

MODEL JVM-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.

Regulatory Agency Approvals

UL RecognizedFile E145172

Thermal Rating

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

Weight

Unfused85 lbs.
Fused88 lbs.

Reference Drawings

Outline0162C33853

JVM-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	
		Primary Voltage (1)	Ratio	Burden per ANSI		Operated at 58% of Fuse Rating Rated Voltage, but Burden Impedance as at Rated Voltage (2)				Amps	Volts
				Operated at Rated Voltage	Operated at 58% of Rated Voltage						
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

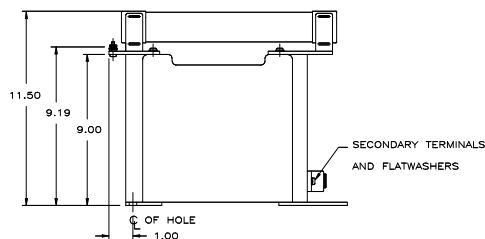
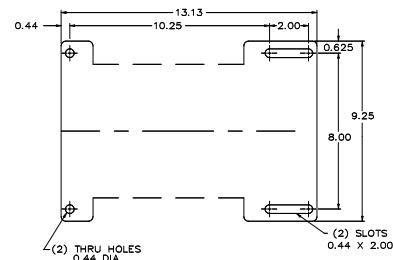
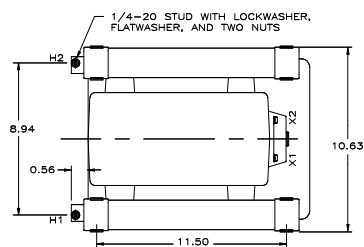


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JVM-5C Data Table (cont'd)

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	
		PRIMARY VOLTAGE (1)	RATIO	BURDEN PER ANSI		OPERATED AT 58% OF FUSE RATING RATED VOLTAGE, BUT BURDEN IMPEDANCE AS AT RATED VOLTAGE (2)				Amps	Volts
				OPERATED AT RATED VOLTAGE	OPERATED AT 58% OF RATED VOLTAGE						
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

Model JVM-5C Dimensions



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.

JVM-5C

ACCURACY 1	ACCURACY 2	ACCURACY 3
Operated at Rated Voltage	Operated at 58% of Rated Voltage	Operated at 58% of Rated Voltage with Burden Impedance as at Rated Voltage
0.3 W, X, M, Y, Z; 1.2 ZZ	0.3 W, X, M, Y; 1.2 Z	0.3 W', X', M', Y', Z



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Construction and Insulation

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

Core

The cores are made from high quality grain oriented silicon steel, which is annealed under rigidly controlled factory conditions.

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.

Polarity

The primary and secondary polarity markers are molded in the insulation. They are thus permanent and integral parts of the transformer and cannot be readily obliterated. They are also marked white.

Fuses

Fuses are current limiting, "E" rated with 1.625" diameter caps. Clip centers are 11.50" for 14.4 kV fuses, 8.25" for 7.2 kV fuses, and 5.88" for 4.8 kV fuse.

Nameplates

The nameplate is laser engraved aluminum. It is mounted on the base of the transformer. Provision is made for attaching the user's identifying tag.

Maintenance

These transformers require no maintenance, other than occasional cleaning.



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