



Hammond Power
Solutions Inc.

HPS IMPERATOR[®]

Machine Tool Rated Molded Control Transformer Typical Specification

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1 GENERAL

1.1 SCOPE

- A This section defines molded, machine tool rated control transformer as indicated.
- B Transformers shall be designed, constructed and rated in accordance with NEMA ST-1, UL 506, CSA C22.2 No. 66 and IEC 61558 standards.

1.2 RELATED DOCUMENTS

- A Drawing and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.3 REFERENCES

- A UL (ANSI/UL 506)
- B CSA (C22.2 No. 66)
- C NEMA (ST-1)
- D IEC 61558

1.4 SUBMITALS

- A Submit shop drawing and product data for approval and final documentation in the quantities listed according to the Conditions of the contract.
 - i Customer name. Customer location and customer order number shall identify all transmittals.
 - ii Product Data including VA rating, temperature rise, detailed dimensions, primary & secondary nominal voltages, primary & secondary voltage taps, inrush, unit weight, warranty.

1.5 STORAGE AND HANDLING

- A Store and handle in strict compliance with manufacturer's instructions and recommendations. Protect from potential damage from weather and construction operations.
- B Handle transformer using proper equipment for lifting and handling.

1.6 WARRANTY

- A The transformer shall carry a lifetime limited warranty.
(For details, refer to the manufacturers published warranty)

2 PRODUCTS

2.1 GENERAL CONSTRUCTION:

- A Single phase machine tool control transformers shall be molded. All single phase transformers shall be constructed with computer designed copper wound coils and a single core.
- B Transformers shall be designed, constructed and rated in accordance with UL, CSA, and NEMA standards. If shipping to Europe, transformer will also have to be manufactured in accordance to CE standards and carry a CE mark.

2.2 VOLTAGE AND VA REQUIREMENTS:

- A Primary & Secondary Voltage combinations:
[600-120x240][600-12x24][240x480-120x240][240x480-12x24][208x416-120x240]
[120x240-120x240][120x240-12x24][575/460/230-115/95][460/230/208-115/24]
[415/400/380-110x220][380/277/208-120x240][other] Volts
- B VA Rating: [50][75][100][150][250][350][500][750][1000][1500][other] VA
- C System Frequency: 60 [50][other] Hertz

2.3 BASIC REQUIREMENTS:

- A Single-phase, common core construction. Convection air cooled.
- B Insulation Class: 105°C system [130°C][180°C][other]
- C Temperature Rise: 55°C [80°C][115°C][other]
- D Standard impedance at 60Hz: 4.6% to 8.5% (up to 500VA), 3.6% to 4.6% (501VA to 1500VA) and 2.5% to 3.6% (1501VA to 5000VA).
- E Transformer core construction: high grade, fully processed silicon steel laminations or better.
- F Coil conductors: continuous copper windings, with soldered terminations.
- G Impregnation: vacuum impregnated polyester resin.
- H All units up to 1500VA have encapsulated coils encased in molded covers.
- I Transformers up to 1500VA shall terminate in molded terminal block. Terminal block screw must incorporate standard SEMS captive washer and combination Phillips/slot screw.
- J Mounting Plate: standard heavy steel mounting plate or feet welded to core.
- K Secondary Fuse Kits: all molded units must be supplied with standard 13/32" x 1 1/2", midget/type CC fuse clips with necessary voltage links and jumpers to also be supplied.
- L Sound level to meet NEMA ST-20.
- M cULus listed, [CE Mark]
- N Built to NEMA ST-1 and in accordance with all applicable UL, CSA and ANSI/IEEE standards.

OPTIONS:

- 13/32" x 1 1/2", midget/type CC Primary Fuse Kits.
- CE mark approved finger safe primary and secondary terminal covers for fused and non-fused transformers.
- Lead kits for alternative termination.

2.4 ACCEPTABLE PRODUCT AND MANUFACTURER:

- A **HPS IMPERATOR®** molded, machine tool rated control transformer by Hammond Power Solutions Inc. (Canada: 1-888-798-8882 / U.S.: 1-866-705-4684).
- B Substitutions are permitted, subject to meeting all requirements of this specification and also having written approval by engineering 10 days prior to bid closing.

3 EXECUTION

3.1 INSTALLATION

- A Verify nameplate data.
- B Check for damage and loose connections.
- C Mount transformer to comply with all applicable codes.
- D Coordinate all work in this section with all work of other sections.
- E Prior to energizing transformer, verify primary and secondary voltages.