

HPS SUPER EFFICIENT Distribution Transformers



HPS is a proud partner in the
NEMA PREMIUM[®]
efficiency transformer program

NEMA PREMIUM[®] EFFICIENCY TRANSFORMER PROGRAM

In the past several years, there has been an accelerated rate of change to introduce energy efficiency standards for transformers in North America. Governments are encouraging users to consider energy efficient products, such as dry-type transformers, in an effort to help reduce carbon dioxide emissions.

The National Electrical Manufacturers Association (NEMA) has initiated the NEMA Premium[®] Transformer Program, which will help utilities, commercial building owners, and industrial plants incorporate super high-efficiency electrical transformers into their operations.

The new NEMA Premium[®] Efficiency Transformer designation requires 30 percent fewer losses than existing DOE regulations (10 CFR 431) for low-voltage dry-type distribution transformers.

For more information about the NEMA Premium Efficiency Transformer Program, visit: <http://www.nema.org/prod/pwr/trans/transformersProgram.cfm>



HPS SUPER EFFICIENT TRANSFORMERS

Hammond Power Solutions Inc. has already been offering super high efficiency transformer lines in the market for many years (HPS SuperSentinel, HPS SuperSynergy, and HPS SuperCenturion). HPS has now updated these lines to meet the efficiency levels in the new NEMA Premium[®] Efficiency Transformer Program.

HPS SUPER EFFICIENT PRODUCT OFFERING

HPS offers three lines of Super Energy Efficient Distribution Transformers that meet the NEMA Premium[®] Efficiency specifications:

HPS SuperSentinel[®]

Super Energy Efficient General Purpose Transformers

HPS SuperSynergy[®]

Super Energy Efficient K-Factor Transformers

HPS SuperCenturion[®]

Super Energy Efficient Harmonic Mitigating Transformers

As a Partner in the NEMA Premium[®] Transformer Program, HPS has determined that this product meets the NEMA Premium[®] Efficiency specifications for premium energy efficiency. NEMA Premium[®] is a trademark of the National Electrical Manufacturers Association™.

HPS SUPER EFFICIENT

Distribution Transformers



STANDARD FEATURES*

Frequency

- 60 Hz

Insulation Class

- 200°C (130°C rise) - all Super lines
- 220°C (150°C rise) - HPS SuperSentinel & SuperSynergy
- 220°C (130°C rise) - HPS SuperCenturion

Winding Material

- Copper or Aluminum

Mounting

- Standard floor & wall mounting
- Optional ceiling mounting requires drip plate kit

Impedance

- Typically 2.5% to 6.5%

Enclosure Type

- Type 3R & Type 3RE

Neutral

- 100% of Nameplate under linear loads - HPS SuperSentinel
- Double Neutral - HPS SuperSynergy & HPS SuperCenturion

Primary Taps

- Meet or Exceed NEMA

Secondary Output

- Single

UL Listed

- File: E112313

CSA Certified

- File: LR3902

AVAILABLE OPTIONS*

CE Mark

Taps

- Custom Primary Taps

Sound Level

- Optional 3dB, 5dB, 8dB Below NEMA ST-20
- Optional low noise units available

Enclosure Rating

- Type 4, 4X, 12

Duty

- Drilling Duty, Marine Duty

Temperature Monitoring

- Thermostat, Dial Type Thermometer

TVSS

- 120kA, 200kA

Monitoring

- Smart Communications

EFFICIENCY FEATURES



HPS SUPERSENTINEL®

Energy efficient general purpose transformers are designed for linear loads and are most frequently used for applications such as commercial buildings which will supply a variety of general loads.

- Exceeds **DOE 10 CFR Part 431** and (if applicable) **CSA C802.2** efficiencies at **35%** of rated load.
- Efficiency performance will meet the **NEMA Premium®** guidelines; **30% lower losses** than DOE 10 CFR Part 431 and (if applicable) CSA C802.2 standards; when measured under a linear load profile.

HPS SUPERSYNERGY®

The HPS SuperSynergy energy efficient K-factor transformer exceeds DOE 10 CFR Part 431 and (if applicable) CSA C802.2 efficiencies over a range of linear loads. It is also designed to be used in a non-linear load environment running at a high K-factor. The HPS SuperSynergy helps satisfy the desire for increased energy conservation in addition to the required regulatory levels.

- Efficiency performance will meet the **NEMA Premium®** guidelines; **30% lower losses** than DOE 10 CFR Part 431 and (if applicable) CSA C802.2 efficiency standards; when measured under a linear load profile at **35%** of rated load.
- Efficiency will meet or exceed DOE 10 CFR Part 431 and (if applicable) CSA C802.2 efficiency standards for linear load even at **50%** of rated load when measured under a **non-linear** load up to **K13**.

HPS SUPERCENTURION®

Specifically designed to treat the harmonics generated by computer equipment and other non-linear, power electronic loads. Combining zero sequence flux cancellation with phase shifting, treats 3rd, 5th, 7th, 9th, 15th, 17th and 19th harmonics within its secondary windings. Typical applications of severe non-linear loading conditions include data centers, internet-service providers, telecom sites, call centers, broadcast centers, etc.

- **Exceeds DOE 10 CFR Part 431** and (if applicable) **C802.2** efficiencies at **35%** of rated load.
- Efficiency performance will meet **NEMA Premium®** guidelines; **30% lower losses** than **DOE 10 CFR Part 431** and (if applicable) CSA C802.2 efficiency standards when measured under a linear load profile.
- Efficiencies will exceed **DOE 10 CFR Part 431** and (if applicable) CSA C802.2 standards at an operating range from **35% to 65%** of rated load when measured under a **non-linear** load profile up to **K20**.

*See the HPS Transformer Products catalog for further details and features



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