

# Hammond HPS Drive Isolation Transformers



HPS Drive Isolation Transformers are designed to meet the rugged demands of AC and DC variable speed drives and also to provide the required voltage change. The separate primary and secondary windings provide electrical isolation between the incoming line and the VFD input. The windings are designed to withstand over-current of 150% of the rated load for 60 seconds or 200% of the rated load for 30 seconds. (A duty cycle of one start for every two hours is permitted.)

## Benefits

- Standard Type 3R enclosure suitable for indoor or outdoor applications.
- Standard integral floor mounting brackets up to 220kVA allow for faster installation.
- All units utilize a uniform 220°C insulation system with 80°C, 115°C, or 150°C temperature rise.
- Industry-leading design solutions, technology and materials continue the legacy of quality and reliability in all HPS products.

## Features

- Winding monitoring thermostat included.
- Primary taps to compensate for voltage variations.
- Core & Coil Construction:
  - Manufactured from quality non-aging, cold-rolled, silicon steel laminations using state-of-the-art equipment.
  - Cores are precision cut to close tolerances which eliminates burrs and improves performance.
  - Core is coated to prevent the ingress of moisture.
  - Precision wound with copper or aluminum conductors that are electrically balanced to minimize axial forces during short-circuit conditions.
  - Robust interface between core and coils for better short-circuit performance.
- Conductor Material: Copper or aluminum (see transformer nameplate for details).
- Temperature Rise: 150°C typical (low rise options available).
- Insulation System: 220°C



DM007JJ



DM063JJ

## Agency Approvals

- UL Listed: File 112313
- CSA Certified: File: LR3902





## Hammond Drive Isolation Transformers Selection Guide Aluminum Wound, Three Phase 460 Delta Primary Volts, 460Y Secondary Volts, 60Hz

Part Number	Price	kVA	Case Style	Weight (lb [kg])	Mounting Type	Wiring Diagram	Drawing
<a href="#">DM007JJ</a>	\$,-005iku:	7.5	NH5	150 [68.0]	Floor or Wall*	SCD8	<a href="#">PDF</a>
<a href="#">DM011JJ</a>	\$,-005ikv:	11	NH5	160 [72.0]	Floor or Wall*	SCD8	<a href="#">PDF</a>
<a href="#">DM014JJ</a>	\$,-005ikx:	14	NH5	170 [77.0]	Floor or Wall*	SCD8	<a href="#">PDF</a>
<a href="#">DM020JJ</a>	\$,-005iky:	20	NH6	240 [108.0]	Floor or Wall*	SCD7	<a href="#">PDF</a>
<a href="#">DM027JJ</a>	\$,-005ikz:	27	NH6	300 [135.0]	Floor or Wall*	SCD7	<a href="#">PDF</a>
<a href="#">DM034JJ</a>	\$,-005iko:	34	NH6	330 [149.0]	Floor or Wall*	SCD7	<a href="#">PDF</a>
<a href="#">DM040JJ</a>	\$,-005ikp:	40	NH6	350 [158.0]	Floor or Wall*	SCD7	<a href="#">PDF</a>
<a href="#">DM051JJ</a>	\$,-005ikq:	51	NH6	430 [194.0]	Floor or Wall*	SCD7	<a href="#">PDF</a>
<a href="#">DM063JJ</a>	\$,-005iks:	63	NH3	530 [239.0]	Floor or Wall*	SCD7	<a href="#">PDF</a>
<a href="#">DM075JJ</a>	\$,-005ikt:	75	NH3	580 [261.0]	Floor or Wall*	SCD7	<a href="#">PDF</a>
<a href="#">DM093JJ</a>	\$,-005ikl:	93	NH3	630 [284.0]	Floor or Wall*	SCD7	<a href="#">PDF</a>
<a href="#">DM118JJ</a>	\$,-005ikm:	118	NH3	730 [329.0]	Floor or Wall*	SCD7	<a href="#">PDF</a>
<a href="#">DM145JJ</a>	\$,-005ikn:	145	NH4	830 [374.0]	Floor	SCD7	<a href="#">PDF</a>
<a href="#">DM175JJ</a>	\$,-005ikp:	175	NH4	930 [419.0]	Floor	SCD7	<a href="#">PDF</a>
<a href="#">DM220JJ</a>	\$,-005ikt:	220	NH4	1350 [610.0]	Floor	SCD9	<a href="#">PDF</a>

\* Integral wall mounting included on units up to 51 kVA (430lb [194.0 kg]). Additional wall mounting kits and or/drip plate kits not sold by AutomationDirect.com. Purchase from Hammond Power Solutions.

# Hammond HPS Drive Isolation Transformers



Hammond Drive Isolation Transformers Specifications Aluminum Wound, Three Phase – 460 Delta Primary Volts, 460Y Secondary Volts		
	 <p><b>7.5 to 175 kVA</b></p>	 <p><b>220 kVA</b></p>
<b>UL Listed</b>	File: E112313	File: E112313
<b>CSA Certified</b>	File: LR3902	File: LR3902
<b>Frequency</b>	60Hz	60Hz
<b>Insulation System</b>	220°C [150°C rise] 200°C (130°C rise) on some copper units up to 40kVA	220°C [150°C rise]
<b>Enclosure Type</b>	Heavy-duty ventilated type 3R	Heavy-duty ventilated type 3R
<b>Enclosure Finish</b>	ANSI 61 Grey, UL50	ANSI 61 Grey, UL50
<b>Neutral</b>	Neutral terminal for field connection (on applicable units)	Neutral terminal for field connection (on applicable units)
<b>Standard Primary Taps</b>	Refer to wiring diagrams for details	Refer to wiring diagrams for details
<b>Termination</b>	Front accessible separate high- and low-voltage terminations suitable for copper and aluminum are provided for easy cable installation	Front accessible separate high- and low-voltage terminations suitable for copper and aluminum are provided for easy cable installation
<b>Thermostat</b>	Standard on all units (NC contacts rated 5.0 A / 120VAC 2.5 A / 240VAC)	Standard on all units (NC contacts rated 5.0 A / 120VAC 2.5 A / 240VAC)
<b>Conduit Knock-Outs</b>	Standard on all units (no knock-outs on stainless steel enclosures)	Standard on all units (no knock-outs on stainless steel enclosures)
<b>Impedance</b>	Typically 3% to 6%	Typically 3% to 6%
<b>Mounting</b>	Floor mounting available on all units. Wall and ceiling mount available on units up to 750lb [340.2 kg]. Purchase from Hammond Power Solutions.	Floor mounting only
<b>Short-Circuit Withstand</b>	Meets UL and CSA short-circuit withstand requirements	Meets UL and CSA short-circuit withstand requirements

# Hammond HPS Drive Isolation Transformers



## Wiring Diagrams

Schematic SCD7	Connections		
	Primary volts	Connect lines to	Inter-connect
	208 218 242 252 437 480 483	H1, H2, H3	1
	198 208 230 240 416 456 460	H1, H2, H3	2
	187 198 219 228 395 432 437	H1, H2, H3	3
	Secondary volts	Connect lines to	
	208 230 240 380 416 460	X1, X2, X3	
	120 133 139 220 240 265	X1, X0    X2, X0    X3, X0	

Schematic SCD8	Connections		
	Primary volts	Connect lines to	Inter-connect
	218 242 252 437 483	H1, H2, H3	1-2
	208 230 240 416 460	H1, H2, H3	2-3
	198 219 228 395 437	H1, H2, H3	3-4
	Secondary volts	Connect lines to	
	208 230 240 380 416 460	X1, X2, X3	
	120 133 139 220 240 265	X1, X0    X2, X0    X3, X0	

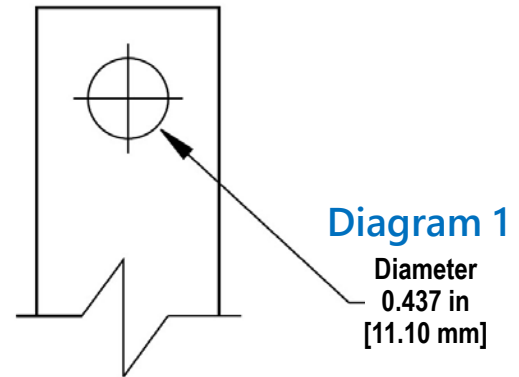
Schematic SCD9	Connections		
	Primary volts	Connect lines to	Inter-connect
	218 242 252 437 483	H1, H2, H3	1
	213 236 246 426 472	H1, H2, H3	2
	208 230 240 416 460	H1, H2, H3	3
	203 224 234 406 449	H1, H2, H3	4
	198 219 228 395 437	H1, H2, H3	5
	Secondary volts	Connect lines to	Inter-connect
	208 380 416 460	X1, X2, X3	–
	120 220 240 266	X1, X0    X2, X0    X3, X0	–

# Hammond HPS Drive Isolation Transformers



## Termination Type

Three-Phase, Aluminum and Copper Termination (460V)	
kVA	Termination
7.5	Lugs
11	Lugs
14	Lugs
20	Lugs
27	Lugs
34	Lugs
40	Lugs
51	Lugs
63	Lugs
75	Lugs
93	Lugs
118	Lugs
145	Lugs
175	Lugs
220	Diagram 1



## Selecting the Drive Isolation Transformer

Select the Drive Isolation Transformer according to the **recommendations from the motor drive system manufacturer or supplier**. If this information is unavailable, use the table below as a guide for selecting the transformer kVA for a required motor horsepower.

Motor HP to Transformer kVA Selection Table	
Motor HP	Transformer kVA
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
600	660

## Thermostat Contacts Connection

