



Hammond Power
Solutions Inc.

HPS SPARTAN®

Open Style General Purpose Industrial Control Transformer Typical Specification

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1 GENERAL

1.1 SCOPE

- A This section defines open style, general purpose industrial control transformers 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 989 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 IEE 989

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 15 year limited pro-rated warranty.
(For details, refer to the manufacturers published warranty)

2 PRODUCTS

2.1 GENERAL CONSTRUCTION:

- A Single phase general purpose industrial control transformers shall be open style. 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:
[600/480-120x240][600-12x24][240x480-120x240][380/347-120x240][380/347-12x24]
[277-120][208X416-120X240][208X416-12X24][120X240-12X24][other] Volts
- B VA Rating: [50][100][150][250][350][500][750][1000][1500][2000][3000][5000][other] VA
- C System Frequency: [60][50][other] Hertz

2.3 BASIC REQUIREMENTS:

- A Name Plate Rating: Linear load, [60Hz][50Hz]
- B Single-phase, common core construction. Convection air cooled
- C Insulation Class: 130°C system [180°C][other]
- D Temperature Rise: 80°C [115°C][other]
- E Transformer core construction: high grade, fully processed silicon steel laminations or better.
- F Coil conductors: continuous copper windings, with terminations crimped and soldered.
- G Impregnation: vacuum impregnated polyester resin and oven cured.
- H Sound level to meet NEMA ST-20
- I Transformers shall terminate to either molded terminal block with #8 Phillips/slot screws c/w SEM's washer or ¼-20 UNC Phillips/slot terminal screws on coil face.
- J UL listed, CSA approved.
- K Built to NEMA ST-20 and in accordance with all applicable UL, CSA and ANSI/IEEE standards.
- L Mounting Plate: standard heavy steel mounting feet, bolted or welded to core.

OPTIONS:

- Primary and/or Secondary "Fuse Block Adapter Kit".(fuse blocks and fuses not supplied)
- Primary and secondary finger guards (on applicable units).

2.4 ACCEPTABLE PRODUCT AND MANUFACTURER:

- A ***HPS SPARTAN***[®] open style, general purpose industrial control transformer by Hammond Power Solutions Inc. (Canada: 1-888-798-8882 / U.S.: 1-866-705-4684) Standard Products: Product must be standard item in manufacturer's published catalog.
- 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
- F Report for the Commission of the transformer shall include:
 - i Primary & Secondary Voltages
 - ii Primary & secondary THDi & THDv