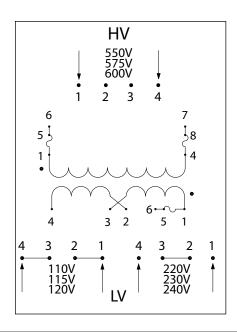


HPS IMPERATOR® Industrial Control Transformer Wiring Diagrams

Literature Code: PHWD1

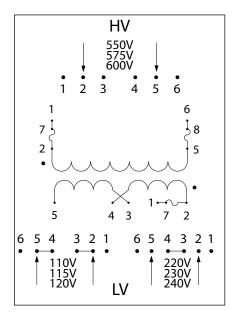
The *HPS Imperator*® series of machine tool industrial molded control transformers are available in many standard offerings. This wiring hook-up instruction sheet refers to all standard *HPS Imperator*® series part number suffixes. (Note: standard secondary fuse kits (not installed) supplied with each transformer unless otherwise indicated; field insatlled primary fuse kits sold separately; fuses not available from HPS.) If you have any questions regarding these wiring diagrams or are having any difficulty correctly installing our transformers, please contact HPS customer service or technical support in the U.S. at 1-866-705-4684 or in Canada at 1-888-798-8882.

HPS IMPERATOR® Series - Wiring Schematic Drawings



PH***AJ Schematic for 50, 75 and 100VA Units

High Voltage (HV)	Install Supplied Jumpers/	Supply Lines	Install Fuse	
(Primary Volts)	Links Between Terminals	Connect To	Clips To	
600 575 550	None	1, 4	Unfused	
600 575 550	None	6, 7	1-5, 4-8	
Low Voltage (LV)	Install Supplied Links	Load Lines	Install Fuse	
(Secondary Volts)	Between Terminals	Connect To	Clips To	
120 115 110	3-4, 1-2	1, 4	Unfused	
240 230 220	2-3	1, 4	Unfused	
120 115 110	3-4, 1-2	4, 6	1-5	
240 230 220	2-3	4, 6	1-5	

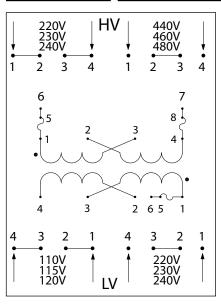


PH***AJ Schematic for 150VA to 1500VA Units

High Voltage (HV) (Primary Volts)				Install Supplied Jumpers/ Links Between Terminals	Supply Lines Connect To	Install Fuse Clips To	
600 575 550			None	2, 5	Unfused		
600 575 550			None	1, 6	2-7, 5-8		
	Low \	/oltag	e (LV) Volts)	Install Supplied Links Between Terminals	Load Lines Connect To	Install Fuse Clips To	
	120	115	110	4-5, 2-3	2, 5	Unfused	
	240	230	220	3-4	2, 5	Unfused	
	120	115	110	4-5, 2-3	1, 5	2-7	
	240	230	220	3-4	1, 5	2-7	

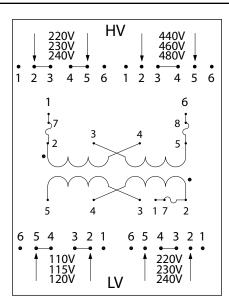
Issue Date: April 2009 rev6 Page 1 of 9





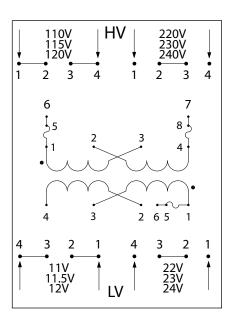
PH***MQMJ Schematic for 50, 75 and 100VA Units

_		-		
	High Voltage (HV)	Install Supplied Links	Supply Lines	Install Fuse
	(Primary Volts)	Between Terminals	Connect To	Clips To
	240 230 220	1-2, 3-4	1, 4	Unfused
	480 460 440	2-3	1, 4	Unfused
	240 230 220	1-2, 3-4	6, 7	1-5, 4-8
	480 460 440	2-3	6, 7	1-5, 4-8
	Low Voltage (LV)	Install Supplied Links	Load Lines	Install Fuse
	(Secondary Volts)	Between Terminals	Connect To	Clips To
	120 115 110	3-4, 1-2	1, 4	Unfused
	240 230 220	2-3	1, 4	Unfused
	120 115 110	3-4, 1-2	4, 6	1-5
	240 230 220	2-3	4, 6	1-5



PH***MQMJ Schematic for 150VA to 1500VA Units

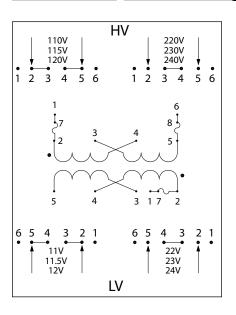
High Voltage (HV)	Install Supplied Links	Supply Lines	Install Fuse
(Primary Volts)	Between Terminals	Connect To	Clips To
240 230 220	2-3, 4-5	2, 5	Unfused
480 460 440	3-4	2, 5	Unfused
240 230 220	2-3, 4-5	1, 6	2-7, 5-8
480 460 440	3-4	1, 6	2-7, 5-8
Low Voltage (LV)	Install Supplied Links	Load Lines	Install Fuse
(Secondary Volts)	Between Terminals	Connect To	Clips To
120 115 110	4-5, 2-3	2, 5	Unfused
240 230 220	3-4	2, 5	Unfused
120 115 110	4-5, 2-3	1, 5	2-7
240 230 220	3-4	1, 5	2-7



PH***PG Schematic for 50, 75 and 100VA Units

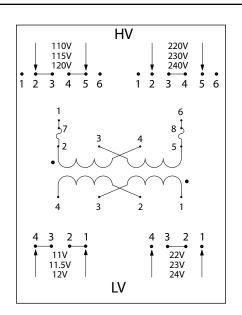
High Volta	• , ,	Install Supplied Links	Supply Lines	Install Fuse
(Primary		Between Terminals	Connect To	Clips To
120 11: 240 23 120 11: 240 23	0 220 5 110	1-2, 3-4 2-3 1-2, 3-4 2-3	1, 4 1, 4 6, 7 6, 7	Unfused Unfused 1-5, 4-8 1-5, 4-8
Low Volta	• , ,	Install Supplied Links	Load Lines	Install Fuse
(Seconda		Between Terminals	Connect To	Clips To
12 11. 24 23 12 11. 24 23	3 22 5 11	3-4, 1-2 2-3 3-4, 1-2 2-3	1, 4 1, 4 4, 6 4, 6	Unfused Unfused 1-5 1-5





PH***PG Schematic for 150VA to 500VA Units

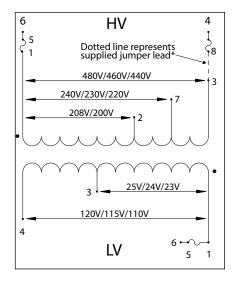
High Voltage (HV)	Install Supplied Links	Supply Lines	Install Fuse
(Primary Volts)	Between Terminals	Connect To	Clips To
120 115 110	2-3, 4-5	2, 5	Unfused
240 230 220	3-4	2, 5	Unfused
120 115 110	2-3, 4-5	1, 6	2-7, 5-8
240 230 220	3-4	1, 6	2-7, 5-8
Low Voltage (LV)	Install Supplied Links	Load Lines	Install Fuse
Low Voltage (LV)	Install Supplied Links	Load Lines	Install Fuse
(Secondary Volts)	Between Terminals	Connect To	Clips To
(Secondary Volts)	Between Terminals	Connect To	Clips To
	4-5, 2-3	2, 5	Unfused
(Secondary Volts)	Between Terminals	Connect To 2, 5 2, 5	Clips To
(Secondary Volts)	Between Terminals	Connect To	Clips To
12 11.5 11	4-5, 2-3	2, 5	Unfused



PH***PG Schematic for 750VA and 1000VA Units

High Voltage (HV)	Install Supplied Links	Supply Lines	Install Fuse	
(Primary Volts)	Between Terminals	Connect To	Clips To	
120 115 110	2-3, 4-5	2, 5	Unfused	
240 230 220	3-4	2, 5	Unfused	
120 115 110	2-3, 4-5	1, 6	2-7, 5-8	
240 230 220	3-4	1, 6	2-7, 5-8	
Low Voltage (LV)	Install Supplied Links	Load Lines	Install Fuse	
(Secondary Volts)	Between Terminals	Connect To	Clips To	
12 11.5 11	3-4, 1-2	1, 4	Unfused	
24 23 22	2-3	1, 4	Unfused	

Note: secondary fuse clips not available on PH750PG or PH1000PG.

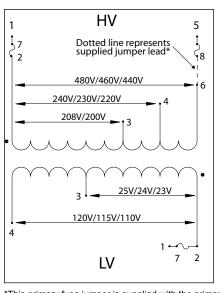


PH***MLI Schematic for 50, 75 and 100VA Units

High Voltage (HV) (Primary Volts)			Install Supplied Jumpers Between Terminals	Supply Lines Connect To	Install Fuse Clips To
480	460	440	None	1, 3	Unfused
240	230	220	None	1, 7	Unfused
	208	200	None	1, 2	Unfused
480	460	440	3-8	6, 4	1-5, 4-8
240	230	220	8-7	6, 4	1-5, 4-8
	208	200	2-8	6, 4	1-5, 4-8
Low Voltage (LV)		۸ (۱ V)	Install Sunnlied Jumpers	Load Lines	Inetall Fuse

Low Voltage (LV) (Secondary Volts)			Install Supplied Jumpers Between Terminals	Load Lines Connect To	Install Fuse Clips To
120	115	110	None	1, 4	Unfused
25	24	23	None	1, 3	Unfused
120	115	110	None	4, 6	1-5
25	24	23	None	3, 6	1-5

HP5

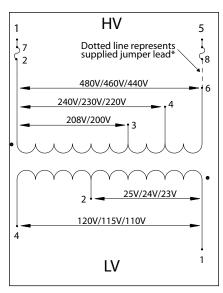


PH***MLI Schematic for 150VA to 500VA Units

_	Voltag mary V	e (HV) ⁄olts)	Install Supplied Jumpers Between Terminals	Supply Lines Connect To	Install Fuse Clips To
480	460	440	None	2, 6	Unfused
240	230	220	None	2, 4	Unfused
	208	200	None	2, 3	Unfused
480	460	440	8-6	1, 5	2-7, 5-8
240	230	220	4-8	1, 5	2-7, 5-8
	208	200	3-8	1, 5	2-7, 5-8

Low Voltage (LV) (Secondary Volts)			Install Supplied Jumpers Between Terminals	Load Lines Connect To	Install Fuse Clips To
120	115	110	None	2, 4	Unfused
25	24	23	None	2, 3	Unfused
120	115	110	None	1, 4	2-7
25	24	23	None	1, 3	2-7

^{*}This primary fuse jumper is supplied with the primary fuse kit only.

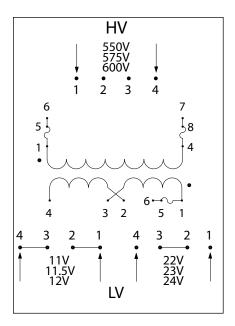


PH***MLI Schematic for 750VA and 1000VA Units

High Voltage (HV) (Primary Volts)	Install Supplied Jumpers Between Terminals	Supply Lines Connect To	Install Fuse Clips To
480 460 440	None	2, 6	Unfused
240 230 220	None	2, 4	Unfused
208 200	None	2, 3	Unfused
480 460 440	8-6	1, 5	2-7, 5-8
240 230 220	4-8	1, 5	2-7, 5-8
208 200	3-8	1, 5	2-7, 5-8
Low Voltage (LV) (Secondary Volts)	Install Supplied Jumpers Between Terminals	Load Lines Connect To	Install Fuse Clips To
120 115 110	None	1, 4	Unfused
25 24 23	None	1, 2	Unfused

Note: secondary fuse clips for 24V tap not available on the PH750MLI or PH1000MLI units.

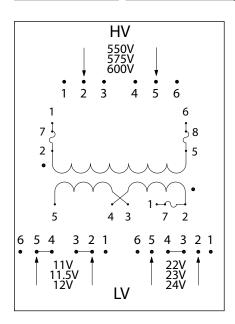
^{*}This primary fuse jumper is supplied with the primary fuse kit only.



PH***AR Schematic for 50, 75 and 100VA Units

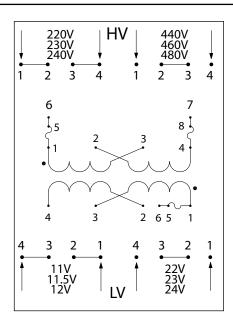
High Voltage	` '	tall Supplied Jumpers/	Supply Lines	Install Fuse
(Primary Vo		iks Between Terminals	Connect To	Clips To
	550	None	1, 4	Unfused
	550	None	6, 7	1-5, 4-8
Low Voltage	` '	nstall Supplied Links	Load Lines	Install Fuse
(Secondary V		Between Terminals	Connect To	Clips To
12 11.5	11	3-4, 1-2	1, 4	Unfused
24 23	22	2-3	1, 4	Unfused





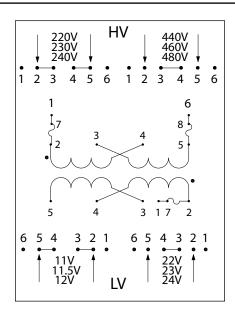
PH***AR Schematic for 150VA to 500VA Units

High V	oltage	` '	Install Supplied Jumpers/	Supply Lines	Install Fuse
(Prim	ary Vo		Links Between Terminals	Connect To	Clips To
600		550	None	2, 5	Unfused
600		550	None	1, 6	2-7, 5-8
Low V	oltage	` '	Install Supplied Links	Load Lines	Install Fuse
(Secor	ndary V		Between Terminals	Connect To	Clips To
24	11.5	11	4-5, 2-3	2, 5	Unfused
	23	22	3-4	2, 5	Unfused
	11.5	11	4-5, 2-3	1, 5	2-7
	23	22	3-4	1, 5	2-7



PH***QR Schematic for 50, 75 and 100VA Units

High Voltage (HV)	Install Supplied Links	Supply Lines	Install Fuse
(Primary Volts)	Between Terminals	Connect To	Clips To
240 230 220	1-2, 3-4	1, 4	Unfused
480 460 440	2-3	1, 4	Unfused
240 230 220	1-2, 3-4	6, 7	1-5, 4-8
480 460 440	2-3	6, 7	1-5, 4-8
Low Voltage (LV)	Install Supplied Links	Load Lines	Install Fuse
(Secondary Volts)	Between Terminals	Connect To	Clips To
12 11.5 11	3-4, 1-2	1, 4	Unfused
24 23 22	2-3	1, 4	Unfused
12 11.5 11	3-4, 1-2	4, 6	1-5
24 23 22	2-3	4, 6	1-5



PH***QR Schematic for 150VA to 500VA Units

High Voltage (HV)

(Primary Volts)

240	230	220	2-3, 4-5	2, 5	Unfused
480	460	440	3-4	2, 5	Unfused
240	230	220	2-3, 4-5	1, 6	2-7, 5-8
480	460	440	3-4	1, 6	2-7, 5-8
	/oltag	` '	Install Supplied Links Between Terminals	Load Lines Connect To	Install Fuse Clips To
(Seco	ndary	voits)	Detween lemmas	Connect 10	Olips 10
12	11.5	11	4-5, 2-3	2, 5	Unfused
•	•	,			-
12	11.5	11	4-5, 2-3	2, 5	Unfused
12 24	11.5 23	11 22	4-5, 2-3 3-4	2, 5 2, 5	Unfused Unfused

Supply Lines

Connect To

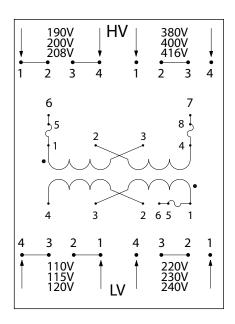
Install Supplied Links

Between Terminals

Install Fuse

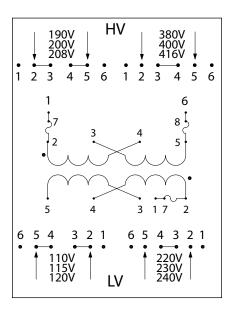
Clips To





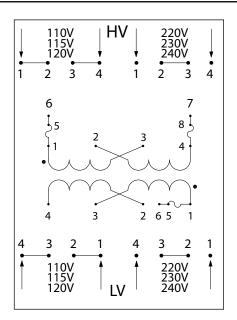
PH***SP Schematic for 50, 75 and 100VA Units

High Voltage (HV)	Install Supplied Links	Supply Lines	Install Fuse
(Primary Volts)	Between Terminals	Connect To	Clips To
208 200 190	1-2, 3-4	1, 4	Unfused
416 400 380	2-3	1, 4	Unfused
208 200 190	1-2, 3-4	6, 7	1-5, 4-8
416 400 380	2-3	6, 7	1-5, 4-8
Low Voltage (LV)	Install Supplied Links	Load Lines	Install Fuse
(Secondary Volts)	Between Terminals	Connect To	Clips To
120 115 110	3-4, 1-2	1, 4	Unfused
240 230 220	2-3	1, 4	Unfused
120 115 110	3-4, 1-2	4, 6	1-5
240 230 220	2-3	4, 6	1-5



PH***SP Schematic for 150VA to 1000VA Units

High Voltage (HV)	Install Supplied Links	Supply Lines	Install Fuse
(Primary Volts)	Between Terminals	Connect To	Clips To
208 200 190	2-3, 4-5	2, 5	Unfused
416 400 380	3-4	2, 5	Unfused
208 200 190	2-3, 4-5	1, 6	2-7, 5-8
416 400 380	3-4	1, 6	2-7, 5-8
Low Voltage (LV)	Install Supplied Links	Load Lines	Install Fuse
(Secondary Volts)	Between Terminals	Connect To	Clips To
120 115 110 240 230 220 120 115 110 240 230 220	4-5, 2-3 3-4 4-5, 2-3	2, 5 2, 5 1, 5	Unfused Unfused 2-7



PH***PP Schematic for 50, 75 and 100VA Units

High Voltage (HV) (Primary Volts)	Install Supplied Links Between Terminals	Supply Lines Connect To	Install Fuse Clips To
120 115 110	1-2, 3-4	1, 4	Unfused
240 230 220	2-3	1, 4	Unfused
120 115 110	1-2, 3-4	6, 7	1-5, 4-8
240 230 220	2-3	6, 7	1-5, 4-8
Low Voltage (LV) (Secondary Volts)	Install Supplied Links Between Terminals	Load Lines Connect To	Install Fuse Clips To
• , ,			
(Secondary Volts)	Between Terminals	Connect To	Clips To
(Secondary Volts) 120 115 110	Between Terminals 3-4, 1-2	Connect To	Clips To Unfused



Install Fuse

Clips To

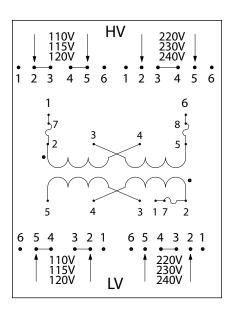
Unfused

Unfused

Unfused

1-5, 4-8

1-5, 4-8



PH***PP Schematic for 150VA to 1500VA Units

High Voltage (HV)	Install Supplied Links	Supply Lines	Install Fuse
(Primary Volts)	Between Terminals	Connect To	Clips To
120 115 110	2-3, 4-5	2, 5	Unfused
240 230 220	3-4	2, 5	Unfused
120 115 110	2-3, 4-5	1, 6	2-7, 5-8
240 230 220	3-4	1, 6	2-7, 5-8
Low Voltage (LV)	Install Supplied Links	Load Lines	Install Fuse
(Secondary Volts)	Between Terminals	Connect To	Clips To
120 115 110	4-5. 2-3	2, 5	Unfused

Install Supplied Jumpers

Between Terminals

None

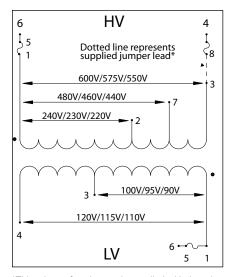
None

None

3-8

8-7

PH***MBMH Schematic for 50 and 75VA Units



High Voltage (HV) (Primary Volts)				
600	575	550		
480	460	440		
240	230	220		
600	575	550		
480	460	440		
240	230	220		

Low Voltage (LV)

(Secondary Volts)

115

95

115

95

110

90

110

90

120

100

120

100

2-8	6, 4	1-5, 4-8
Install Supplied Jumpers/	Load Lines	Install Fuse
Links Between Terminals	Connect To	Clips To
None	1, 4	Unfused
None	1, 3	Unfused
None	4, 6	1-5
None	3, 6	1-5

Supply Lines

Connect To

1, 3

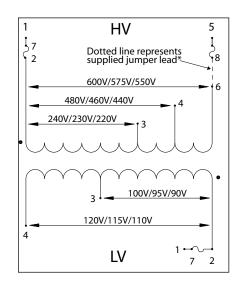
1, 7

1, 2

6, 4

6, 4

PH***MBMH Schematic for 100VA to 1500VA Units



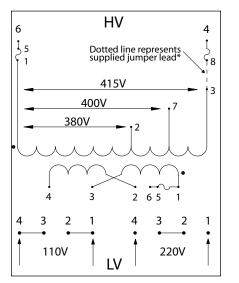
High Voltage (HV) (Primary Volts)			Install Supplied Jumpers Between Terminals	Supply Lines Connect To	Install Fuse Clips To
600	575	550	None	2, 6	Unfused
480	460	440	None	2, 4	Unfused
240	230	220	None	2, 3	Unfused
600	575	550	8-6	1, 5	2-7, 5-8
480	460	440	4-8	1, 5	2-7, 5-8
240	230	220	3-8	1, 5	2-7, 5-8
	/oltag	e (LV)	Install Supplied Jumpers/	Load Lines	Install Fuse

Low Voltage (LV) (Secondary Volts)		` '	Install Supplied Jumpers/ Links Between Terminals	Load Lines Connect To	Install Fuse Clips To
120	115	110	None	2, 4	Unfused
100	95	90	None	2, 3	Unfused
120	115	110	None	1, 4	2-7
100	95	90	None	1, 3	2-7

^{*}This primary fuse jumper is supplied with the primary fuse kit only.



PH***MEMX Schematic for 50, 75 and 100VA Units

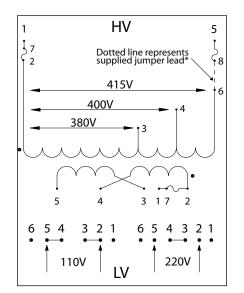


High Voltage (HV) (Primary Volts)	Install Supplied Jumpers Between Terminals	Supply Lines Connect To	Install Fuse Clips To
415	None	1, 3	Unfused
400	None	1, 7	Unfused
380	None	1, 2	Unfused
415	3-8	6, 4	1-5, 4-8
400	8-7	6, 4	1-5, 4-8
380	2-8	6, 4	1-5, 4-8

Low Voltage (LV) (Secondary Volts)	Install Supplied Links Between Terminals	Load Lines Connect To	Install Fuse Clips To
110	3-4, 1-2	1, 4	Unfused
220	2-3	1, 4	Unfused
110	3-4, 1-2	4, 6	1-5
220	2-3	4. 6	1-5

^{*}This primary fuse jumper is supplied with the primary fuse kit only.

PH***MEMX Schematic for 150VA to 1000VA Units

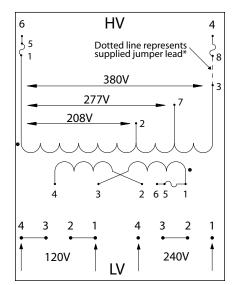


High Voltage (HV) (Primary Volts)	Install Supplied Jumpers Between Terminals	Supply Lines Connect To	Install Fuse Clips To
415	None	2, 6	Unfused
400	None	2, 4	Unfused
380	None	2, 3	Unfused
415	8-6	1, 5	2-7, 5-8
400	4-8	1, 5	2-7, 5-8
380	3-8	1, 5	2-7, 5-8

Low Voltage (LV) (Secondary Volts)	Install Supplied Links Between Terminals	Load Lines Connect To	Install Fuse Clips To
110	4-5, 2-3	2, 5	Unfused
220	3-4	2, 5	Unfused
110	4-5, 2-3	1, 5	2-7
220	3-4	1, 5	2-7

^{*}This primary fuse jumper is supplied with the primary fuse kit only.

PH***MGJ Schematic for 50, 75 and 100VA Units



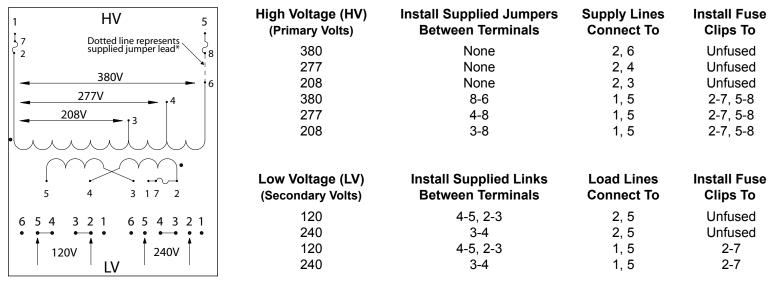
High Voltage (HV) (Primary Volts)	Install Supplied Jumpers Between Terminals	Supply Lines Connect To	Install Fuse Clips To
380	None	1, 3	Unfused
277	None	1, 7	Unfused
208	None	1, 2	Unfused
380	3-8	6, 4	1-5, 4-8
277	8-7	6, 4	1-5, 4-8
208	2-8	6, 4	1-5, 4-8

Low Voltage (LV) (Secondary Volts)	Install Supplied Links Between Terminals	Load Lines Connect To	Install Fuse Clips To
120	3-4, 1-2	1, 4	Unfused
240	2-3	1, 4	Unfused
120	3-4, 1-2	4, 6	1-5
240	2-3	4, 6	1-5

^{*}This primary fuse jumper is supplied with the primary fuse kit only.



PH***MGJ Schematic for 150VA to 1000VA Units



^{*}This primary fuse jumper is supplied with the primary fuse kit only.