# **Drive Isolation**



## 3 to 990 kVA

## **Applications**

For industrial and commercial applications with SCR-controlled adjustable speed motor drives, and AC adjustable frequency or DC drives

## **Specifications**

- NEMA1 rated enclosures
- Three-Phase Encapsulated 3 through 11 kVA
- Three-Phase Ventilated 14 through 990 kVA
- 60 Hz operation
- Aluminum windings
- 150°C temperature rise
- 220°C insulation class units
- Electrostatic shield
- Heat-cured ASA-61 gray powder coat finish
- Cores of high quality electrical steel
- Primary taps

## Features, Functions, Benefits

- Large connection compartment for ease of wiring and installation
- Complete kVA range to cover standard drive systems
- Internally braced for short circuit stress protection
- Low impedance for better voltage regulation
- Low flux density to minimize core saturation
- Tap arrangements provided to compensate for input voltage variation
- Quiet operation for installation flexibility
- Seismic certification for all units



## **Standards**

Built in accordance with NEMA, ANSI, UL and CSA standards

## **Options and Accessories**

- 50/60 Hz optional
- Other sizes, voltages and temperature rises available
- Copper windings
- Wall mount brackets available through 75 kVA

## Approvals









## **Enclosure Figures**



Figure 7



Wall Mounting Bracket Kits		
Part Number	Description	Capacity (lbs)
223-7008-030	For 14 to 20 kVA units, 150°C rise	250
223-7008-075	For 27 to 75 kVA units, 150°C rise	750

## **Drive Selection**

To determine the proper size drive isolation transformer, locate the HP of the motors to be operated in the left hand column. The corresponding figure in the right hand column is the recommended transformer kVA. Use the Product Selector on our website to find your model.

Drive Selector (	<b>Chart</b>
HP	kVA
2	3
3	6
5	7.5
7.5	11
10	14
15	20
20	27
25	34
30	40
40	51
50	63
60	75
75	93
100	118
125	145
150	175
200	220
250	275
300	330
400	440
500	550

#### **Drive Isolation Transformers**

Designed for use with motor drives, the drive isolation transformer must isolate the motor from the line and handle the added loads of the drive-created harmonics. Jefferson Electric's drive isolation transformers are custom engineered for both AC adjustable frequency and DC motor drives. They are specifically designed to accommodate the electrical and mechanical stresses, regenerative current reversals and frequent short circuits inherent in severe drive duty cycles.

Following is a representative list of the models available:

US Standard Efficiency			
Primary	Secondary	Taps	Wiring Diagram
230V Delta	230Y/133V	1 @ 5% FCAN & 1 @ 5% FBCN	DIT CC
230V Delta	460Y/266V	1 @ 5% FCAN & 1 @ 5% FBCN	DIT CG
460V Delta	230Y/133V	1 @ 5% FCAN & 1 @ 5% FBCN	DIT GC
460V Delta	460Y/266V	1 @ 5% FCAN & 1 @ 5% FBCN	DIT GG
575V Delta	230Y/133V	1 @ 5% FCAN & 1 @ 5% FBCN	DIT LC
575V Delta	460Y/266V	1 @ 5% FCAN & 1 @ 5% FBCN	DIT LG
Canadian C802	2 Compliant		
240V Delta	240Y/139V	1 @ 5% FCAN & 1 @ 5% FBCN	DIT DD
240V Delta	480Y/277V	1 @ 5% FCAN & 1 @ 5% FBCN	DIT DH
480V Delta	240Y/139V	1 @ 5% FCAN & 1 @ 5% FBCN	DIT HD
480V Delta	480Y/277V	1 @ 5% FCAN & 1 @ 5% FBCN	DIT HH
600V Delta	240Y/139V	1 @ 5% FCAN & 1 @ 5% FBCN	DIT MD
600V Delta	480Y/277V	1 @ 5% FCAN & 1 @ 5% FBCN	DIT MH

See website for kVA, copper windings and temperature options.

Use the "Find a Product" tool for detailed specification sheets.

For further information, contact an Application Engineer at 800-892-3755, technical\_services@jeffersonelectric.com







## Wiring Diagrams US Standard Efficiency

#### **DIT CC** Wiring Diagram & Connections



Connections		
Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
242	1	H1, H2, H3
230	2	H1, H2, H3
218	3	H1, H2, H3
Secondary V	olts (	condary Lines Connect To
230	>	(1, X2, X3
133 1 Phase		ween X0 and or X2 or X3

#### DIT GG Wiring Diagram & Connections

#### Wiring Diagram



Connections			
Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To	
483	1	H1, H2, H3	
460	2	H1, H2, H3	
437	3	H1, H2, H3	
Secondary Volts		condary Lines Connect To	
460		X1, X2, X3	
266 1 Phase	266Between X0 and1 PhaseX1 or X2 or X3		

#### **DIT CG** Wiring Diagram & Connections



Connections				
Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To		
242	1	X1, X2, X3		
230	2	X1, X2, X3		
218	3	X1, X2, X3		
Secondary V	olts Sec	condary Lines Connect To		
460	F	I1, H2, H3		
266 1 Phase	Betv H1	ween H0 and or H2 or H3		

#### **DIT LC** Wiring Diagram & Connections



Connections			
Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To	
604	1	H1, H2, H3	
575	2	H1, H2, H3	
546	3	H1, H2, H3	
Secondary V	'olts Se	condary Lines Connect To	
230	2	X1, X2, X3	
133 1 Phase	Bet X1	ween X0 and or X2 or X3	

#### **DIT GC** Wiring Diagram & Connections Wiring Diagram





Connections		
Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
483	1	H1, H2, H3
460	2	H1, H2, H3
437	3	H1, H2, H3
Secondary V	olts	econdary Lines Connect To
230		X1, X2, X3
133 1 Phase	Bei X	tween X0 and 1 or X2 or X3

#### **DIT LG** Wiring Diagram & Connections



Connections			
Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To	
604	1	H1, H2, H3	
575	2	H1, H2, H3	
546	3	H1, H2, H3	
Secondary Vo	olts	econdary Lines Connect To	
460		X1, X2, X3	
266 1 Phase	Be X	tween X0 and 1 or X2 or X3	

More wiring diagrams can be found in catalog's appendix, section 15.

Use the "Find a Product" tool on our website for detailed specification sheets.

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## Wiring Diagrams Canadian C802 Standard Efficiency

#### **DIT DD** Wiring Diagram & Connections



Connections		
Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
252	1	H1, H2, H3
240	2	H1, H2, H3
228	3	H1, H2, H3
Secondary V	olts (	condary Lines Connect To
240	×	(1, X2, X3
139	Betv	ween X0 and
1 Phase	X1	or X2 or X3

#### **DIT HH** Wiring Diagram & Connections



Connections			
Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To	
504	1	H1, H2, H3	
480	2	H1, H2, H3	
456	3	H1, H2, H3	
Secondary V	olts	condary Lines Connect To	
480	>	<1, X2, X3	
277 1 Phase	Bet X1	Between X0 and X1 or X2 or X3	

## **DIT DH** Wiring Diagram & Connections



Connections		
Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
252	1	H1, H2, H3
240	2	H1, H2, H3
228	3	H1, H2, H3
Secondary V	olts Cert	condary Lines Connect To
480	>	(1, X2, X3
277 1 Phase	Betv X1	ween X0 and or X2 or X3

#### **DIT MD** Wiring Diagram & Connections



Connections				
Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To		
630	1	H1, H2, H3		
600	2	H1, H2, H3		
570	3	H1, H2, H3		
Secondary V	olts Sec	Secondary Lines Connect To		
240	>	X1, X2, X3		
139 1 Phase	Betv X1	Between X0 and X1 or X2 or X3		

## DIT HD Wiring Diagram & Connections



Connections			
Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To	
504	1	H1, H2, H3	
480	2	H1, H2, H3	
456	3	H1, H2, H3	
Secondary Volts		Secondary Lines Connect To	
240	>	X1, X2, X3	
139 1 Phase	Bet X1	Between X0 and X1 or X2 or X3	

#### **DIT MH** Wiring Diagram & Connections



Connections				
Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To		
630	1	H1, H2, H3		
600	2	H1, H2, H3		
570	3	H1, H2, H3		
Secondary Volts		condary Lines Connect To		
480	2	X1, X2, X3		
277 1 Phase	Bet X1	Between X0 and X1 or X2 or X3		

More wiring diagrams can be found in catalog's appendix, section 15.

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