

CATALOG

Drive Isolation Transformers



XTARE.

drive isolation transformers General Description and Features



Drive Isolation Transformers for Reliable VFD Protection

Drive isolation transformers play a critical role in safeguarding Variable Frequency Drives (VFDs) by protecting them from line disturbances and mitigating short-circuit currents. By electrically isolating the incoming line from the drive circuitry, these transformers ensure smooth operation and enhance the longevity of three-phase motors. They provide essential voltage conversion and minimize disturbances caused by SCR (Silicon Control Rectifier) firing, making them indispensable in industrial environments where VFDs are used to control motor speed.

Designed to meet demanding applications, Hevi-Duty drive isolation transformers are built to withstand the mechanical stresses, harmonics, and voltage spikes associated with SCR drive systems. Featuring delta primary and a delta or wye secondary configurations, they ensure seamless compatibility with three-phase rectifier circuits. These transformers are engineered to handle overcurrents of up to 150% for 60 seconds or 200% for 30 seconds, providing a robust solution for both AC and DC variable speed drives. Available in a range of horsepower and voltage ratings, they offer the flexibility needed to match standard motor specifications.

With ratings from 7.5 to 990 kVA, drive isolation transformers come equipped with a durable 220°C insulation system and offer both aluminum (standard) and copper winding options. UL listed and cUL certified, these transformers are backed by a 10-year warranty, underscoring their reliability and quality. Whether for standard or custom applications, drive isolation transformers deliver the protection and performance essential for preventing power failures and ensuring uninterrupted motor drive operations in industrial settings.

Features

- Designed for use with VFD to protect them from line disturbances
- kVA ratings from 7.5 through 990 kVA to support your most common applications
- designed for overcurrent of up to 150% for 60 seconds or 200% for 30 seconds to handle demanding applications.
- NEMA 1 enclosures with optional weather shields for indoor or outdoor protection
- Aluminum winds are standard for a cost-effective solution
- UL and cUL certified to meet your local requirements

Selection instructions

If you know the motor horse-power, simply follow the drive system manufacturer's recommendation.

Or, select the corresponding kVA from the chart on the right.

For example, a 40 Hp motor requires a 51 kVA DIT.



H.P.	kVA	H.P.	kVA
5.0	7.5	75.0	93.0
7.5	11.0	100.0	118.0
10.0	14.0	125.0	145.0
15.0	20.0	150.0	175.0
20.0	27.0	200.0	220.0
25.0	34.0	250.0	275.0
30.0	40.0	300.0	330.0
40.0	51.0	400.0	440.0
50.0	63.0	500.0	550.0
60.0	75.0	600.0	660.0



Selection Charts

kVA	Primary 230V Delta Secondary 230Y/133 Catalog Number		Height ³ (Inches) (Cm.)	Width ³ (Inches) (Cm.)	Depth ³ (Inches) (Cm.)	Weight (Lbs.) (Kg.)	Mounting Type (Wall) Floor)	Weather Shield	Design Figures
7.5	DTFA72S	(62)	15.21 (38.6)	19.25 (48.9)	7.37 (18.7)	180 (81.6)	W	NA	F
11.0	DTFA0112S		18.86 (48.0)	20.30 (51.6)	9.03 (22.9)	265 (120.0)	F ¹	NA	I
14.0	DTFA0142S		18.86 (48.0)	20.30 (51.6)	9.03 (22.9)	265 (120.0)	F ¹	NA	I
20.0	DTFA0202S]	20.77 (52.8)	20.94 (53.2)	10.18 (25.9)	435 (197.0)	F ¹	NA	I
27.0	DTFA0274S	(59)	25.48 (64.8)	24.39 (62.0)	19.40 (49.3)	302 (137.0)	F ²	WSA1	E
34.0	DTFA0344S		25.48 (64.8)	24.39 (62.0)	19.40 (49.3)	330 (150.0)	F ²	WSA1	E
40.0	DTFA0404S		25.48 (64.8)	24.39 (62.0)	19.40 (49.3)	370 (168.0)	F ²	WSA1	E
51.0	DTFA0514S		29.40 (74.7)	28.15 (71.5)	22.40 (56.9)	375 (170.0)	F ²	WSA2	E
63.0	DTFA0634S		29.40 (74.7)	28.15 (71.5)	22.40 (56.9)	495 (225.0)	F ²	WSA2	E
75.0	DTFA0754S		29.40 (74.7)	28.15 (71.5)	22.40 (56.9)	525 (238.0)	F ²	WSA2	E
93.0	DTFA0934S		35.40 (89.9)	31.90 (81.0)	26.90 (68.3)	685 (311.0)	F	WSA3	E
118.0	DTFA01184S		35.40 (89.9)	31.90 (81.0)	26.90 (68.3)	710 (322.0)	F	WSA3	E
145.0	DTFA01454S		41.52 (105.5)	32.90 (83.6)	29.90 (75.9)	980 (445.0)	F	WSA4	E
175.0	DTFA01754S		41.52 (105.5)	32.90 (83.6)	29.90 (75.9)	1110 (504.0)	F	WSA4	E
220.0	DTFA02204S	•	41.52 (105.5)	32.90 (83.6)	29.90 (75.9)	1120 (508.0)	F	WSA4	E

kVA	Primary 460V Delta Secondary 230Y/133 Catalog Number		Primary 460V Delta Secondary 460Y/266 Catalog Number		Height ³ (Inches) (Cm.)	Width ^³ (Inches) (Cm.)	Depth ³ (Inches) (Cm.)	Weight (Lbs.) (Kg.)	Mounting Type (Wall) Floor)	Weather Shield	Design Figures
7.5	DTGA72S	(37)	DTGB72S	(34)	15.21 (38.6)	19.25 (48.9)	7.37 (18.7)	180 (81.6)	W	NA	F
11.0	DTGA0112S		DTGB0112S		18.86 (47.9)	20.30 (51.6)	9.03 (22.9)	265 (120.0)	F	NA	1
14.0	DTGA0142S		DTGB0142S		18.86 (47.9)	20.30 (51.6)	9.03 (22.9)	270 (123.0)	F	NA	1
20.0	DTGA0202S	↓	DTGB0202S	↓	20.77 (52.8)	20.94 (53.2)	10.18 (25.9)	435 (197.0)	F ¹	NA	
27.0	DTGA0274S	(38)	DTGB0274S	(35)	25.50 (64.8)	24.39 (61.9)	19.37 (49.2)	320 (145.0)	F ²	WSA1	E
34.0	DTGA0344S		DTGB0344S		25.50 (64.8)	24.39 (61.9)	19.37 (49.2)	340 (154.0)	F ²	WSA1	E
40.0	DTGA0404S		DTGB0404S		25.50 (64.8)	24.39 (61.9)	19.37 (49.2)	395 (179.0)	F ²	WSA1	E
51.0	DTGA0514S		DTGB0514S		29.90 (75.9)	28.15 (71.5)	22.37 (56.8)	400 (181.0)	F ²	WSA2	E
63.0	DTGA0634S		DTGB0634S		29.90 (75.9)	28.15 (71.5)	22.37 (56.8)	550 (250.0)	F ²	WSA2	E
75.0	DTGA0754S		DTGB0754S		29.90 (75.9)	28.15 (71.5)	22.37 (56.8)	570 (259.0)	F ²	WSA2	E
93.0	DTGA0934S		DTGB0934S		35.90 (91.2)	31.90 (81.0)	26.88 (68.3)	685 (311.0)	F	WSA3	E
118.0	DTGA01184S		DTGB01184S		35.90 (91.2)	31.90 (81.0)	26.88 (68.3)	765 (347.0)	F	WSA3	E
145.0	DTGA01454S		DTGB01454S		41.52 (105.5)	32.90 (83.6)	29.88 (75.9)	990 (449.0)	F	WSA4	E
175.0	DTGA01754S		DTGB01754S		41.52 (105.5)	32.90 (83.6)	29.88 (75.9)	1100 (499.0)	F	WSA4	E
220.0	DTGA02204S		DTGB02204S		41.52 (105.5)	32.90 (83.6)	29.88 (75.9)	1120 (508.0)	F	WSA4	E
275.0	DTGA002754S		DTGB002754S		45.60 (115.8)	39.50 (100.3)	35.50 (90.2)	2090 (948.0)	F	WSA5	E
330.0	DTGA03304S		DTGB03304S		45.60 (115.8)	39.50 (100.3)	35.50 (90.2)	2090 (948.0)	F	WSA5	G
440.0			DTGB04404S		57.84 (146.9)	45.50 (115.6)	41.49 (105.4)	2295 (1043.2)	F	WSA7	G
550.0			DTGB05504S		57.84 (146.9)	45.50 (115.6)	41.49 (105.4)	2580 (1172.7)	F	WSA7	G
660.0			DTGB06604S		62.84 (159.6)	54.00 (137.2)	41.49 (105.4)	3700 (1678.3)	F	WSA6	G
770.0			DTGB07704S		62.84 (159.6)	54.00 (137.2)	41.49 (105.4)	4044 (1838.2)	F	WSA6	G
880.0			DTGB008804S		62.84 (159.6)	54.00 (137.2)	41.49 (105.4)	4230 (1922.7)	F	WSA6	G
990.0			DTGB9902S		62.84 (159.6)	54.00 (137.2)	41.49 (105.4)	4285 (1947.7)	F	WSA6	G

1 Optional wall mounting kits-part # PL79911, refer to page 8.

2 Optional wall mounting kits-part # PL79912, refer to page 8.

3 Dimensions may change and are not to be used for detailed construction purposes. Please contact the factory for certified dimensional drawings.

The number in ()'s following the catalog number is the electrical wiring diagram number beginning on page 7.



Wiring Diagrams



35 Primary: 460 Volts Delta Secondary: 460Y/266 Volts Taps: 2-2½% ANFC and BNFC

	H				
Primary Volts	%	Connect Leads to Tap No.			
483	105	1			
472	102.5	2			
460	100	3			
449	97.5	4			
437	95	5			
Secondary Volts					
460		X1, X2, X3			
266 1 phase		X1 & X0, X2 & X0, X3 & X0			

57 Primary: 460 Volts Delta Secondary: 230Y/133 Volts Taps: 1-5% ANFC and BNFC

	3 ² 11 				
Primary Volts	%	Connect Leads to Tap No.			
483	105	1			
460	100	2			
437	95	3			
Secondary Volts					
230		X1, X2, X3			
133 1 phase		X1 & X0, X2 & X0, X3 & X0			

38 Primary: 460 Volts Delta Secondary: 230Y/133 Volts Taps: 2-2½% ANFC and BNFC

5	H					
×0	X1	x2 x3				
Primary Volts	%	Connect Leads to Tap No.				
483	105	1				
472	102.5	2				
460	100	3				
449	97.5	4				
437	95	5				
Secondary Volts						
230		X1, X2, X3				
133 1 phase		X1 & X0, X2 & X0, X3 & X0				

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40 Primary: 575 Volts Delta Secondary: 230Y/133 Volts Taps: 1-5% ANFC and BNFC



41 Primary: 575 Volts Delta Secondary: 230Y/133 Volts Taps: 2-2½% ANFC and BNFC

1 phase

	H 413[2] 1] 413[2] 1] 413[
Primary Volts	%	Connect Leads to Tap No.			
604	105	1			
589	102.5	2			
575	100	3			
561	97.5	4			
546	95	5			
Secondary Volts					
230		X1, X2, X3			
133 1 phase		X1 & X0, X2 & X0, X3 & X0			

43 Primary: 575 Volts Delta Secondary: 460Y/266 Volts Taps: 1-5% ANFC and BNFC



Primary Volts	%	Connect Leads to Tap No.		
604	105	1		
575	100	2		
546	95	3		
Secondary Volts				
460		X1, X2, X3		
266 1 phase		X1 & X0, X2 & X0, X3 & X0		

44 Primary: 575 Volts Delta Secondary: 460Y/266 Volts Taps: 2-2½% ANFC and BNFC

Primary Volts	%	Connect Leads to Tap No.			
604	105	1			
589	102.5	2			
575	100	3			
561	97.5	4			
546	95	5			
Secondary Volts					
460		X1, X2, X3			
266 1 phase		X1 & X0, X2 & X0, X3 & X0			

59 Primary: 230 Volts Delta Secondary: 230Y/133 Volts Taps: 2-2½% ANFC and 2-2½% BNFC

	H			
Primary Volts	%	Connect Leads to Tap No.		
242	105	1		
236	102.5	2		
230	100	3		
224	97.5	4		
219	95	5		
Secondary Volts				
230		X1, X2, X3		
133 1 phase		X1 & X0, X2 & X0, X3 & X0		

62 Primary: 230 Volts Delta Secondary: 230Y/133 Volts Taps: 1-5% ANFC and 1-5% BNFC

	3 ² 1 x1				
Primary Volts	%	Connect Leads to Tap No.			
241	105	1			
230	100	2			
218	95	3			
Secondary Volts					
230		X1, X2, X3			
133 1 phase		X1 & X0, X2 & X0, X3 & X0			





Wall Mounting Bracket

Required on: Ventilated Units: 3Ø, 27-75 kVA Catalog Number: PL-79912

Encapsulated Units: 3Ø dit., 11 kVA — 20 kVA Catalog Number: PL-79911



Warranty and Number Index

Acme Electric 10-Year Limited* Warranty

Acme Electric (Acme) warrants to the original purchaser to correct by repair, replacement or refund of original purchase price, at Acme's option, products manufactured and sold by its Power Distribution Products Division, that may fail in service within the applicable period as set forth below, from the date of manufacture provided however, that conditions of operation have been normal at all times, and that the equipment has not been subjected to abnormal stress from such causes as incorrect primary voltage or frequency, improper ventilation or improper use. This warranty is made on the condition that prompt notice of defect is given to Acme in writing within the warranty period, and that Acme's inspection reveals to its satisfaction that the original purchaser's claim is valid under the terms of this warranty. Acme's obligation under this warranty, which is in lieu of all other warranties, express or implied, including the implied warranty of fitness for a particular purpose and merchantability, is limited to replacing or repairing defective products or parts, free of charge, provided they are returned to the factory, or refund of original purchase price, at Acme's option. However, purchased components (except for timers and photocells used in low voltage lighting power supplies) including but not limited to capacitors, circuit breakers, terminal blocks, batteries, fuses and tubes shall not be covered under this warranty. Repairs or replacement deliveries shall not interrupt or prolong the term of this warranty. Acme will not be liable for any special, indirect, consequential or incidental damages, including, without limitation, from loss of use, data, function or profits deriving out of or in connection with the use or performance of the product and shall have no liability for payment of any other damages whether in an action of contract, strict liability or tort. The remedy provided herein states Acme Electric's entire liability and buyer's sole and exclusive remedy here under. Rights may vary in certain states.

*Warranty Period:

Standard Catalog Transformers – 10-year limited; Medium Voltage Transformer – 3-year limited, Custom products – 1 year.



Our history is strong, engaging and dedicated... just like our people.



The Acme Electric Legacy

Acme Electric provides power quality and conversion equipment to OEM, industrial and commercial markets. Founded in 1917 in Cleveland, Ohio as the Acme Electric and Machine Company, the company has a legacy of providing innovative electrical products. Acme is now part of Hubbell Incorporated, one of the largest electrical manufacturers in North America. Hubbell's history of innovation extends back to 1888 and the invention of the pull chain light switch and the electric plug.

Acme's original product line of motor-driven battery chargers, electrical appliances and electrical generators has transformed to a diversified mix of high-quality low voltage, medium voltage and 3 phase transformers and power supplies.

Learn more about us at www.hubbell.com/acmeelectric/en





We manufacture transformers and custom design magnetic solutions for industrial, commercial and OEM applications.

GET IN TOUCH:

pdpdtechsupport@hubbell.com

L 1-800-334-5214 Option 2

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• Menomonee Falls, WI

