

Innovative TRANSFORMER Solutions



HPS FUSION™

**GENERAL PURPOSE
ENCLOSED TRANSFORMER**



Hammond Power
Solutions Inc.

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 manufacturing facilities in Compton, California; Guelph, Ontario; Walkerton, Ontario; Granby, Quebec; and Monterrey, Mexico. HPS has multiple regional distribution centers throughout North America.

GENERAL PURPOSE ENCLOSED TRANSFORMER

The new HPS Fusion line of enclosed transformers are an indoor, cost effective approach ideally suited for single phase, general purpose industrial and light duty loads.

APPLICATIONS

The HPS Fusion™ is the perfect solution and is specifically designed for the following applications:

- General purpose enclosed applications used to adjust a supply voltage to match a load requirement
- Supplying motor control circuits
- Signal and Alarm systems
- Industrial lighting and circuit isolation
- HVAC applications

Economical

INDUSTRIES

- Commercial
- Industrial
- Security
- HVAC



Value

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 solid wire and 18 AWG to 12 AWG stranded wire). Units with 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 FS***ACP and FS***AR).
- Copper wound coils with high dielectric strength insulation.
- Bolted core construction.
- CSA Certified (file LR 3902), UL Listed (file E50394), CE Marked and RoHS Compliant.
- Meets NEMA standards.
- All HPS Fusion core and coils are Vacuum Impregnated with Polyester Resin and oven cured.
- Superior insulating materials. The HPS Fusion offers the following insulation systems:
 - Up to 1500 VA: 95°C temperature rise, 130°C insulation class (B)
 - 2000 VA to 5000 VA: 130°C temperature rise, 180°C insulation class (F)(Note: Temperature rise based on 25°C ambient)
- All units supplied with primary and secondary voltage links/jumpers.
- Rugged TYPE 1 enclosure.
- Finish - green powder coat.
- Primary and secondary ground screws.
- Four (0.88") wiring knockouts and four (0.50") accessory knockouts.
- Optional panel mount fuse holder.
- Easy mounting and installation via four mounting slots and two keyhole slots.
- Easy access to primary and secondary wiring compartment through removable covers.
- Most HPS Fusion units incorporate "Premium Packaging" which feature:
 - Premium fluted cartons
 - Custom molded foam inserts
 - Easy removal and repacking
 - Industry's best box label
 - Environmentally neutral
- All HPS Fusion units are supplied with trilingual installation and wiring instruction sheets.
- **15 Year Warranty.**



Group A

Primary Voltage: 600/480 || 575/460 || 550/440
 Secondary Voltage: 120 x 240 || 115 x 230 || 110 x 220



60 Hertz

VA Rating	CE VA Rating	Catalog Number	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot G X H	Approx. Ship Weight Lbs.
				A	B	C	D	E		
50	50	FS50ACP	0.42/0.21	2.7	6.4	3.33	1.66	4.16	0.22 x 0.44	3.0
100	100	FS100ACP	0.83/0.42	3.09	6.3	3.6	2.05	3.5	0.22 x 0.44	4.2
150	150	FS150ACP	1.25/0.63	3.09	6.9	3.6	2.05	4.1	0.22 x 0.44	5.3
250	160	FS250ACP	2.08/1.04	3.9	6.6	4.3	2.52	3.9	0.22 x 0.44	7.6
350	250	FS350ACP	2.92/1.46	3.9	7	4.3	2.52	4.3	0.22 x 0.44	8.7
500	300	FS500ACP	4.17/2.08	4.6	7.2	4.6	3.3	4.5	0.31 x 0.81	13.3
750	500	FS750ACP	6.25/3.13	5.6	7.6	5.1	4	4.9	0.31 x 0.81	20.3
1000	650	FS1000ACP	8.33/4.17	5.6	8	5.1	4	5.3	0.31 x 0.81	22.9
1500	1000	FS1500ACP	12.5/6.25	5.6	9.4	5.1	4	6.7	0.31 x 0.81	30.3
2000	1300	FS2000ACP	16.7/8.33	6.6	9.1	6	5.1	5.7	0.31 x 0.81	37.1
3000	2000	FS3000ACP	25.0/12.5	7.8	11.3	6.7	6.3	6.9	0.31 x 0.81	64.0
5000	3000	FS5000ACP	41.7/20.8	9.3	14.9	8	7.1	7.3	0.31 x 0.81	99.7

Primary and Secondary voltage links/jumpers supplied standard with all transformers.

Special voltages and VA sizes available upon request.

* See page 10 for dimensional drawings.

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	CE VA Rating	Catalog Number	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot G X H	Approx. Ship Weight Lbs.
				A	B	C	D	E		
50	50	FS50AR	4.17/2.08	2.7	5.8	3.33	1.66	3.58	0.22 x 0.44	2.3
100	100	FS100AR	8.33/4.17	3.09	6.3	3.6	2.05	3.5	0.22 x 0.44	4.2
150	150	FS150AR	12.5/6.25	3.09	6.7	3.6	2.05	3.9	0.22 x 0.44	4.8
250	160	FS250AR	20.8/10.4	3.9	6.2	4.3	2.52	3.5	0.22 x 0.44	6.4
350	250	FS350AR	29.2/14.6	3.9	6.8	4.3	2.52	4.1	0.22 x 0.44	8.3
500	300	FS500AR	41.7/20.8	4.6	6.8	4.1	3.3	4.5	0.31 x 0.81	11.8

Primary and Secondary voltage links/jumpers supplied standard with all transformers.

Special voltages and VA sizes available upon request.

* See page 10 for dimensional drawings.

All dimensions in inches

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	CE VA Rating	Catalog Number	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot G X H	Approx. Ship Weight Lbs.
				A	B	C	D	E		
50	50	FS50MQMJ	0.42/0.21	2.7	5.9	3.33	1.66	3.69	0.22 x 0.44	2.5
100	100	FS100MQMJ	0.83/0.42	3.09	6.3	3.6	2.05	3.5	0.22 x 0.44	3.9
150	150	FS150MQMJ	1.25/0.63	3.09	6.9	3.6	2.05	4.1	0.22 x 0.44	5.2
250	160	FS250MQMJ	2.08/1.04	3.9	6.6	4.3	2.52	3.9	0.22 x 0.44	7.7
350	250	FS350MQMJ	2.92/1.46	3.9	7.2	4.3	2.52	4.9	0.22 x 0.44	9.4
500	300	FS500MQMJ	4.17/2.08	4.6	7.2	4.6	3.3	4.5	0.31 x 0.81	13.2
750	500	FS750MQMJ	6.25/3.13	5.6	7.2	5.1	4	4.5	0.31 x 0.81	18.0
1000	650	FS1000MQMJ	8.33/4.17	5.6	8	5.1	4	5.3	0.31 x 0.81	22.8
1500	1000	FS1500MQMJ	12.5/6.25	6.6	8.5	6	5.1	5.1	0.31 x 0.81	31.1
2000	1300	FS2000MQMJ	16.7/8.33	6.6	9.1	6	5.1	5.7	0.31 x 0.81	38.1
3000	2000	FS3000MQMJ	25.0/12.5	7.8	11.7	6.7	6.3	7.3	0.31 x 0.81	68.5
5000	3000	FS5000MQMJ	41.7/20.8	9.3	15.1	8	7.4	7.3	0.31 x 0.81	104.2

Primary and Secondary voltage links/jumpers supplied standard with all transformers.

All dimensions in inches

Special voltages and VA sizes available upon request.

* See page 10 for dimensional drawings.

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	CE VA Rating	Catalog Number	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot G X H	Approx. Ship Weight Lbs.
				A	B	C	D	E		
50	50	FS50QR	4.17/2.08	2.7	5.9	3.33	1.66	3.69	0.22 x 0.44	2.5
100	100	FS100QR	8.33/4.17	3.09	6.1	3.6	2.05	3.35	0.22 x 0.44	3.9
150	150	FS150QR	12.5/6.25	3.09	6.9	3.6	2.05	4.1	0.22 x 0.44	5.2
250	160	FS250QR	20.8/10.4	3.9	6.6	4.3	2.52	3.9	0.22 x 0.44	7.7
350	250	FS350QR	29.2/14.6	3.9	7.2	4.3	2.52	4.9	0.22 x 0.44	9.5
500	300	FS500QR	41.7/20.8	4.6	7.2	4.6	3.3	4.5	0.31 x 0.81	13.4

Primary and Secondary voltage links/jumpers supplied standard with all transformers.

All dimensions in inches

Special voltages and VA sizes available upon request.

* See page 10 for dimensional drawings.

Group E

Primary Voltage: 380/347
Secondary Voltage: 120 x 240



50/60 Hertz

VA Rating	CE VA Rating	Catalog Number	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot	Approx. Ship Weight Lbs.
				A	B	C	D	E	G X H	
50	50	FS50KHP	0.42/0.21	2.7	5.9	3.33	1.66	3.69	0.22 x 0.44	2.5
100	100	FS100KHP	0.83/0.42	3.09	6.3	3.6	2.05	3.5	0.22 x 0.44	4.3
150	150	FS150KHP	1.25/0.63	3.09	6.9	3.6	2.05	4.1	0.22 x 0.44	5.3
250	160	FS250KHP	2.08/1.04	3.9	6.6	4.3	2.52	3.9	0.22 x 0.44	7.9
350	250	FS350KHP	2.92/1.46	3.9	7.2	4.3	2.52	4.9	0.22 x 0.44	9.6
500	300	FS500KHP	4.17/2.08	4.6	7.2	4.6	3.3	4.5	0.31 x 0.81	13.6
750	500	FS750KHP	6.25/3.13	5.6	7.2	5.1	4	4.5	0.31 x 0.81	19
1000	650	FS1000KHP	8.33/4.17	5.6	8	5.1	4	5.3	0.31 x 0.81	23.5
1500	1000	FS1500KHP	12.5/6.25	6.6	8.5	6	5.1	5.1	0.31 x 0.81	31.6

Primary and Secondary voltage links/jumpers supplied standard with all transformers.

Special voltages and VA sizes available upon request.

* See page 10 for dimensional drawings.

All dimensions in inches

Group F

Primary Voltage: 380/347
Secondary Voltage: 12 x 24



50/60 Hertz

VA Rating	CE VA Rating	Catalog Number	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot	Approx. Ship Weight Lbs.
				A	B	C	D	E	G X H	
50	50	FS50KHR	4.17/2.08	2.7	5.9	3.33	1.66	3.69	0.22 x 0.44	2.5
100	100	FS100KHR	8.33/4.17	3.09	6.3	3.6	2.05	3.5	0.22 x 0.44	4.2
150	150	FS150KHR	12.5/6.25	3.09	6.9	3.6	2.05	4.1	0.22 x 0.44	5.3
250	160	FS250KHR	20.8/10.4	3.9	6.6	4.3	2.52	3.9	0.22 x 0.44	7.6
350	250	FS350KHR	29.2/14.6	3.9	7.2	4.3	2.52	4.9	0.22 x 0.44	9.3
500	300	FS500KHR	41.7/20.8	4.6	7.2	4.6	3.3	4.5	0.31 x 0.81	13.2

Primary and Secondary voltage links/jumpers supplied standard with all transformers.

Special voltages and VA sizes available upon request.

* See page 10 for dimensional drawings.

All dimensions in inches

Group G

Primary Voltage: 277

Secondary Voltage: 120



50/60 Hertz

VA Rating	CE VA Rating	Catalog Number	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot G X H	Approx. Ship Weight Lbs.
				A	B	C	D	E		
50	50	FS50NJ	0.42	2.7	5.9	3.33	1.66	3.69	0.22 x 0.44	2.4
100	100	FS100NJ	0.83	3.09	6.1	3.6	2.05	3.35	0.22 x 0.44	4.1
150	150	FS150NJ	1.25	3.09	6.9	3.6	2.05	4.1	0.22 x 0.44	5.2
250	160	FS250NJ	2.08	3.9	6.6	4.3	2.52	3.9	0.22 x 0.44	7.6
350	250	FS350NJ	2.92	3.9	7.2	4.3	2.52	4.9	0.22 x 0.44	9.3
500	300	FS500NJ	4.17	4.6	7.2	4.6	3.3	4.5	0.31 x 0.81	13.3
750	500	FS750NJ	6.25	5.6	7.6	5.1	4	4.9	0.31 x 0.81	20.1
1000	650	FS1000NJ	8.33	5.6	8	5.1	4	5.3	0.31 x 0.81	22.8
1500	1000	FS1500NJ	12.50	5.6	9.4	5.1	4	6.7	0.31 x 0.81	31.1

Primary and Secondary voltage links/jumpers supplied standard with all transformers.

All dimensions in inches

Special voltages and VA sizes available upon request.

* See page 10 for dimensional drawings.

Group H

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

Secondary Voltage: 12 x 24 || 11.5 x 23 || 11 x 22



50/60 Hertz

VA Rating	CE VA Rating	Catalog Number	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot G X H	Approx. Ship Weight Lbs.
				A	B	C	D	E		
50	50	FS50PR	4.17/2.08	2.7	5.9	3.33	1.66	3.69	0.22 x 0.44	2.5
100	100	FS100PR	8.33/4.17	3.09	6.1	3.6	2.05	3.35	0.22 x 0.44	3.9
150	150	FS150PR	12.5/6.25	3.09	6.9	3.6	2.05	4.1	0.22 x 0.44	5.2
250	160	FS250PR	20.8/10.4	3.9	6.4	4.3	2.52	3.7	0.22 x 0.44	7.1
350	250	FS350PR	29.2/14.6	3.9	7.2	4.3	2.52	4.9	0.22 x 0.44	9.4
500	300	FS500PR	41.7/20.8	4.6	7.2	4.6	3.3	4.5	0.31 x 0.81	13.2

Primary and Secondary voltage links/jumpers supplied standard with all transformers.

All dimensions in inches

Special voltages and VA sizes available upon request.

* See page 10 for dimensional drawings.

Group I

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	CE VA Rating	Catalog Number	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot G X H	Approx. Ship Weight Lbs.
				A	B	C	D	E		
50	50	FS50SP	0.42/0.21	2.7	5.9	3.33	1.66	3.69	0.22 x 0.44	2.4
100	100	FS100SP	0.83/0.42	3.09	6.1	3.6	2.05	3.35	0.22 x 0.44	3.9
150	150	FS150SP	1.25/0.63	3.09	6.9	3.6	2.05	4.1	0.22 x 0.44	5.2
250	160	FS250SP	2.08/1.04	3.9	6.6	4.3	2.52	3.9	0.22 x 0.44	7.7
350	250	FS350SP	2.92/1.46	3.9	7.2	4.3	2.52	4.9	0.22 x 0.44	9.5
500	300	FS500SP	4.17/2.08	4.6	7.2	4.6	3.3	4.5	0.31 x 0.81	13.3
750	500	FS750SP	6.25/3.13	5.6	7.2	5.1	4	4.5	0.31 x 0.81	18.2
1000	650	FS1000SP	8.33/4.17	5.6	8	5.1	4	5.3	0.31 x 0.81	22.5
1500	1000	FS1500SP	12.5/6.25	6.6	8.5	6	5.1	5.1	0.31 x 0.81	30.1

Primary and Secondary voltage links/jumpers supplied standard with all transformers.

Special voltages and VA sizes available upon request.

* See page 10 for dimensional drawings.

All dimensions in inches

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



50/60 Hertz

VA Rating	CE VA Rating	Catalog Number	Output Amps	Overall Dimensions			Mounting Centers		Mounting Slot G X H	Approx. Ship Weight Lbs.
				A	B	C	D	E		
50	50	FS50SR	4.17/2.08	2.7	5.9	3.33	1.66	3.69	0.22 x 0.44	2.4
100	100	FS100SR	8.33/4.17	3.09	6.1	3.6	2.05	3.35	0.22 x 0.44	4
150	150	FS150SR	12.5/6.25	3.09	6.9	3.6	2.05	4.1	0.22 x 0.44	5.2
250	160	FS250SR	20.8/10.4	3.9	6.6	4.3	2.52	3.9	0.22 x 0.44	7.7
350	250	FS350SR	29.2/14.6	3.9	7.2	4.3	2.52	4.9	0.22 x 0.44	9.5
500	300	FS500SR	41.7/20.8	4.6	7.2	4.6	3.3	4.5	0.31 x 0.81	13.3

Primary and Secondary voltage links/jumpers supplied standard with all transformers.

Special voltages and VA sizes available upon request.

* See page 10 for dimensional drawings.

All dimensions in inches

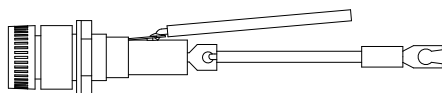
OPTIONAL ACCESSORIES

Fuse Holder Kit

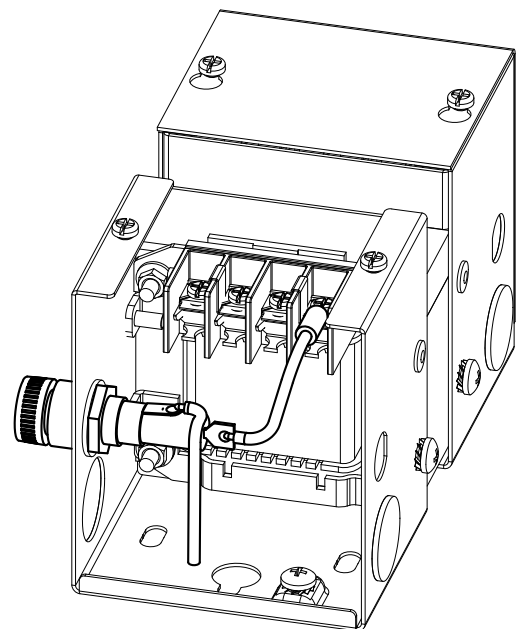
This general purpose enclosed transformer optional fuse holder kit is specifically designed to provide circuit protection up to a maximum of 20 amps and up to 250V. The fuse holder kit is supplied with leads for easy hook-up and is easy to install. Fuses are NOT supplied with this kit. Fuses should be selected in accordance with CSA, UL and local electrical codes.

(Note: Fuseholder is designed to accept 1/4" x 1 1/4" fuses)

Part Number	Applicable Transformer Part Number Suffix's	Applicable Specifications
FSFH1	All	Up to 20 amps and 250V



Fuse Holder Kit
(Optional)

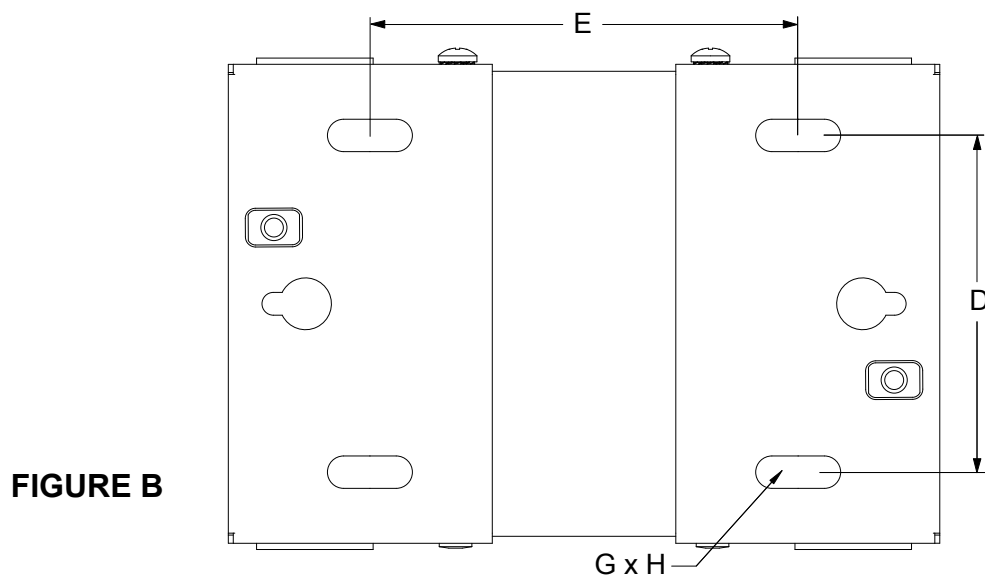
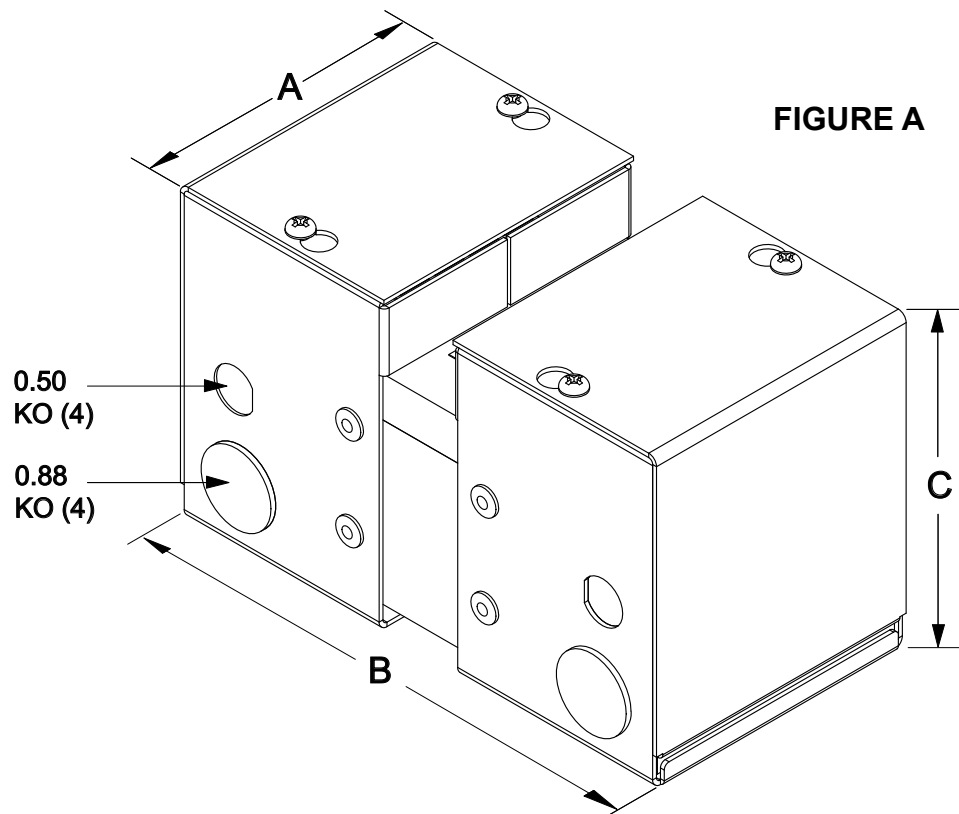


**Sample Assembly Drawing for
Optional Fuse Holder Installation**

For detailed installation instructions of HPS Fusion transformers or the optional fuse kits, please visit our website under Products and Services - Literature & Resources - Instruction Sheets - Control Transformers.

Or go to the following link: http://www.hammondpowersolutions.com/products/product_literature/instruction_sheets/control_transformers.php

DIMENSIONAL DRAWINGS



OTHER CUSTOM PRODUCTS

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



Enclosed Potted Control



Medium Voltage Control



Hammond Power
Solutions Inc.

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

Email: sales@hammondpowersolutions.com



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or go to: <http://www.hammondpowersolutions.com/news>*