

PROGRESSIVE  
**Innovative**  
Solutions



# HPS IMPERATOR<sup>®</sup>

Encapsulated Machine Tool  
Industrial Control Transformers

- Lifetime Warranty
- Unique Terminal Block
- Innovative Fusing Method
  - Patented Design



Hammond Power  
Solutions Inc.

# HPS IMPERATOR®

## Encapsulated Machine Tool Industrial Control Transformers

### OUR COMPANY

Hammond Power Solutions (HPS) was established in 1917 in Guelph, Ontario and has grown from a small family owned business in the short wave radio market, to the industry leader in magnetic transformer design and manufacturing. HPS has 6 manufacturing facilities and currently has 10 regional distribution centers throughout North America.

### INNOVATIVE DESIGN

The HPS Imperator® series is a unique innovative and compact design that provides the ideal solution for any industrial control application and will change the way the industrial machine tool industry looks at the control transformer.

**The HPS Imperator's unique terminal block design allows for the quick and easy installation of standard secondary or optional primary 13/32" x 1 1/2" midget/type CC fuse clips on every unit. This is the simplest and most inexpensive fusing installation provided on any industrial control transformer in the market today.**

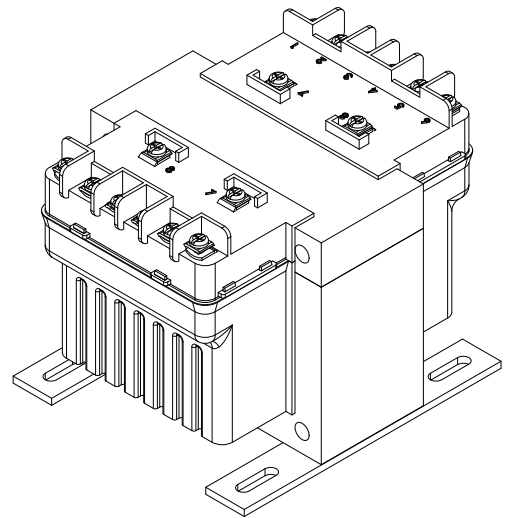
The windings and internal terminations of the HPS Imperator are encapsulated which protects them from moisture, dirt and other airborne contaminants. The custom molded coil covers with their unique 'fin shaped' design combine superior transformer cooling properties with a clean bold look.

The HPS Imperator utilizes custom serrated terminals, in combination with standard SEMS washer screws making assembly easier and quicker to install; and provides superior connection strength when connecting with bare, solid or stranded wire. It also allows for ring or spade termination connectors.

### THE PERFECT SOLUTION

The HPS Imperator series of machine tool rated industrial control transformers are specifically designed to meet the high inrush industrial applications where electromagnetic components such as relays, solenoids and magnetic motor starters are used.

**With 11 standard voltage groups, a VA range from 50VA to 1500VA and available with standard secondary and optional primary fuse kits, the HPS Imperator series provides the perfect solution for any application.**



ENGINEERING

Precision

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## APPLICATIONS

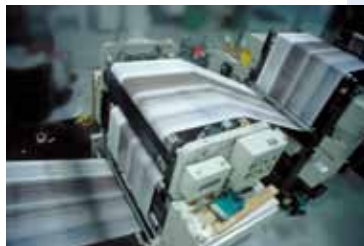
- Automation
- Panel Shops
- Machines
- Panel Boards
- Solenoids
- Control Applications
- Timers



PERFORMANCE  
**Value**  
Quality

## INDUSTRIES

- Paper Mills
- Printing
- Automotive
- Packaging Systems
- Process Automation



## SUPERIOR QUALITY & VALUE

The HPS Imperator series design, utilizing superior insulation systems and being constructed with high quality silicon steel laminations for optimum performance, will meet or exceed UL and CE standards.

**Backed by an industry leading LIFETIME warranty, the HPS Imperator industrial control transformer line offers superior performance, quality and value.**



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# HPS IMPERATOR®

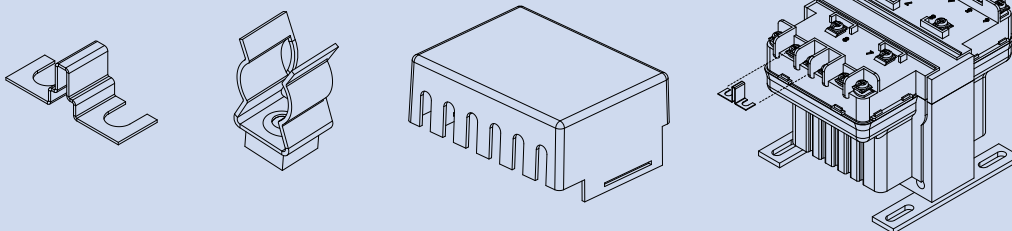
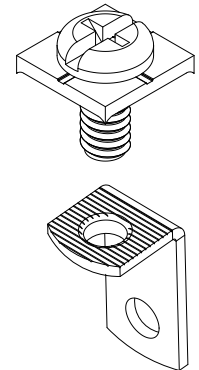
## Encapsulated Machine Tool Industrial Control Transformers

### FEATURES & BENEFITS

- 600V class, machine tool rated industrial control transformers
- 11 standard multi primary and secondary voltage groups available<sup>1</sup>
- 50/60 Hertz (60Hz on PH\*\*\*AJ & PH\*\*\*AR)
- VA range from 50 up to 1500<sup>1</sup>
- Superior insulation system
  - 50-150VA, temperature rise 55°C, insulation class 105°C
  - 250-1500VA, temperature rise 80°C, insulation class 130°C
- Constructed with high quality silicon steel laminations that provide optimum performance and reliability
- Encapsulated coils encased in a custom injection molded cover, protect coils and terminations from moisture, dirt and other industrial airborne contaminants.
- Mounting Feet: made of heavy steel and welded or bolted to the core, these mounting feet provide superior strength in a compact design.
- Termination: combination slot/Philips #6 screw, complete with SEMS washer (suitable for 18 AWG to 14 AWG solid or 14 AWG stranded wire)
- Standard SEMS washers - supplied on all units<sup>2</sup>
- Standard secondary fuse kits -utilizing 13/32" x 1 1/2" midget/type CC fuse clips (supplied with all units)
- Optional primary fuse kits available utilizing 13/32" x 1 1/2" midget/type CC fuse clips
- Optional finger safe terminal covers available on all units
- UL Listed (approved for U.S. and Canada)
- CE Mark standard on all units (excluding PH\*\*\*AJ & PH\*\*\*AR)
- LIFETIME Warranty (Limited)
- RoHS Compliant

<sup>1</sup> special voltages and VA sizes available upon request

<sup>2</sup> excluding PH750PG, PH1000PG, PH750MLI, PH1000MLI



WARRANTY

Lifetime



Terminal connection numbers molded into terminal block and correspond to nameplate and wiring diagrams, make connecting the HPS Imperator quick and simple.

SEMS washer allows for easy connection of supply or load wires with or without terminal connectors

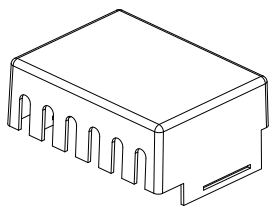


Standard secondary and optional primary fuse kits utilizing 13/32" x 1 1/2" midget/type CC fuse clips provide an economical solution to your fusing requirements (fuses not available).

Innovative terminal block design provides for easy hook-up and installation of fuse clips.



Optional removable finger safe terminal covers available on all standard units.



Custom injection molded coil cover with its unique "fin shaped" design combine superior cooling properties with a clean, bold look.

Made of heavy steel and welded or bolted to the core, these mounting feet provide superior strength in a compact design.

# HPS IMPERATOR®

## Encapsulated Machine Tool Industrial Control Transformers

### Group A

Primary Voltage: 600 || 575 || 550  
 Secondary Voltage: 120 x 240 || 115 x 230 || 110 x 220



60 Hertz

VA Rating	Catalog Number	Mtg. Fig.	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot	Height with Finger Guard	Depth with Finger Guard	Approx. Ship Weight Lbs.	Optional Primary Fuse Kit P/N
				A	B	C	D	E	G X H				
50	PH50AJ	A	0.42/0.21	3.00	3.81	3.19	2.50	2.25	0.22 x 0.44	4.00	5.25	2.70	PFK1
75	PH75AJ	A	0.63/0.31	3.25	3.69	3.56	2.63	2.50	0.22 x 0.44	4.37	5.13	2.80	PFK1
100	PH100AJ	A	0.83/0.42	3.25	4.06	3.63	2.63	2.63	0.22 x 0.44	4.44	5.50	4.10	PFK1
150	PH150AJ	B	1.25/0.63	4.00	4.63	3.81	3.38	2.75	0.22 x 0.75	4.50	6.13	4.90	PFK2
250	PH250AJ	B	2.08/1.04	4.50	5.25	3.81	3.75	3.13	0.22 x 0.75	4.50	6.75	6.97	PFK2
350	PH350AJ	B	2.92/1.46	4.50	4.88	4.44	3.75	3.75	0.22 x 0.75	4.94	6.38	8.30	PFK3
500	PH500AJ	B	4.17/2.08	4.75	5.56	4.31	4.06	3.44	0.31 x 0.94	4.81	7.06	11.6	PFK3
750	PH750AJ	B	6.25/3.13	5.13	6.38	4.31	4.38	4.00	0.31 x 0.81	4.81	7.88	16.6	PFK3
1000	PH1000AJ	B	8.33/4.17	5.25	6.50	4.94	4.50	4.09	0.31 x 0.81	5.56	8.00	21.0	PFK3
1500	PH1500AJ	B	12.5/6.25	5.25	7.56	4.94	4.50	5.44	0.38 x 1.00	5.56	9.06	30.0	PFK3

Secondary fuse clips, fuse clip mounting screws and primary and secondary voltage links/jumpers supplied standard with transformers.  
 Please refer to page 14 for dimensional drawings. Special voltages and VA sizes available upon request.

All dimensions in inches

### Group B

Primary Voltage: 600 || 575 || 550  
 Secondary Voltage: 12 x 24 || 11.5 x 23 || 11 x 22



60 Hertz

VA Rating	Catalog Number	Mtg. Fig.	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot	Height with Finger Guard	Depth with Finger Guard	Approx. Ship Weight Lbs.	Optional Primary Fuse Kit P/N
				A	B	C	D	E	G X H				
50	PH50AR	A	4.17/2.08	3.00	3.81	3.19	2.50	2.25	0.22 x 0.44	4.00	5.25	2.70	PFK1
75	PH75AR	A	6.25/3.13	3.25	3.69	3.56	2.63	2.50	0.22 x 0.44	4.37	5.13	2.80	PFK1
100	PH100AR	A	8.33/4.17	3.25	4.19	3.63	2.63	2.63	0.22 x 0.44	4.44	5.63	4.50	PFK1
150	PH150AR	B	12.5/6.25	4.00	4.94	3.81	3.38	2.75	0.22 x 0.75	4.50	6.44	5.70	PFK2
250	PH250AR	B	20.8/10.4	4.50	5.44	3.81	3.75	3.13	0.22 x 0.75	4.50	6.94	7.50	PFK2
350	PH350AR	B	29.2/14.6	4.50	4.88	4.44	3.75	3.75	0.22 x 0.75	4.94	6.38	8.30	PFK3
500	PH500AR	B	41.7/20.8	4.75	5.56	4.31	4.06	3.44	0.31 x 0.94	4.81	7.06	11.6	PFK3

Secondary fuse clips, fuse clip mounting screws and primary and secondary voltage links/jumpers supplied with transformers.  
 Please refer to page 14 for dimensional drawings. Special voltages and VA sizes available upon request.

All dimensions in inches

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## Group C

Primary Voltage: **240 x 480** || 230 x 460 || 220 x 440  
 Secondary Voltage: **120 x 240** || 115 x 230 || 110 x 220



50/60 Hertz

VA Rating	Catalog Number	Mtg. Fig.	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot	Height with Finger Guard	Depth with Finger Guard	Approx. Ship Weight Lbs.	Optional Primary Fuse Kit P/N
				A	B	C	D	E	G X H				
50	PH50MQMJ	A	0.42/0.21	3.00	4.38	3.19	2.50	2.25	0.22 x 0.44	4.00	5.82	3.50	PFK1
75	PH75MQMJ	A	0.63/0.31	3.25	3.88	3.56	2.63	2.50	0.22 x 0.44	4.37	5.32	3.54	PFK1
100	PH100MQMJ	A	0.83/0.42	3.25	4.19	3.63	2.63	2.63	0.22 x 0.44	4.44	5.63	4.50	PFK1
150	PH150MQMJ	B	1.25/0.63	4.00	4.94	3.81	3.38	2.75	0.22 x 0.75	4.50	6.44	5.70	PFK2
250	PH250MQMJ	B	2.08/1.04	4.50	5.44	3.81	3.75	3.13	0.22 x 0.75	4.50	6.94	7.50	PFK2
350	PH350MQMJ	B	2.92/1.46	4.50	5.19	4.44	3.75	3.75	0.22 x 0.75	4.94	6.69	10.1	PFK3
500	PH500MQMJ	B	4.17/2.08	4.75	5.94	4.31	4.06	3.81	0.31 x 0.94	4.81	7.44	14.2	PFK3
750	PH750MQMJ	B	6.25/3.13	5.13	6.69	4.31	4.38	4.31	0.31 x 0.81	4.81	8.19	16.6	PFK3
1000	PH1000MQMJ	B	8.33/4.17	5.25	6.81	4.94	4.50	4.44	0.31 x 0.81	5.56	8.31	23.6	PFK3
1500	PH1500MQMJ	B	12.5/6.25	5.25	8.19	4.94	4.50	6.06	0.38 x 1.00	5.56	9.69	32.0	PFK3

Secondary fuse clips, fuse clip mounting screws and primary and secondary voltage links/jumpers supplied standard with transformers.  
 Please refer to page 14 for dimensional drawings. Special voltages and VA sizes available upon request.

All dimensions in inches

## Group D

Primary Voltage: **240 x 480** || 230 x 460 || 220 x 440  
 Secondary Voltage: **12 x 24** || 11.5 x 23 || 11 x 22



50/60 Hertz

VA Rating	Catalog Number	Mtg. Fig.	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot	Height with Finger Guard	Depth with Finger Guard	Approx. Ship Weight Lbs.	Optional Primary Fuse Kit P/N
				A	B	C	D	E	G X H				
50	PH50QR	A	4.17/2.08	3.00	4.38	3.19	2.50	2.25	0.22 x 0.44	4.00	5.82	3.50	PFK1
75	PH75QR	A	6.25/3.13	3.25	3.88	3.56	2.63	2.50	0.22 x 0.44	4.37	5.32	3.54	PFK1
100	PH100QR	A	8.33/4.17	3.25	4.19	3.63	2.63	2.63	0.22 x 0.44	4.44	5.63	4.50	PFK1
150	PH150QR	B	12.5/6.25	4.00	4.94	3.81	3.38	2.75	0.22 x 0.75	4.50	6.44	5.70	PFK2
250	PH250QR	B	20.8/10.4	4.50	5.44	3.81	3.75	3.13	0.22 x 0.75	4.50	6.94	7.50	PFK2
350	PH350QR	B	29.2/14.6	4.50	5.19	4.44	3.75	3.75	0.22 x 0.75	4.94	6.69	10.1	PFK3
500	PH500QR	B	41.7/20.8	4.75	5.94	4.31	4.06	3.81	0.31 x 0.94	4.81	7.44	14.2	PFK3

Secondary fuse clips, fuse clip mounting screws and primary and secondary voltage links/jumpers supplied standard with transformers.  
 Please refer to page 14 for dimensional drawings. Special voltages and VA sizes available upon request.

All dimensions in inches



Hammond Power Solutions Inc.

# HPS IMPERATOR®

## Encapsulated Machine Tool Industrial Control Transformers

### Group E

Primary Voltage: **208 x 416** || 200 x 400 || 190 x 380  
 Secondary Voltage: **120 x 240** || 115 x 230 || 110 x 220



50/60 Hertz

VA Rating	Catalog Number	Mtg. Fig.	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot	Height with Finger Guard	Depth with Finger Guard	Approx. Ship Weight Lbs.	Optional Primary Fuse Kit P/N
				A	B	C	D	E	G X H				
50	PH50SP	A	0.42/0.21	3.00	4.38	3.19	2.50	2.25	0.22 x 0.44	4.00	5.82	3.50	PFK1
75	PH75SP	A	0.63/0.31	3.25	3.88	3.56	2.63	2.50	0.22 x 0.44	4.37	5.32	3.54	PFK1
100	PH100SP	A	0.83/0.42	3.25	4.19	3.63	2.63	2.63	0.22 x 0.44	4.44	5.63	4.50	PFK1
150	PH150SP	B	1.25/0.63	4.00	4.94	3.81	3.38	2.75	0.22 x 0.75	4.50	6.44	5.70	PFK2
250	PH250SP	B	2.08/1.04	4.50	5.44	3.81	3.75	3.13	0.22 x 0.75	4.50	6.94	7.50	PFK2
350	PH350SP	B	2.92/1.46	4.50	5.19	4.44	3.75	3.75	0.22 x 0.75	4.94	6.69	10.1	PFK3
500	PH500SP	B	4.17/2.08	4.75	5.94	4.31	4.06	3.81	0.31 x 0.94	4.81	7.44	14.2	PFK3
750	PH750SP	B	6.25/3.13	5.13	6.69	4.31	4.38	4.31	0.31 x 0.81	4.81	8.19	16.6	PFK3
1000	PH1000SP	B	8.33/4.17	5.25	6.81	4.94	4.50	4.44	0.31 x 0.81	5.56	8.31	23.6	PFK3

Secondary fuse clips, fuse clip mounting screws and primary and secondary voltage links/jumpers supplied standard with transformers. Please refer to page 14 for dimensional drawings. Special voltages and VA sizes available upon request.

All dimensions in inches

### Group F

Primary Voltage: **120 x 240** || 115 x 230 || 110 x 220  
 Secondary Voltage: **120 x 240** || 115 x 230 || 110 x 220



50/60 Hertz

VA Rating	Catalog Number	Mtg. Fig.	Output Amps	Overall Dimensions			Mounting Centers		Mtg. Slot	Height with Finger Guard	Depth with Finger Guard	Approx. Ship Weight Lbs.	Optional Primary Fuse Kit P/N
				A	B	C	D	E	G X H				
50	PH50PP	A	0.42/0.21	3.00	4.38	3.19	2.50	2.25	0.22 x 0.44	4.00	5.82	3.50	PFK1
75	PH75PP	A	0.63/0.31	3.25	3.88	3.56	2.63	2.50	0.22 x 0.44	4.37	5.32	3.54	PFK1
100	PH100PP	A	0.83/0.42	3.25	4.19	3.63	2.63	2.63	0.22 x 0.44	4.44	5.63	4.50	PFK1
150	PH150PP	B	1.25/0.63	4.00	4.94	3.81	3.38	2.75	0.22 x 0.75	4.50	6.44	5.70	PFK2
250	PH250PP	B	2.08/1.04	4.50	5.44	3.81	3.75	3.13	0.22 x 0.75	4.50	6.94	7.50	PFK2
350	PH350PP	B	2.92/1.46	4.50	5.19	4.44	3.75	3.75	0.22 x 0.75	4.94	6.69	10.1	PFK3
500	PH500PP	B	4.17/2.08	4.75	5.94	4.31	4.06	3.81	0.31 x 0.94	4.81	7.44	14.2	PFK3
750	PH750PP	B	6.25/3.13	5.13	6.69	4.31	4.38	4.31	0.31 x 0.81	4.81	8.19	16.6	PFK3
1000	PH1000PP	B	8.33/4.17	5.25	6.81	4.94	4.50	4.44	0.31 x 0.81	5.56	8.31	23.6	PFK3
1500	PH1500PP	B	12.5/6.25	5.25	8.19	4.94	4.50	6.06	0.38 x 1.0	5.56	9.69	32.0	PFK3

Secondary fuse clips, fuse clip mounting screws and primary and secondary voltage links/jumpers supplied standard with transformers. Please refer to page 14 for dimensional drawings. Special voltages and VA sizes available upon request.

All dimensions in inches

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## Group G

Primary Voltage: **120 x 240** || **115 x 230** || **110 x 220**  
 Secondary Voltage: **12 x 24** || **11.5 x 23** || **11 x 22**



**CE** 50/60 Hertz

VA Rating	Catalog Number	Mtg. Fig.	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot G X H	Height with Finger Guard	Depth with Finger Guard	Approx. Ship Weight Lbs.	Optional Primary Fuse Kit P/N
				A	B	C	D	E					
50	<b>PH50PG</b>	A	4.17/2.08	3.00	4.38	3.19	2.50	2.25	0.22 x 0.44	4.00	5.82	3.50	PFK1
75	<b>PH75PG</b>	A	6.25/3.13	3.25	3.88	3.56	2.63	2.50	0.22 x 0.44	4.37	5.32	3.54	PFK1
100	<b>PH100PG</b>	A	8.33/4.17	3.25	4.19	3.63	2.63	2.63	0.22 x 0.44	4.44	5.63	4.50	PFK1
150	<b>PH150PG</b>	B	12.5/6.25	4.00	4.94	3.81	3.38	2.75	0.22 x 0.75	4.50	6.44	5.70	PFK2
250	<b>PH250PG</b>	B	20.8/10.4	4.50	5.44	3.81	3.75	3.13	0.22 x 0.75	4.50	6.94	7.50	PFK2
350	<b>PH350PG</b>	B	29.2/14.6	4.50	5.19	4.44	3.75	3.75	0.22 x 0.75	4.94	6.69	10.1	PFK3
500	<b>PH500PG</b>	B	41.7/20.8	4.75	5.94	4.31	4.06	3.81	0.31 x 0.94	4.81	7.44	14.2	PFK3
750	<b>PH750PG</b>	C	62.5/31.3	5.13	6.69	4.31	4.38	4.31	0.31 x 0.81	4.81	8.19	16.6	PFK3
1000	<b>PH1000PG</b>	C	83.3/41.7	5.25	6.81	4.94	4.50	4.44	0.31 x 0.81	5.56	8.31	23.6	PFK3

Secondary fuse clips and fuse clip mounting screws supplied standard with transformers up to and including 500VA. Primary and secondary voltage links/jumpers supplied standard with transformers. Please refer to page 14 for dimensional drawings. Special voltages and VA sizes available upon request. All dimensions in inches

## Group H

Primary Voltage: **600/480/240** || **575/460/230** || **550/440/220**  
 Secondary Voltage: **120/100** || **115/95** || **110/90**



**CE** 50/60 Hertz

VA Rating	Catalog Number	Mtg. Fig.	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot G X H	Height with Finger Guard	Depth with Finger Guard	Approx. Ship Weight Lbs.	Optional Primary Fuse Kit P/N
				A	B	C	D	E					
50	<b>PH50MBMH</b>	A	0.43	3.25	4.06	3.63	2.63	2.63	0.22 x 0.44	4.44	5.50	4.10	PFK4
75	<b>PH75MBMH</b>	A	0.65	3.25	4.19	3.63	2.63	2.63	0.22 x 0.44	4.44	5.63	4.50	PFK5
100	<b>PH100MBMH</b>	B	0.87	4.00	4.63	3.81	3.38	2.75	0.22 x 0.75	4.50	6.13	4.90	PFK6
150	<b>PH150MBMH</b>	B	1.30	4.00	5.44	3.81	3.38	2.75	0.22 x 0.75	4.50	6.94	7.60	PFK6
250	<b>PH250MBMH</b>	B	2.17	4.50	5.19	4.44	3.75	3.75	0.22 x 0.75	4.94	6.69	10.1	PFK6
350	<b>PH350MBMH</b>	B	3.04	4.50	5.56	4.44	3.75	3.75	0.22 x 0.75	4.94	7.06	11.0	PFK7
500	<b>PH500MBMH</b>	B	4.35	4.75	6.69	4.31	4.06	4.50	0.31 x 0.94	4.81	8.19	16.3	PFK7
750	<b>PH750MBMH</b>	B	6.52	5.25	6.81	4.94	4.50	4.44	0.31 x 0.81	5.56	8.31	23.6	PFK7
1000	<b>PH1000MBMH</b>	B	8.70	5.25	8.19	4.94	4.50	5.81	0.31 x 0.81	5.56	9.69	31.2	PFK7
1500	<b>PH1500MBMH</b>	B	13.0	5.25	8.19	4.94	4.50	6.06	0.38 x 1.0	5.56	9.69	32.0	PFK7

Secondary fuse clips, fuse clip mounting screws and primary and secondary voltage links/jumpers supplied standard with transformers. Please refer to page 14 for dimensional drawings. Special voltages and VA sizes available upon request. All dimensions in inches



Hammond Power Solutions Inc.

# HPS IMPERATOR®

## Encapsulated Machine Tool Industrial Control Transformers

### Group I

Primary Voltage: 480/240 || **460/230/208** || 440/220/200  
 Secondary Voltage: 120/25 || **115/24** || 110/23



50/60 Hertz

VA Rating	Catalog Number	Mtg. Fig.	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot	Height with Finger Guard	Depth with Finger Guard	Approx. Ship Weight Lbs.s	Optional Primary Fuse Kit P/N
				A	B	C	D	E	G X H				
50	PH50MLI	A	0.43/2.08	3.25	4.06	3.56	2.63	2.50	0.22 x 0.44	4.37	5.50	4.00	PFK5
75	PH75MLI	A	0.65/3.13	3.25	4.25	3.56	2.63	2.50	0.22 x 0.44	4.37	5.69	4.60	PFK5
100	PH100MLI	A	0.87/4.17	3.25	4.69	3.63	2.63	2.63	0.22 x 0.44	4.44	6.13	5.20	PFK5
150	PH150MLI	B	1.30/6.25	4.00	5.44	3.81	3.38	2.75	0.22 x 0.75	4.50	6.94	7.60	PFK6
250	PH250MLI	B	2.17/10.42	4.50	5.19	4.44	3.75	3.75	0.22 x 0.75	4.94	6.69	10.1	PFK6
350	PH350MLI	B	3.04/14.58	4.50	5.56	4.44	3.75	3.75	0.22 x 0.75	4.94	7.06	11.0	PFK7
500	PH500MLI	B	4.35/20.83	4.75	6.69	4.31	4.06	4.50	0.31 x 0.94	4.81	8.19	16.3	PFK7
750	PH750MLI	C	6.52/31.25	5.25	6.50	4.94	4.50	4.13	0.31 x 0.81	5.56	8.00	21.0	PFK7
1000	PH1000MLI	C	8.70/41.67	5.25	8.19	4.94	4.50	5.81	0.31 x 0.81	5.56	9.69	31.2	PFK7

Secondary fuse clips and fuse clip mounting screws supplied standard with transformers up to and including 500VA. Primary and secondary voltage links/jumpers supplied standard with transformers. Please refer to page 14 for dimensional drawings. Special voltages and VA sizes available upon request.

All dimensions in inches

### Group J

Primary Voltage: **415/400/380**  
 Secondary Voltage: **110 x 220**



50/60 Hertz

VA Rating	Catalog Number	Mtg. Fig.	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot	Height with Finger Guard	Depth with Finger Guard	Approx. Ship Weight Lbs.	Optional Primary Fuse Kit P/N
				A	B	C	D	E	G X H				
50	PH50MEMX	A	0.45/0.23	3.00	4.38	3.19	2.50	2.25	0.22 x 0.44	4.00	5.82	3.50	PFK4
75	PH75MEMX	A	0.68/0.34	3.25	4.06	3.63	2.63	2.63	0.22 x 0.44	4.44	5.50	4.10	PFK5
100	PH100MEMX	A	0.91/0.45	3.25	4.19	3.63	2.63	2.63	0.22 x 0.44	4.44	5.63	4.50	PFK5
150	PH150MEMX	B	1.36/0.68	4.00	4.94	3.81	3.38	2.75	0.22 x 0.75	4.50	6.44	5.70	PFK6
250	PH250MEMX	B	2.27/1.14	4.50	5.44	3.81	3.75	3.13	0.22 x 0.75	4.50	6.94	7.50	PFK6
350	PH350MEMX	B	3.18/1.59	4.50	5.19	4.44	3.75	3.75	0.22 x 0.75	4.94	6.69	10.1	PFK7
500	PH500MEMX	B	4.55/2.27	4.75	5.94	4.31	4.06	3.81	0.31 x 0.94	4.81	7.44	14.2	PFK7
750	PH750MEMX	B	6.82/3.41	5.25	6.50	4.94	4.50	4.13	0.31 x 0.81	5.56	8.00	21.0	PFK7
1000	PH1000MEMX	B	9.09/4.55	5.25	6.81	4.94	4.50	4.44	0.31 x 0.81	5.56	8.31	23.6	PFK7

Secondary fuse clips, fuse clip mounting screws and primary and secondary voltage links/jumpers supplied with transformers. Please refer to page 14 for dimensional drawings. Special voltages and VA sizes available upon request.

All dimensions in inches



## Group K

Primary Voltage: **380/277/208**  
 Secondary Voltage: **120 x 240**



CE 50/60 Hertz

VA Rating	Catalog Number	Mtg. Fig.	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot G X H	Height with Finger Guard	Depth with Finger Guard	Approx. Ship Weight Lbs.	Optional Primary Fuse Kit P/N
				A	B	C	D	E					
50	PH50MGJ	A	0.42/0.21	3.25	3.88	3.56	2.63	2.50	0.22 x 0.44	4.37	5.32	3.54	PFK4
75	PH75MGJ	A	0.63/0.31	3.25	4.19	3.63	2.63	2.63	0.22 x 0.44	4.44	5.63	4.50	PFK5
100	PH100MGJ	A	0.83/0.42	3.25	4.69	3.63	2.63	2.63	0.22 x 0.44	4.44	6.13	5.20	PFK5
150	PH150MGJ	B	1.25/0.63	4.00	5.44	3.81	3.38	2.75	0.22 x 0.75	4.50	6.94	7.60	PFK6
250	PH250MGJ	B	2.08/1.04	4.50	4.88	4.44	3.75	3.75	0.22 x 0.75	4.94	6.38	8.30	PFK6
350	PH350MGJ	B	2.92/1.46	4.50	5.56	4.44	3.75	3.75	0.22 x 0.75	4.94	7.06	11.0	PFK7
500	PH500MGJ	B	4.17/2.08	4.75	6.69	4.31	4.06	4.50	0.31 x 0.94	4.81	8.19	16.3	PFK7
750	PH750MGJ	B	6.25/3.13	5.25	6.81	4.94	4.50	4.44	0.31 x 0.81	5.56	8.31	23.6	PFK7
1000	PH1000MGJ	B	8.33/4.17	5.25	7.25	4.94	4.50	4.83	0.31 x 0.81	5.44	8.75	25.5	PFK7

Secondary fuse clips, fuse clip mounting screws and primary and secondary voltage links/jumpers supplied with transformers.  
 Please refer to page 14 for dimensional drawings. Special voltages and VA sizes available upon request.

All dimensions in inches

### Accessory Kits Available

The HPS Imperator series of machine tool rated industrial control transformers are supplied with standard secondary fuse kits or optional accessories such as primary fuse kits and finger guards.

### Standard Secondary Fuse Kits

All HPS Imperator control transformers are supplied with standard secondary fuse kits which include: 13/32" x 1 1/2" midget/type CC fuse clips, fuse clip mounting screws, primary and secondary voltage links and the PHAK1 instruction sheet (note: secondary fuse clips and fuse clip mounting screws not supplied on the PH750PG, PH1000PG, PH750MLI and PH1000MLI). Please consult the HPS Transformer Products catalog for additional details.

### Optional Primary Fuse Kits

Kit Part Number	Applicable Transformer Part Number Suffix's	Applicable VA Sizes	Parts Included in Kit
PFK1	<i>Refer to Specification Tables on Pages 5 to 10</i>	<i>Refer to Specification Tables on Pages 5 to 10</i>	4 fuse clips, 4 mtg. screws, PHAK1 instruction sheet
PFK2			4 fuse clips, 4 mtg. screws, PHAK1 instruction sheet
PFK3			4 fuse clips, 4 mtg. screws, PHAK1 instruction sheet
PFK4			4 fuse clips, 4 mtg. screws, 1 jumper, 1 finger guard, PHAK1 instruction sheet
PFK5			4 fuse clips, 4 mtg. screws, 1 jumper, 1 finger guard, PHAK1 instruction sheet
PFK6			4 fuse clips, 4 mtg. screws, 1 jumper wire, PHAK1 instruction sheet
PFK7			4 fuse clips, 4 mtg. screws, 1 jumper wire, PHAK1 instruction sheet

Note: Maximum allowable current rating on all primary and secondary fuse kits is 30 amps.



Hammond Power Solutions Inc.

# HPS IMPERATOR®

## Encapsulated Machine Tool Industrial Control Transformers

### Factory Installed Primary and Secondary Fuse Kits

HPS now stocks some HPS Imperator series voltage groups with FACTORY INSTALLED primary and secondary fuse clips. To order, just add the suffix “-FK” to the end of the standard part number.

Factory installed primary and secondary fuse clips are only available on the following voltage groups:

**Group C (p/n: PH\*\*\*MQMJ-FK) | Group G (p/n: PH\*\*\*PG-FK) | Group I (p/n: PH\*\*\*MLI-FK)**

On PH750PG-FK, PH1000PG-FK, PH750MLI-FK, and PH1000MLI-FK, only primary fuse clips are included on factory installed units. Secondary fuse clips are not included or available on these units.

*Note: All factory installed fuse kits are pre-wired at the transformers highest primary voltage and the lowest secondary voltage. To hook up at a different primary or secondary voltage, please refer to the wiring instruction sheet included with the transformer.*

### Optional Unfused Finger Guard Kits

Kit Part Number	Applicable Transformer Part Number Suffix's	Applicable VA Sizes	Parts Included in Kit
<b>FG1</b>	AJ, AR, MQMJ, MEMX, QR, SP, PG, PP	50	1 finger guard (unfused), PHAK1 instruction sheet
<b>FG2</b>	MBMH, MGJ, MLI	50	1 finger guard (unfused), PHAK1 instruction sheet
<b>FG2</b>	All	75	1 finger guard (unfused), PHAK1 instruction sheet
<b>FG2</b>	All (excluding PH100MBMH) refer to FG3, FG4 or FG5 below	100 150 to 1500	1 finger guard (unfused), PHAK1 instruction sheet

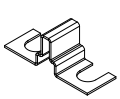
### Optional Fused Finger Guard Kits

<b>FGF1</b>	AJ, AR, MQMJ, MEMX, QR, SP, PG, PP	50	1 finger guard (fused), PHAK1 instruction sheet
<b>FGF2</b>	MBMH, MGJ, MLI	50	1 finger guard (fused), PHAK1 instruction sheet
<b>FGF2</b>	All	75	1 finger guard (fused), PHAK1 instruction sheet
<b>FGF2</b>	All (excluding PH100MBMH)	100	1 finger guard (fused), PHAK1 instruction sheet
<b>FG3</b>	MBMH	100	1 finger guard, PHAK1 instruction sheet
<b>FG3</b>	All	150	1 finger guard, PHAK1 instruction sheet
<b>FG3</b>	AJ, AR, MQMJ, MEMX, QR, SP, PG, PP	250	1 finger guard, PHAK1 instruction sheet
<b>FG4</b>	MBMH, MGJ, MLI	250	1 finger guard, PHAK1 instruction sheet
<b>FG4</b>	All	350, 500	1 finger guard, PHAK1 instruction sheet
<b>FG4</b>	AJ, AR, MQMJ, QR, SP, PP	750	1 finger guard, PHAK1 instruction sheet
<b>FG5</b>	MBMH, MEMX, MGJ, MLI, PG	750	1 finger guard, PHAK1 instruction sheet
<b>FG5</b>	All	1000, 1500	1 finger guard, PHAK1 instruction sheet

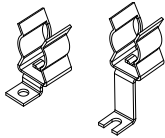
Note: Each finger guard kit supplies either the primary or secondary side.



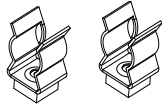
Sample Accessory Drawings



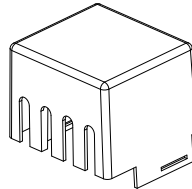
**Voltage Link**



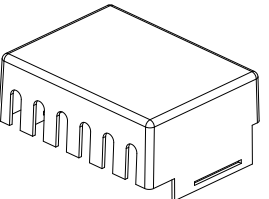
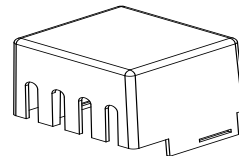
**Fuse Clips**  
(for 50, 75 and 100VA)



**Fuse Clips**  
(for 150VA to 1500VA)

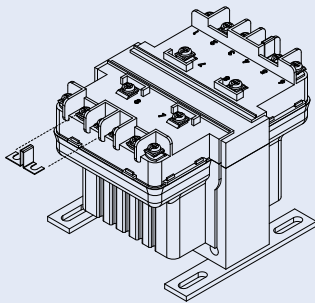


**Fused & Unfused Finger Guard**  
(for 50, 75 and 100VA)

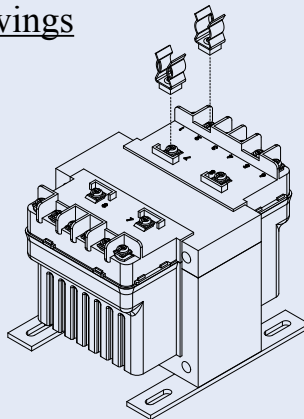


**Finger Guard**  
(for 150VA to 1500VA)

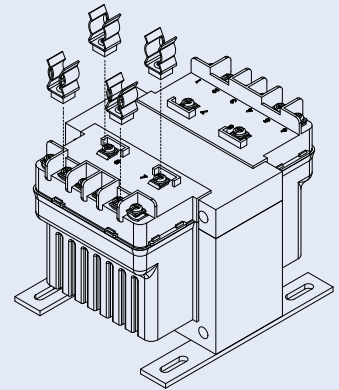
Sample Accessory Assembly Drawings



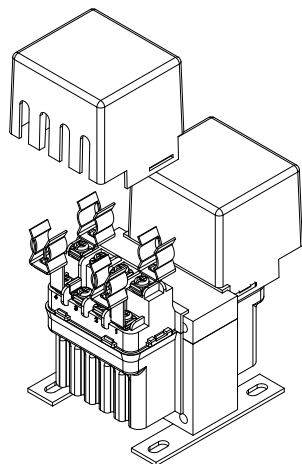
**Sample Assembly Drawing for  
Voltage Link Installation**



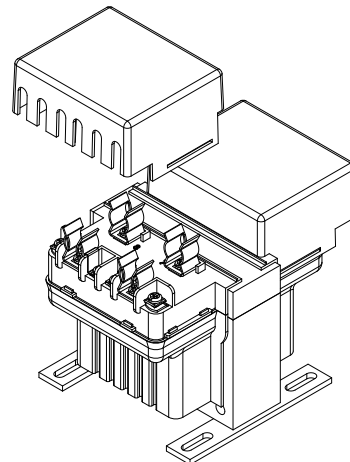
**Sample Assembly Drawing for  
Secondary Fuse Clip Installation**  
(for 150VA to 1500VA)



**Sample Assembly Drawing for  
Primary Fuse Clip Installation**  
(for 150VA to 1500VA)



**Sample Assembly Drawing for  
Finger Guard Installation**  
(for 50, 75 and 100VA)



**Sample Assembly Drawing for  
Finger Guard Installation**  
(for 150VA to 1500VA)



# HPS IMPERATOR®

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### Overcurrent Protection

#### Secondary

The overcurrent protection listed below, in amperes, is 125% of the rated current of the transformer. Choose the next higher fuse rating if these numbers do not correspond with standard fuse selections.

Sec. Voltage	VA Rating															
	25	50	75	100	150	200	250	300	350	500	750	1000	1500	2000	3000	5000
12	2.7	5.3	7.9	11	16	21	27	-	-	-	-	-	-	-	-	-
24	1.4	2.7	4.0	5.3	7.9	11	14	16	19	27	-	-	-	-	-	-
90	0.4	0.7	1.1	1.4	2.1	2.8	3.5	4.2	4.9	7.0	11	14	21	28	-	-
95	0.4	0.7	1.0	1.4	2.0	2.7	3.3	4.0	4.7	6.6	9.9	14	20	27	-	-
100	0.4	0.7	1.0	1.3	1.9	2.5	3.2	3.8	4.4	6.3	9.4	13	19	25	-	-
110	0.3	0.6	0.9	1.2	1.8	2.3	2.9	3.5	4.0	5.7	8.6	12	18	23	-	-
115	0.3	0.6	0.9	1.1	1.7	2.2	2.8	3.3	3.9	5.5	8.2	11	17	22	-	-
120	0.3	0.6	0.8	1.1	1.6	2.1	2.7	3.2	3.7	5.3	7.9	11	16	21	-	-
220	0.15	0.3	0.5	0.6	0.9	1.2	1.5	1.8	2.0	2.9	4.3	5.7	8.6	12	18	29
230	0.14	0.3	0.5	0.6	0.9	1.1	1.4	1.7	2.0	2.8	4.1	5.5	8.2	11	17	28
240	0.14	0.3	0.4	0.6	0.8	1.1	1.4	1.6	1.9	2.7	4.0	5.3	7.9	11	16	27

#### Primary

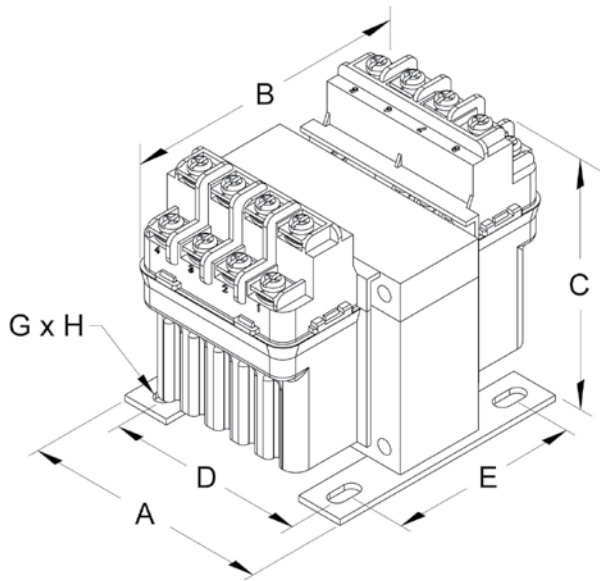
To assist in the selection of fuses, the following chart recommends the maximum primary fuse rating in amperes. The number shown is the maximum overcurrent protection when the primary current is less than 2 amps and the overcurrent protection device is rated for 300%. Choose the next higher fuse rating if these numbers do not correspond with standard fuse selections.

Pri. Volt	VA Rating																
	25	50	75	100	150	200	250	300	350	500	750	1000	1500	2000	3000	5000	7500
115	0.6	1.25	1.8	2.5	3.5	5	4	5	5	8	10	15	20	25	-	-	-
120	0.6	1.25	1.8	2.25	3.5	5	4	5	5	8	10	15	15	20	-	-	-
200	0.3	0.75	1.125	1.5	2.25	3	3.5	4.5	5	4.5	7	9	15	15	20	-	-
208	0.3	0.6	1	1.4	2	2.8	3.5	4	5	4	6	8	12	15	20	30	-
220	0.3	0.6	1	1.25	2	2.5	3.2	4	4.5	4	6	8	12	15	20	30	-
230	0.3	0.6	0.8	1.25	1.8	2.5	3.2	3.5	4.5	4	6	8	10	15	20	30	-
240	0.3	0.6	0.8	1.25	1.8	2.25	3	3.5	4	3.5	5	7	10	15	15	30	-
277	0.25	0.5	0.8	1	1.6	2	2.5	3.2	3.5	5	5	6	9	12	15	25	-
347	0.25	0.5	0.8	1	1.6	2	2.5	3.2	3.5	5	6.25	5	7.5	10	15	20	30
380	0.1875	0.3	0.5	0.75	1.125	1.5	1.8	2.25	2.5	3.5	5.6	4.5	6.25	9	15	20	25
400	0.1875	0.3	0.5	0.75	1.125	1.5	1.8	2.25	2.5	3.5	5.6	4.5	6.25	9	12	15	20
416	0.15	0.3	0.5	0.6	1	1.4	1.8	2	2.5	3.5	5	4	6	8	12	15	20
440	0.15	0.3	0.5	0.6	1	1.25	1.6	2	2.25	3.2	5	4	6	8	12	15	20
460	0.15	0.3	0.4	0.6	0.8	1.25	1.6	1.8	2.25	3.2	4.5	3.5	6	8	12	15	20
480	0.15	0.3	0.4	0.6	0.8	1.25	1.5	1.8	2	3	4.5	3.5	5	7	10	15	20
550	0.125	0.25	0.4	0.5	0.8	1	1.25	1.6	1.8	2.5	4	5	4.5	6	9	15	15
575	0.125	0.25	0.3	0.5	0.75	1	1.25	1.5	1.8	2.5	3.5	5	4.5	6	9	15	15
600	0.125	0.2	0.3	0.5	0.75	0.8	1.25	1.5	1.6	2.25	3.5	5	4	6	9	15	15

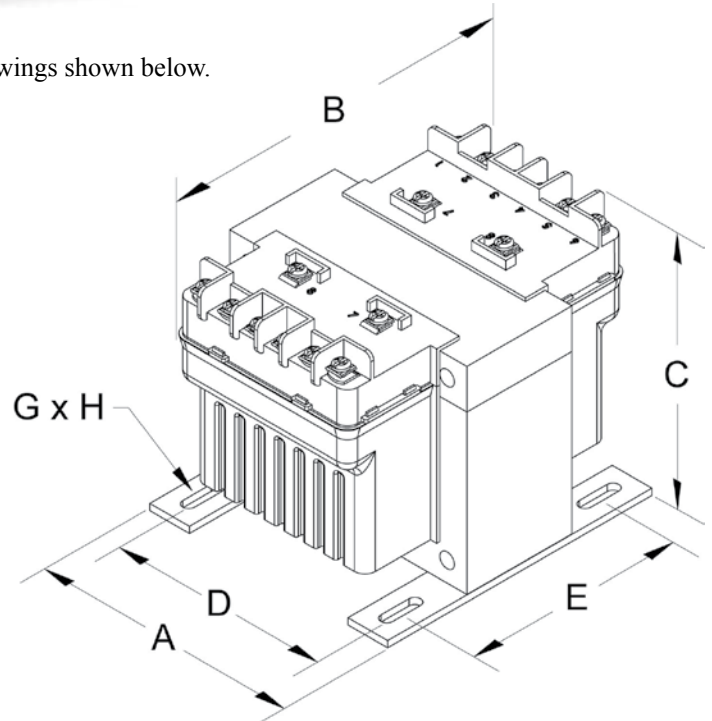


## Dimensional Drawings

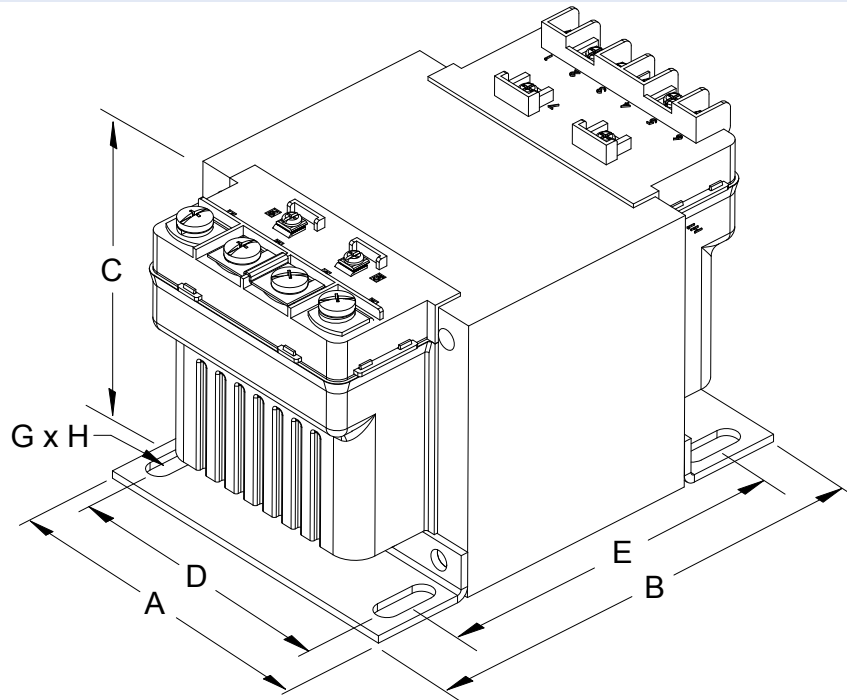
Some actual transformer units may differ from dimensional drawings shown below.



**FIGURE A** (100 VA and less)



**FIGURE B** (150 VA to 1500 VA)



**FIGURE C** (For PH750PG, PH1000PG, PH750MLI & PH1000MLI)



Hammond Power  
Solutions Inc.

# HPS IMPERATOR®

Encapsulated Machine Tool Industrial Control Transformers

## CANADA

Hammond Power Solutions Inc.  
595 Southgate Drive  
Guelph, Ontario N1G 3W6  
Tel: (519) 822-2441  
Fax: (519) 822-9701  
Toll Free in Canada: 1-888-798-8882

## USA

Hammond Power Solutions, Inc.  
1100 Lake Street  
Baraboo, Wisconsin 53913-2866  
Tel: (608) 356-3921  
Fax: (608) 355-7623  
Toll Free in the United States: 1-866-705-4684

[www.hammondpowersolutions.com](http://www.hammondpowersolutions.com)



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Solutions Inc.

Literature No.: ENCCON  
Issue Date: October 2009