

**Specification Number:** 26 20 00.16

**Product Name:** DRY TYPE RESIN ENCAPSULATED TRANSFORMERS

## **SECTION 26 20 00.16**

### **DRY TYPE RESIN ENCAPSULATED TRANSFORMERS**

#### **PART 1 GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Dry-type resin encapsulated distribution transformers with primary and secondary voltages of 600V and less and capacity ratings through 225kVA.

Note: Paragraphs and words marked in [ ] are alternates. Select only one.

##### **1.02 REFERENCES**

- A. NFPA 70 - National Electrical Code
- B. NEMA ST20
- C. UL 1561

##### **1.03 SUBMITTALS**

- A. Suppliers asking consideration as an approved equal shall submit complete, warranted performance data and physical dimensions for similar transformers. Data shall be submitted for each size specified, and shall be received by the consultant engineer no less than 10 days prior to the bid due date for consideration.

##### **1.04 STANDARDS**

- A. Transformers shall be listed by Underwriters Laboratories.
- B. Conform to the requirements of ANSI/NFPA 70.
- C. Transformers are to be manufactured and tested in accordance with NEMA ST20.

#### **PART 2 PRODUCTS**

##### **2.01 MANUFACTURERS**

- A. Transformers shall be as manufactured by Square D Company or approved equal.
- B. Approved manufacturers shall be registered firms in accordance with ISO 9001:1994 SIC 3612 (US); which is the design and manufacture of low voltage dry type power, distribution and specialty transformers.

##### **2.02 RATINGS INFORMATION**

- A. All insulating materials are to exceed NEMA ST20 standards and be rated for 180°C UL component recognized insulation system.
- B. Transformers shall be [115°C] [80°C] temperature rise above 40°C ambient. [80°C] rise transformers shall be capable of carrying a continuous 15% overload without exceeding 115°C rise in a 40°C ambient. Transformers 25kVA and larger shall have a minimum of 4 - 2.5% full capacity primary taps. Exact voltages and taps to be as designated on the plans or the transformer schedule.
- C. The maximum temperature of the top of the enclosure shall not exceed 65°C rise above a 40°C ambient.
- D. The transformer(s) shall be rated as indicated in the following schedule:
  - Identification Number(s)
  - kVA Rating
  - Voltages
  - Phase
  - Frequency

**2.03 CONSTRUCTION**

- A. All cores to be constructed of high grade, non-aging silicon steel with high magnetic permeability and low hysteresis and eddy current losses. Magnetic flux densities are to be kept well below the saturation point.
- B. Terminations shall consist of wire leads with minimum insulation rating of 125°C.
- C. The transformer enclosures shall be non-ventilated and be fabricated of heavy gauge, sheet steel construction. The entire enclosure shall be finished utilizing a continuous process consisting of degreasing, cleaning and phosphatizing by electrostatic deposition of polymer polyester powder coating and baking cycle to provide uniform coating of all edges and surfaces. The coating shall be UL recognized for outdoor use. The coating color shall be ANSI 49.

**2.04 SOUND LEVELS**

- A. Sound levels shall be warranted by the manufacturer not to exceed the following:  
0 to 9KVA - 37dB; 10 to 30kVA - 42dB; 31 to 50kVA - 45dB; 51 to 150kVA - 50dB; 151 to 225kVA-55dB

Note: Lower sound levels may be desirable for critical areas such as hospitals, schools or office areas. Contact your local Square D representative for specific recommendations.

**2.05 OPTIONAL ACCESSORIES**

- A. [Provide #316 stainless steel enclosure]
- B. [Provide #304 stainless steel enclosure]
- C. [Label for Class 1 Division 2, Temperature Class T3]

**PART 3 EXECUTION**

**3.01 INSTALLATION**

- A. Not used

END OF SECTION