764X120028	1 A	7200
JVM-4C With Two Primary Fuses											
4,200	Δ or Y (3)	4,200 (4)	35:1	Accuracy 1	Accuracy 2	Accuracy 3	75 kV	764X120012	---	2 A	4800
4,200	Δ or Y (3)	4,200 (4)	35:1	Accuracy 1	---	---	75 kV	764X120015	764X120018	2 A	7200
4,800	Δ or Y (3)	4,800	40:1	Accuracy 1	Accuracy 2	Accuracy 3	75 kV	764X120013	764X120019	2 A	4800
7,200	Δ or Y (3)	7,200	60:1	Accuracy 1	Accuracy 2	Accuracy 3	75 kV	764X120016	764X120020	1 A	7200
JVM-5C Unfused											
7,200 12,470	Δ or Y Y only	7,200	60:1	Accuracy 1	Accuracy 2	Accuracy 3	110 kV	---	765X121001	---	---
8,400 14,400	Δ or Y Y only	8,400	70:1	Accuracy 1	Accuracy 2	Accuracy 3	110 kV	---	765X121002	---	---
12,000	Δ or Y	12,000	100:1	Accuracy 1	Accuracy 2	Accuracy 3	110 kV	---	765X121003	---	---
14,400	Δ or Y	14,400	120:1	Accuracy 1	Accuracy 2	Accuracy 3	110 kV	---	765X121004	---	---
JVM-5C With One Primary Fuse											
7,200	Y only	7,200 (4)	60:1	---	Accuracy 2	Accuracy 3	110 kV	765X121053	765X121061	1 A	7200
12,470	Y only	7,200 (4)	60:1	Accuracy 1	---	---	110 kV	765X121048	765X121056	1 A	14400
14,400	Y only	8,400	70:1	Accuracy 1	---	---	110 kV	765X121049	765X121057	1 A	14400
12,000	Y only	12,000	100:1	---	Accuracy 2	Accuracy 3	110 kV	765X121050	765X121058	0.5 A	14400
14,400	Y only	14,400	120:1	---	Accuracy 2	Accuracy 3	110 kV	765X121051	765X121059	0.5 A	14400
JVM-5C With Two Primary Fuses											
7,200	Δ or Y (3)	7,200 (4)	60:1	Accuracy 1	Accuracy 2	Accuracy 3	110 kV	765X121031	765X121047	1 A	7200
12,470	Y only (3)	7,200 (4)	60:1	Accuracy 1	---	---	110 kV	765X121027	765X121043	1 A	14400
8,400 14,400	Δ or Y Y only (3)	8,400	70:1	Accuracy 1	Accuracy 2	Accuracy 3	110 kV	765X121028	765X121044	1 A	14400
12,000	Δ or Y (3)	12,000	100:1	Accuracy 1	Accuracy 2	Accuracy 3	110 kV	765X121029	765X121045	0.5 A	14400
14,400	Δ or Y (3)	14,400	120:1	Accuracy 1	Accuracy 2	Accuracy 3	110 kV	765X121030	765X121046	0.5 A	14400

Construction and Insulation

The core and coil are placed in a mold and vacuum encapsulated in a polyurethane resin.

Primary Terminals

Primary terminals on unfused units are 1/4"-20 brass screws with one flat washer and one lock washer. On fused units, primary terminals are 1/4"-20 brass studs with one flat washer, one lock washer and two nuts.

Secondary Terminals

Secondary terminals are compression type with a 0.275" cross-hole and a 1/4"-28 clamp screw. The terminal cover is made of transparent plastic. Provision is made for sealing the cover.

Model JVM-4AC/5AC

Indoor High Accuracy Voltage Transformer
75-110 kV BIL, 4,200-14,400 V

Application

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

Thermal Rating

55 °C Rise above 30°C Ambient....2,000 VA
55 °C Rise above 30°C Ambient ...1,400 VA

Weight

Unfused .....85 lbs
Fused .....88 lbs

Regulatory Agency Approvals

UL Recognized .....File E145172

Reference Drawings

Outline 0162C33853

Model JVM-4AC/5AC

Circuit Line to Line Voltage	Permissible Transformer Primary Connection	Transformer Rating		ANSI Accuracy Classification 60 Hz		BIL	Catalog Number Supplied without Fuses	Primary Fuse Rating	
		Primary [1] Voltage	Ratio	Burden Per ANSI				Amps	Volts
				Operated at Rated Voltage	Operated at 58 % of Rated Voltage				
JVM-4AC Unfused									
4,200 7,200	Δ or Y Y only	4,200	35:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	75 kV	764X121001	---	---
4,800 8,320	Δ or Y Y only	4,800	40:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	75 kV	764X121002	---	---
7,200	Δ or Y	7,200	60:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	75 kV	764X121003	---	---
JVM-4AC With One Primary Fuse									
4,200	Y only	4,200 [4]	35:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z [2]	75 kV	764X121010	2 A	4800
7,200	Y only	4,200 [4]	35:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	75 kV	764X121011	2 A	7200
4,800	Y only	4,800	40:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z [2]	75 kV	764X121012	2 A	4800
7,200	Y only	7,200	60:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z [2]	75 kV	764X121013	1 A	7200
JVM-4AC With Two Primary Fuses									
4,200	Δ or Y only [3]	4,200	35:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	75 kV	764X121021	2 A	4800
4,800	Δ or Y only [3]	4,800	40:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	75 kV	764X121022	2 A	4800
7,200	Δ or Y only [3]	7,200	60:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	75 kV	764X121023	1 A	7200
JVM-5AC Unfused									
7,200 12,470	Δ or Y Y only	7,200	60:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X123001	---	---
7,620 13,200	Δ or Y Y only	7,620	63.5:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X123002	---	---
8,400 14,400	Δ or Y Y only	8,400	70:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X123003	---	---
12,000	Δ or Y	12,000	100:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X123004	---	---
13,200	Δ or Y	13,200	110:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X123005	---	---
14,400	Δ or Y	14,400	120:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X123006	---	---
JVM-5AC With One Primary Fuse									
7,200	Y only	7,200 [4]	60:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z [2]	110 kV	765X123010	1 A	7200
12,470	Y only	7,200 [4]	60:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X123011	1 A	14400
7,620	Y only	7,620	63.5:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X123012	1 A	14400
8,400	Y only	8,400	70:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X123013	1 A	14400
12,000	Y only	12,000	100:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z [2]	110 kV	765X123014	1 A	14400
13,200	Y only	13,200	110:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z [2]	110 kV	765X123015	1 A	14400
14,400	Y only	14,400	120:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z [2]	110 kV	765X123016	1 A	14400
4800JVM-5AC With Two Primary Fuses									
7,200	Δ or Y only [3]	7,200	60:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X123020	1 A	7200
12,000	Δ or Y only [3]	12,000	100:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X123024	1 A	14400
13,200	Δ or Y only [3]	13,200	110:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X123025	1 A	14400
14,400	Δ or Y only [3]	14,400	120:1	0.15 W, X, M, Y	0.3 W, X, M, Y, Z	110 kV	765X123026	1 A	14400

Notes:
(1) For continuous operation, the transformer's 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) With ANSI 69 Volt burden.
(3) 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.
(4) Although these pairs of transformers have the same voltage rating and turns ratio and are otherwise identical, they are supplied with fuses having different voltage ratings to suit the operating voltage of the application. This difference necessitates a separate catalog number to differentiate them.