

HPS Spartan®

Industrial Open Core &
Coil Control Transformer

power to perform



Hammond Power Solutions Inc. (HPS) is the North American leader for the design and manufacture of high quality standard and custom electrical dry-type transformers and related engineered magnetic devices. Our global footprint has expanded with the addition of facilities in Europe & India. HPS excels at designing products that have very specific application constraints. Having an extensive engineering resource, HPS offers the broadest range of electrical products in the industry and as a result, the company has grown in many diverse markets and provides services to many global leaders.

Hammond Power Solutions Inc., with its headquarters in Guelph, Ontario, Canada, operates out of ten facilities:

Guelph, Ontario	Walkerton, Ontario	Monterrey, Mexico
Baraboo, Wisconsin	Compton, California	Granby, Quebec
Vicenza, Italy	Marnate, Italy	Hyderabad, India

QUALITY

HPS has been highly regarded for quality products and service since inception. Customers have come to rely on our products and services. Extensive testing programs and an exemplary field service record ensures that HPS products not only meet all the standards necessary, but more importantly, fulfill customers expectations and requirements.

DESIGN CAPABILITIES

HPS engineering services are located throughout our manufacturing facilities. Our designs are cost effective and our transformers are built with modern manufacturing techniques. We particularly emphasize our Value Added Engineering whereby our design staff will interface with your team to produce the optimum transformer. Our 3-D modelling design and CAD facilities permits quick and effective communication when time is vital.

CUSTOMERS

Through our extensive standard and custom product offering, HPS is able to provide a convenient one source solution for a wide variety of markets

Our engineering design staff work directly with you to produce the most optimum and cost effective solution for your application. We will design to your specification requirements and all transformers are built with modern manufacturing techniques.

Our innovative products are used in the most demanding applications requiring performance, reliability, and energy efficiency.

MARKETS



VALUE

The HPS Spartan® series of industrial control transformers are ideally suited for general purpose, industrial and light duty loads.

Designed for applications where high inrush or machine tool duty are not necessary, the HPS Spartan control transformer offers an efficient and economical solution.



APPLICATIONS

The HPS Spartan® is the perfect solution for HVAC applications, signal and alarm systems, motor control circuits, lighting and circuit isolation.

INDUSTRIES

- Commercial
- Agriculture
- Security
- Automation
- Solar

FEATURES AND BENEFITS

- Molded terminal blocks for primary and secondary connections up to 3000 VA or 30 amps. Coil face termination over 3000 VA or 30 amps.
- All terminal blocks utilize a combination slot/Phillips #6 screw with a SEMS washer (Suitable for 18 AWG to 14 AWG for solid wire and 18 AWG to 12 AWG for stranded wire). Coil face terminations utilize a ¼-20 UNC X 0.50" combination slot/Phillips screw and a spring lock washer.
- 50/60 Hz (60 Hz on SP***ACP and SP***AR).
- Copper wound coils with high dielectric strength insulation.
- CSA Certified (file LR 3902), UL Listed (file E50394), CE Marked and RoHS Compliant.
- Meets NEMA standards.
- Superior insulating materials. The HPS Spartan offers the following insulation systems:
Up to 1500 VA: 80°C rise, 130°C temperature class (B)
2000 VA to 5000 VA: 115°C rise, 180°C temperature class (F)
- Most HPS Spartan units incorporate "Premium Packaging" which feature:
 - Premium fluted cartons
 - Custom molded foam inserts
 - Easy removal and repacking
 - Industry's best box label
- All HPS Spartan units are supplied with trilingual installation and wiring instruction sheets.
- All units supplied with primary and secondary voltage links/jumpers.
- All HPS Spartan® transformers are Vacuum Impregnated with Polyester Resin and oven cured.
- Bolted core construction.
- Bolt-on mounting brackets.
- 15 year warranty.



GROUP I

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



VA Rating	CE VA Rating	Catalog Number	Mtg. Fig.	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot G X H	Height with Finger Guard	Height with Fuse Block Adapter	Approx. Ship Weight Lbs.
					A	B	C	D	E				
50	50	SP50SP	A	0.42/0.21	2.60	3.35	2.60	2.13	2.17	0.22 x 0.44	1.6	2.60	1.6
100	100	SP100SP	A	0.83/0.42	2.99	3.54	2.85	2.52	2.40	0.22 x 0.44	3	2.85	3
150	150	SP150SP	A	1.25/0.63	2.99	4.29	2.85	2.52	3.15	0.22 x 0.44	4.3	2.85	4.3
250	160	SP250SP	A	2.08/1.04	3.78	4.09	3.40	3.31	2.99	0.22 x 0.44	6.5	3.40	6.5
350	250	SP350SP	A	2.92/1.46	3.78	4.69	3.40	3.31	3.58	0.22 x 0.44	8.3	3.40	8.3
500	300	SP500SP	A	4.17/2.08	4.49	4.69	3.78	3.78	3.66	0.31 x 0.81	11	3.78	11
750	500	SP750SP	A	6.25/3.13	5.25	4.69 ¹	4.37	4.50	3.66	0.31 x 0.81	16	4.75	16
1000	650	SP1000SP	A	8.33/4.17	5.25	5.47 ¹	4.37	4.50	4.45	0.31 x 0.81	20	4.75	20
1500	1000	SP1500SP	A	12.5/6.25	6.38	4.88 ¹	5.31	5.75	3.86	0.31 x 0.81	27	5.69	27

Primary and Secondary voltage links/jumpers supplied standard with all transformers.
 Special voltages and VA sizes available upon request.

All dimensions in inches

¹ Note: For 750 through 1500 VA units actual overall depth is 0.24" plus the value in column B.
 * See page 10 for dimensional drawings.

GROUP J

Primary Voltage: 208 x 416 || 200 x 400 || 190 x 380
 Secondary Voltage: 12 x 24 || 11.5 x 23 || 11 x 22



VA Rating	CE VA Rating	Catalog Number	Mtg. Fig.	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot G X H	Height with Finger Guard	Height with Fuse Block Adapter	Approx. Ship Weight Lbs.
					A	B	C	D	E				
50	50	SP50SR	A	4.17/2.08	2.60	3.35	2.60	2.13	2.17	0.22 x 0.44	2.98	2.79	1.6
100	100	SP100SR	A	8.33/4.17	2.99	3.54	2.85	2.52	2.40	0.22 x 0.44	3.23	3.04	3.1
150	150	SP150SR	A	12.5/6.25	2.99	4.29	2.85	2.52	3.15	0.22 x 0.44	3.23	3.04	4.3
250	160	SP250SR	A	20.8/10.4	3.78	4.09	3.40	3.31	2.99	0.22 x 0.44	3.78	3.59	6.5
350	250	SP350SR	A	29.2/14.6	3.78	4.69	3.40	3.31	3.58	0.22 x 0.44	3.78	3.59	8.3
500	300	SP500SR	B	41.7/20.8	4.49	5.47	3.78	3.78	3.66	0.31 x 0.81	4.16	3.97	11

Primary and Secondary voltage links/jumpers supplied standard with all transformers.
 Special voltages and VA sizes available upon request.

All dimensions in inches

* See page 10 for dimensional drawings.

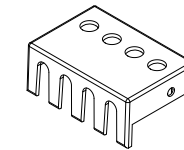
OPTIONAL ACCESSORIES

Finger Guards

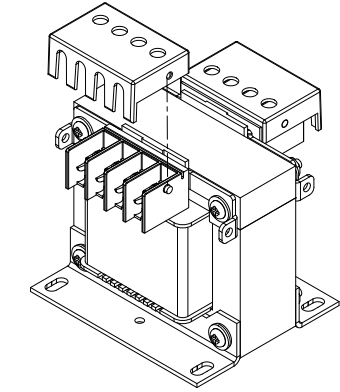
HPS Spartan industrial control transformers up to and including 3000VA or 30 amps are available with optional finger guards.

Part Number	Applicable Transformer Part Number Suffix's	Applicable VA Sizes
SPFG1	AR, QR, PR, KHR, SR	50 to 350
SPFG1	KHP, SP, NJ	50 to 1500
SPFG1	ACP, MQMJ	50 to 3000

Note: Each finger guard supplies either the primary or secondary side. Finger guard option not available on SP5000ACP and SP5000MQMJ standard units. Add 0.38" per finger guard to overall depth (column B) on units from 50 VA to 500 VA and 0.31" to units from 750 VA to 2000 VA when finger guard has been installed. For custom units, optional finger guards are only available on units up to 3000VA or 30 amps.



Finger Guard (Optional)



Sample Assembly Drawing for Optional Finger Guard Installation
 (Only available for units supplied with either a primary or secondary molded terminal block)

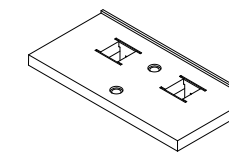
Fuse Block Adapter Kit

HPS Spartan industrial control transformers up to and including 3000VA or 30 amps are available with optional fuse block adapter kits. The Fuse Block Adapter Kit is designed to allow for the installation of any third party after market fuse block assembly onto the industrial control transformer. The transformer must be a unit that incorporates a molded terminal block on either the primary or secondary side.

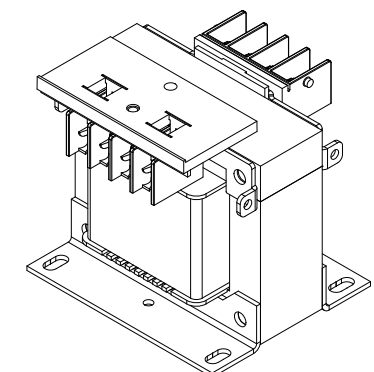
Note: HPS does not provide any jumpers or appropriate fuses for any after market fuse block you install on the HPS Spartan industrial control transformer. The HPS Fuse Block Adapter Kit provides only the mechanical means of attaching a third party after market fuse block. HPS does not recommend any specific fuse block or fuse supplier. For a recommended size of fuse please refer to the HPS Transformer Products catalog.

Kit Part Number	Applicable Transformer Part Number Suffixes	Applicable VA Sizes
SPFBAK1	AR, QR, PR, KHR, SR	50 to 500
SPFBAK1	KHP, SP, NJ	50 to 1500
SPFBAK1	ACP, MQMJ	50 to 3000

Note: Only 1 fuse block adapter kit is required per transformer. Fuse block adapter kit not available on SP5000ACP and SP5000MQMJ standard units. Add 0.38" per fuse block adapter to overall depth (column B) on units from 750 VA to 3000 VA when optional fuse block adapter is installed. For custom units, optional fuse block adapter kit is only available on units up to 3000VA or 30 amps.



Fuse Block Adapter Kit (Optional)



Sample Assembly Drawing for Optional Fuse Block Adapter Installation

For detailed installation instructions of HPS Spartan transformers or the optional finger guards and fuse block adapter kits, please visit our website.

DIMENSIONAL DRAWINGS

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

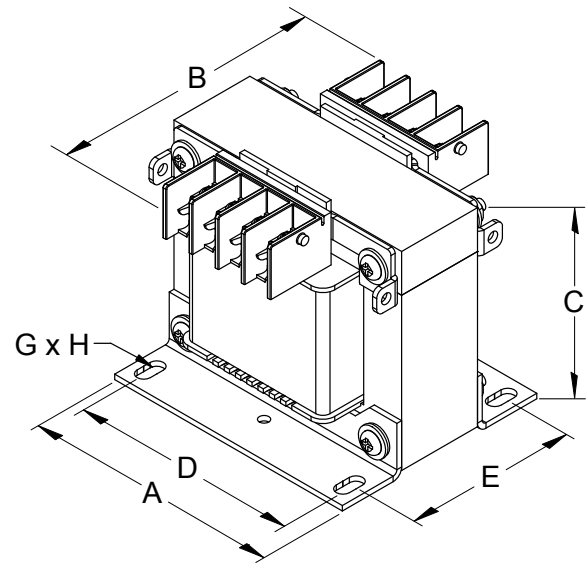


FIGURE A

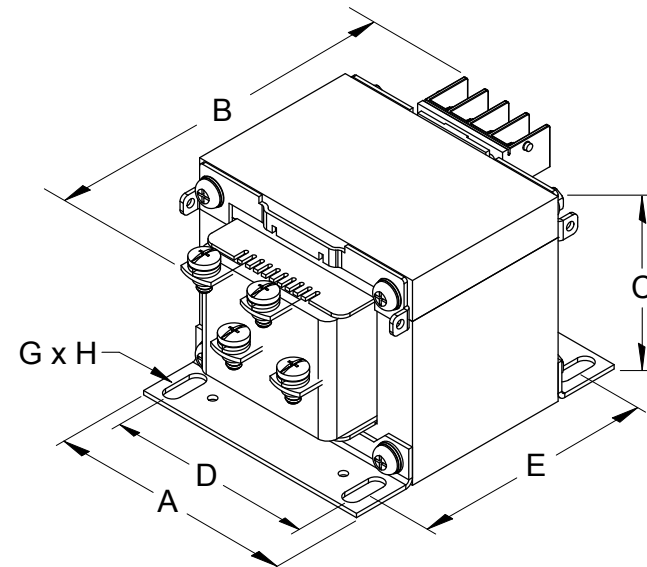


FIGURE B

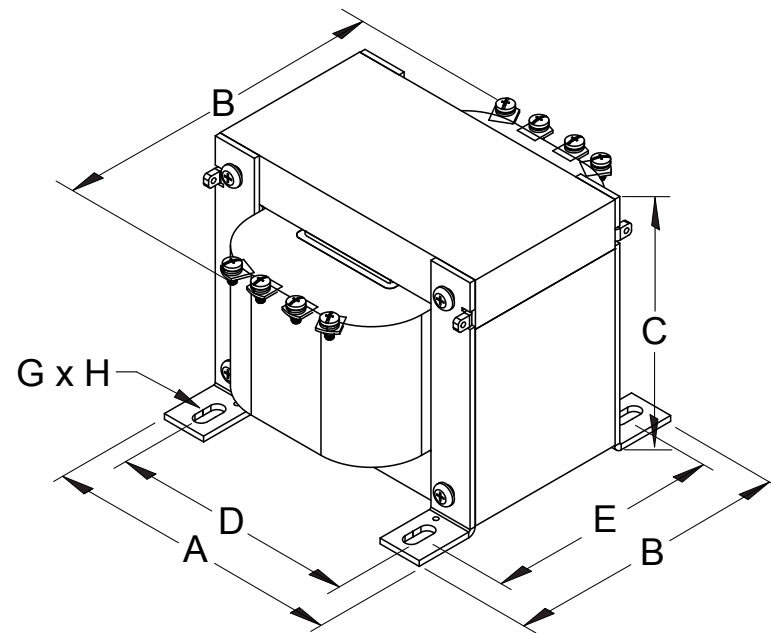


FIGURE C

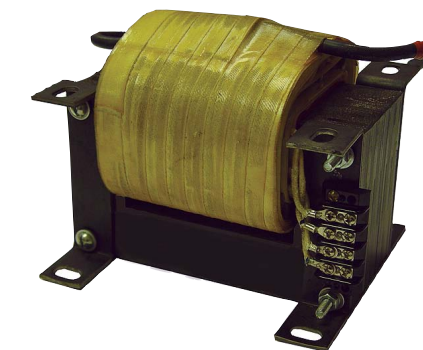
CUSTOM CONTROL CAPABILITIES

HPS is one of the industry's most technically capable manufacturers producing the broadest and most competitive range of custom dry-type transformers and related magnetic products in North America. Our designs are cost effective and our transformers are built with modern manufacturing techniques. We emphasize our Value Added Engineering whereby our design staff will interface with your team to produce the optimum transformer. Our 3-D modelling design and CAD facilities permits quick and effective communication when time is vital.

HPS can provide custom control transformers to fit your design style requirements for most standard or specialty applications. From custom medium voltage to potted control, HPS has the engineering and manufacturing resources to deliver your custom control transformer how you want it and when you need it. Contact your HPS sales representative or the HPS sales department directly at: sales@hammondpowersolutions.com



Custom Open Core & Coil Control



Medium Voltage Control



Enclosed Potted Control

HPS Spartan

Industrial Open Core & Coil Control Transformers



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