



# HPS Imperator™

Encapsulated Industrial Control  
Transformers

power to perform

# HPS Imperator

## Encapsulated Industrial Control Transformer

### INNOVATIVE DESIGN

The HPS Imperator series is a unique innovative and compact design that provides the ideal solution for any industrial control application.

**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 connections 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 industrial control transformers are specifically designed to meet the high inrush current levels 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.**

### SUPERIOR QUALITY & VALUE

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

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

### APPLICATIONS



Process Controls



Panel Shops



Machine Automation



Control Boards



HVAC Panels



Power Timers, Solenoids and Controllers

### INDUSTRIES



Paper Mills



Printing



Automotive



Packaging Systems



Process Automation

### APPROVALS

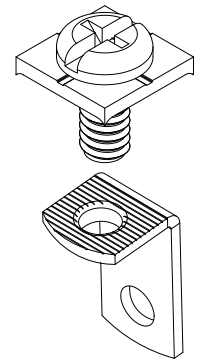
- UL Listed (Approved for U.S. and Canada)
- CE Mark standard on all units
- RoHS Compliant





## FEATURES AND BENEFITS

- 600V class, 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>
- Robust insulation system:
  - 50-150VA, temperature rise 55°C, insulation class 130°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/Phillips #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
- LIFETIME Warranty (Limited)



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

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

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

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

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 supplied).

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



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

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



## 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.	Opt. Pri. Fuse Kit P/N
				A	B	C	D	E	G X H				
50	PH50MQMJ	A	0.42/0.21	3.00 [76.20]	4.38 [111.26]	3.19 [81.03]	2.50 [63.50]	2.25 [57.15]	0.22 x 0.44 [5.59 x 11.18]	4.00 [101.60]	5.82 [147.83]	3.5 [1.6]	PFK1
75	PH75MQMJ	A	0.63/0.31	3.25 [82.55]	3.88 [98.56]	3.56 [90.43]	2.63 [66.81]	2.50 [63.50]	0.22 x 0.44 [5.59 x 11.18]	4.37 [111.00]	5.32 [135.13]	3.5 [1.6]	PFK1
100	PH100MQMJ	A	0.83/0.42	3.25 [82.55]	4.19 [106.43]	3.63 [92.21]	2.63 [66.81]	2.63 [66.81]	0.22 x 0.44 [5.59 x 11.18]	4.50 [114.30]	5.63 [143.01]	4.5 [2.1]	PFK1
150	PH150MQMJ	B	1.25/0.63	4.00 [101.60]	4.94 [125.48]	3.81 [96.78]	3.38 [85.86]	2.75 [69.85]	0.22 x 0.75 [5.59 x 19.05]	4.50 [114.30]	6.44 [163.58]	5.7 [2.6]	PFK2
250	PH250MQMJ	B	2.08/1.04	4.50 [114.30]	5.44 [138.18]	3.81 [96.78]	3.75 [95.25]	3.13 [79.51]	0.22 x 0.75 [5.59 x 19.05]	4.50 [114.30]	6.94 [176.28]	7.5 [3.4]	PFK2
350	PH350MQMJ	B	2.92/1.46	4.50 [114.30]	5.19 [131.83]	4.44 [112.78]	3.75 [95.25]	3.75 [95.25]	0.22 x 0.75 [5.59 x 19.05]	5.18 [131.58]	6.69 [169.93]	10.1 [4.6]	PFK3
500	PH500MQMJ	B	4.17/2.08	4.75 [120.65]	5.94 [150.88]	4.31 [109.48]	4.06 [103.13]	3.81 [96.78]	0.31 x 0.94 [7.88 x 23.88]	5.13 [130.31]	7.44 [188.98]	14.2 [6.4]	PFK3
750	PH750MQMJ	B	6.25/3.13	5.13 [130.31]	6.69 [169.93]	4.31 [109.48]	4.38 [111.26]	4.31 [109.48]	0.31 x 0.81 [7.88 x 20.58]	5.13 [130.31]	8.19 [208.03]	16.6 [7.5]	PFK3
1000	PH1000MQMJ	B	8.33/4.17	5.25 [133.35]	6.81 [172.98]	4.94 [125.48]	4.50 [114.30]	4.44 [112.78]	0.31 x 0.81 [7.88 x 20.58]	5.56 [141.23]	8.31 [211.08]	23.6 [10.7]	PFK3
1500	PH1500MQMJ	B	12.5/6.25	5.25 [133.35]	8.19 [208.03]	4.94 [125.48]	4.50 [114.30]	6.06 [153.93]	0.38 x 1.00 [9.66 x 25.4]	5.56 [141.23]	9.69 [246.13]	32.0 [14.4]	PFK3

\*Secondary fuse clips, fuse clip mounting screws and primary and secondary voltage links/jumpers supplied standard with transformers. Please refer to page 11 for dimensional drawings. Special voltages and VA sizes available upon request.

\*All dimensions in inches [mm] [kg]

## 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.	Opt. Pri. Fuse Kit P/N
				A	B	C	D	E	G X H				
50	PH50QR	A	4.17/2.08	3.00 [76.20]	4.38 [111.26]	3.19 [81.03]	2.50 [63.50]	2.25 [57.15]	0.22 x 0.44 [5.59 x 11.18]	4.00 [101.60]	5.82 [147.83]	3.5 [1.6]	PFK1
75	PH75QR	A	6.25/3.13	3.25 [82.55]	3.88 [98.56]	3.56 [90.43]	2.63 [66.81]	2.50 [63.50]	0.22 x 0.44 [5.59 x 11.18]	4.37 [111.00]	5.32 [135.13]	3.5 [1.6]	PFK1
100	PH100QR	A	8.33/4.17	3.25 [82.55]	4.19 [106.43]	3.63 [92.21]	2.63 [66.81]	2.63 [66.81]	0.22 x 0.44 [5.59 x 11.18]	4.44 [112.78]	5.63 [143.01]	4.5 [2.1]	PFK1
150	PH150QR	B	12.5/6.25	4.00 [101.60]	4.94 [125.48]	3.81 [96.78]	3.38 [85.86]	2.75 [69.85]	0.22 x 0.75 [5.59 x 19.05]	4.50 [114.30]	6.44 [163.58]	5.7 [2.6]	PFK2
250	PH250QR	B	20.8/10.4	4.50 [114.30]	5.44 [138.18]	3.81 [96.78]	3.75 [95.25]	3.13 [79.51]	0.22 x 0.75 [5.59 x 19.05]	4.50 [114.30]	6.94 [176.28]	7.5 [3.4]	PFK2
350	PH350QR	B	29.2/14.6	4.50 [114.30]	5.19 [131.83]	4.44 [112.78]	3.75 [95.25]	3.75 [95.25]	0.22 x 0.75 [5.59 x 19.05]	5.18 [131.58]	6.69 [169.93]	10.1 [4.6]	PFK3
500	PH500QR	B	41.7/20.8	4.75 [120.65]	5.94 [150.88]	4.31 [109.48]	4.06 [103.13]	3.81 [96.78]	0.31 x 0.94 [7.88 x 23.88]	5.13 [130.31]	7.44 [188.98]	14.2 [6.4]	PFK3

\*Secondary fuse clips, fuse clip mounting screws and primary and secondary voltage links/jumpers supplied standard with transformers. Please refer to page 11 for dimensional drawings. Special voltages and VA sizes available upon request.

\*All dimensions in inches [mm] [kg]

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## Encapsulated Industrial Control Transformer

### 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

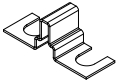
Kit Part Number	Transformer Part Number Suffix's	VA Sizes	Parts Included in Kit
<b>FG1</b>	AJ, AR, MQMJ, MEMX, QR, SP, PG, PP	50	1 finger guard (unfused), PHAK1 instruction sheet
<b>FG2</b>	MBMH, MGJ, MLI	50	1 finger guard (unfused), PHAK1 instruction sheet
<b>FG2</b>	All	75	1 finger guard (unfused),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

### Optional Fused Finger Guard Kits

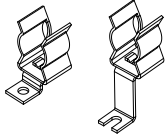
Kit Part Number	Transformer Part Number Suffix's	VA Sizes	Parts Included in Kit
<b>FGF1</b>	AJ, AR, MQMJ, MEMX, QR, SP, PG, PP	50	1 finger guard (fused), PHAK1 instruction sheet
<b>FGF2</b>	MBMH, MGJ, MLI	50	1 finger guard (fused), PHAK1 instruction sheet
<b>FGF2</b>	All	75	1 finger guard (fused), PHAK1 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



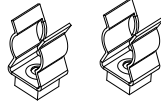
### SAMPLE ACCESSORY DRAWINGS



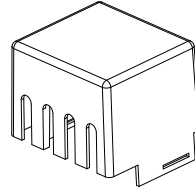
**Voltage Link**



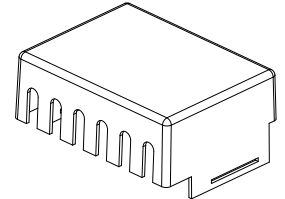
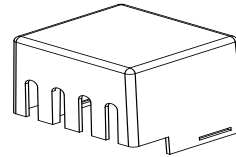
**Fuse Clips**  
(For 50, 75 and 100VA)



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

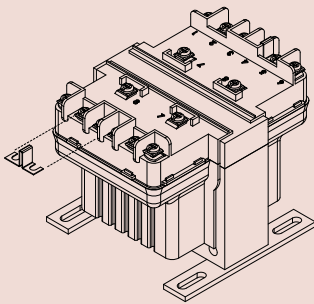


**Fused & Unfused Finger Guard**  
(For 50, 75 and 100VA)

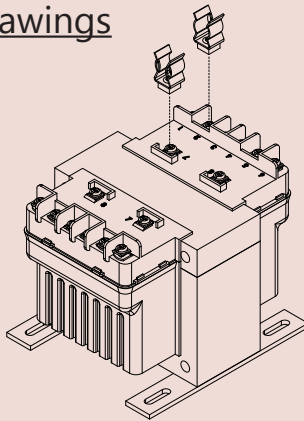


**Finger Guard**  
(For 150VA to 1500VA)

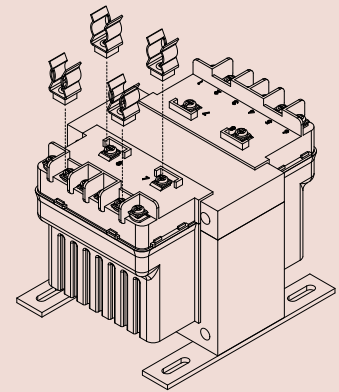
### Sample Accessory Assembly Drawings



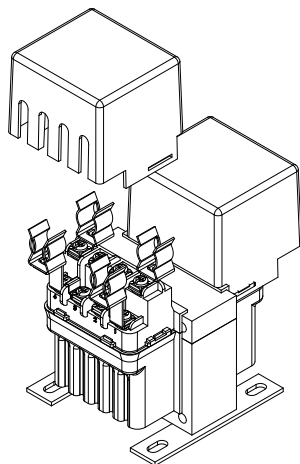
**Sample Assembly Drawing for  
Voltage Link Installation**



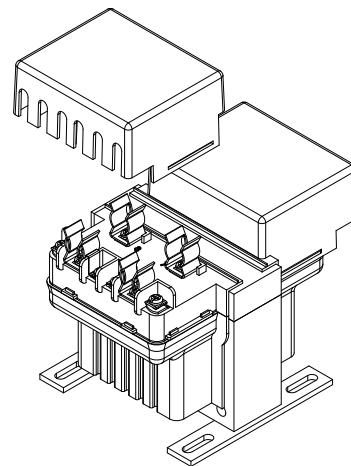
**Sample Assembly Drawing for  
Secondary Fuse Clip Installation**  
(For 150VA to 1500VA)



**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)