



ENCAPSULATED TRANSFORMERS FOR HAZARDOUS LOCATIONS



HPS Titan® has been designed to operate in harsh environments/hazardous locations where dangerous gases, liquids, dust, etc., could lead to serious consequences. HPS Titan® encapsulated transformers are used in installations where safety is your priority, efficiency is a concern and the environment, location and application are key. Typical applications include institutional, commercial, industrial, petrochemical, marine, mining, etc.

HPS Titan® series transformers are UL Listed for "Class 1, Division 2, Groups A, B, C and D Hazardous Locations" and are ABS Type Approved for "Marine Duty Service and Offshore Applications - Electrical Distribution and Propulsion". And with a North American Temperature Classification of T3C, the HPS Titan® series will remain cool under load.

Key features:

- Single phase ratings from .05 kVA to 37.5 kVA; three phase ratings from 2 kVA to 150 kVA
- 60 Hz frequency (50/60 Hz on units with 380V primary)
- Primary volts: 120, 208/240/277, 347/380, 240x480, 600, export model: 190/200/208/220x380/400/416/440
- UL 1604 approval, Class 1 Division 2
- ABS type approval
- Electrostatic shield standard on all three phase units and single phase units over 0.50 kVA
- 10 year warranty

For more information, click one of the links below:

- [HPS Titan Series Encapsulated Transformer Brochure](#)
- [HPS Titan Series Catalog Information](#) (HTP-08 Catalog Sec. 9)
- [Enclosure Drawings, Electrical Connection Diagrams, Termination Details](#) (HTP-08 Catalog Sec. General Info)
- [HPS Titan Installation Manual for single phase units up to 50 kVA](#) (IOMGE Installation Manual)
- [HPS Titan Installation Manual for three phase units up to 150 kVA](#) (IOMGE3 Installation Manual)
- [HPS Titan 1.2kV Class Typical Specification](#) (SPS 09, Rev 03)

©2008 Hammond Power Solutions Inc. All Rights Reserved

HPS TITAN Series of Products

HPS has over 85 years of experience in the design and manufacture of dry-type transformers including those for harsh environments and hazardous location applications.

The terms “Harsh Environments” and “Hazardous Location” in many industries brings to the forefront the many difficult environments which may contain dangerous gases, liquids, dust, etc., that could lead to serious consequences. Products which are designed to operate in these hazardous environmental conditions must be safe, reliable and affordable.

Other manufacturers of harsh environment and hazardous location transformers can design a functional transformer. But what makes HPS the leader in the industry is our investment in providing a complete solution.

- **Advanced Encapsulated Harsh Environment and Hazardous Location Transformer Designs**
- **Standard Features Expected in the Industry**
- **Superior Quality in Materials and Workmanship**
- **Options and Accessories that Enhance the Product Line**
- **Value, Customer Service and Support**

The new **HPS TITAN** line of encapsulated transformers have been designed for installation where safety is your priority, efficiency is a concern and the environment, location and application are key. Typical applications include institutional, commercial, industrial, petrochemical, marine, mining etc. HPS designs provide:

- **Safe Superior Performance**
- **Compact Efficient Design**
- **Easy Installation and Hook-up**

HPS TITAN series transformers are *UL Listed* for “**Class 1, Division 2, Groups A, B, C and D Hazardous Locations**” and are *ABS Type Approved* for “**Marine Duty Service and Offshore Applications - Electrical Distribution and Propulsion**”. And with a North American Temperature Classification of **T3C**, the **HPS TITAN** series will remain cool under load.

The **HPS TITAN** series of products are competitively priced for the rugged, industrial and commercial indoor and outdoor distribution transformer markets. HPS facilities have the most modern testing equipment for the requirements of ANSI, OSHA, UL, CSA, IEC, NEMA, ABS, DNV, BV, CE, etc.

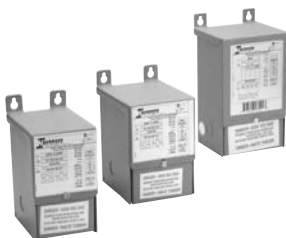
Hammond Power Solutions . . . helping customers solve tough applications in today’s environments!



HPS TITAN Features and Benefits

- **Ratings:** Three phase from 2 kVA thru to 150 kVA; single phase from .05 kVA thru to 37.5 kVA
- **Approvals:** UL 1604 - File No. E258346 (Class 1, Division 2, Groups A, B, C and D Hazardous Locations)
ABS Type Approval - Certificate No. 04-MO523208-X (Marine Duty Service and Offshore Applications)
- **Electrostatic Shield:** Standard on all three phase units and single phase units over 0.50 kVA; provides quality power and superior protection.
- **Quality Design:** All units are encapsulated with electrical grade silica sand and resin compounds which completely enclose the core and coil to seal out moisture, airborne contaminants and eliminates corrosion and deterioration.
- **Insulation:** Offering UL class 130°C insulation, 80°C temperature rise up to 1 kVA on single phase and 5 kVA three phase; 180°C insulation, 115°C temperature rise on all units over 1 kVA on single phase and 5 kVA three phase. Quiet operation with sound levels below NEMA standards.
- **Enclosures:** NEMA 3R enclosures meet or exceed listing criteria including NEMA, ANSI, ABS and OSHA standards for indoor and outdoor service. On three phase units, convert to a NEMA 4 or 12 enclosure rating quickly and easily by ordering the HPS NEMA 4/12 Gasket Kit. Competitively priced stainless steel enclosures with stainless steel nameplates are also available.
- **Conduit knockouts:** Rear and side entry into an easily accessible and roomy wiring compartment.
- **Wiring compartment:** Provides copper lead wire terminations or copper tab and standard ground lug assembly for easy cable installation.
- **Installation made quick and easy:** Via keyhole mounting slots. Wall mounting available on single phase units from .05 to 37.5 kVA and three phase from 2 to 15 kVA (excluding Q015QKKF). Lifting provisions are included on all single phase units from 5 to 37.5 kVA and three phase units from 6 to 150 kVA.
- **Dual Nameplates:** All three phase units come standard with two nameplates. One on the front and an additional nameplate is located on the inside of the top cover. (1ph units have one standard nameplate only.)
- **Additional voltage groups and kVA sizes** are available upon request.
- **Warranty:** All HPS standard catalog encapsulated transformers come with a 10 year limited* warranty. *(Please refer to the Hammond Power Solutions "standard Catalog Transformer Products Warranty for full details.)

HPS TITAN Single Phase



HPS TITAN Three Phase



FOR TERMINATION DETAILS SEE PAGE 269.

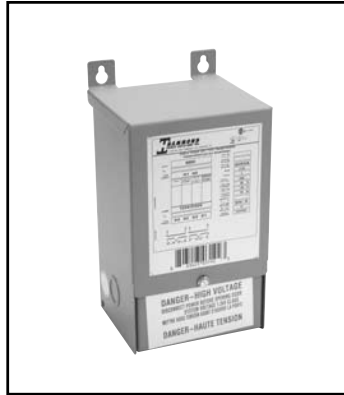
FOR ACCESSORIES SEE PAGES 254-257.

Data subject to change without notice.



HPS TITAN SERIES TRANSFORMERS FOR HARSH ENVIRONMENTS AND HAZARDOUS LOCATIONS

SINGLE PHASE STANDARD SPECIFICATIONS



| | .05 kVA to 1 kVA | 1.5 to 37.5 kVA |
|-------------------------------------|--|--|
| UL 1604, Class I, Division 2 | File: E258346 | File: E258346 |
| ABS Type Approval (RQS) | Certificate No.: 04-MO523208-X | Certificate No.: 04-MO523208-X |
| Frequency | 60 Hz (50/60 Hz on units with 380V primary) | 60 Hz (50/60 Hz on units with 380V primary) |
| Insulation System | 130°C (80°C rise) standard on all units | 180°C (115°C rise) standard on all units. Optional 130°C (80°C rise) available. |
| Electrostatic Shield | Optional on units up to .500 kVA. Standard on .750 kVA and 1 kVA units. | Standard on all units. |
| Encapsulation | All units are encapsulated with electrical grade silica sand and resin compounds. | All units are encapsulated with electrical grade silica sand and resin compounds. |
| Enclosure Type | Heavy Duty Encapsulated NEMA Type 3R Optional NEMA 4, 4X (stainless steel) and 12 | Heavy Duty Encapsulated NEMA Type 3R Optional NEMA 4, 4X (stainless steel) and 12 |
| Enclosure Finish | ANSI 61 Grey, UL50 | ANSI 61 Grey, UL50 |
| Termination | Front accessible separate high and low voltage lead wires or copper tabs. | Front accessible separate high and low voltage lead wires or copper tabs. |
| Conduit Knock-Outs | Standard side and rear knock-outs on all units. | Standard side and rear knock-outs on all units. |
| Impedance | Typically 1 to 5%. | Typically 1 to 5%. |
| Mounting | Standard Wall Mounting. | Standard Wall Mounting. Lifting ears provided on all units 5 kVA and up. |
| Sound Level | Meets NEMA ST-20 standards. (optional low noise units available on request) | Meets NEMA ST-20 standards. (optional low noise units available on request) |

Other voltages not listed in this section are available upon request. Please contact customer service for details, price and availability.

All HPS TITAN single phase transformers are UL Listed for "Class 1, Division 2, Groups A, B, C and D Hazardous Locations" and are ABS Type Approved for "Marine Duty Service and Offshore Applications - Electrical Distribution and Propulsion". And with a North American Temperature Classification of T3C, the HPS TITAN series will remain cool under load.



SINGLE PHASE, NEMA 3R STYLE ENCLOSURE



Export Model

190/200/208/220 X 380/400/415/440 Primary Volts 120/240 Secondary Volts 50/60 Hz

| kVA | Catalog Number | Case Style (Page 249) | Approx. Dimensions (Inches) | | | Approx. Weight (Lbs.) | Mtg Type W - Wall | Wiring Diagram (Pages 258-268) |
|------|----------------|--------------------------|-----------------------------|-------|--------|-----------------------|----------------------|-----------------------------------|
| | | | Width | Depth | Height | | | |
| 0.05 | QC05XECB | NQ0 | 3.75 | 5.25 | 7.25 | 7 | W | SCD 28 |
| 0.10 | QC10XECB | NQ0 | 3.75 | 5.25 | 7.25 | 8 | W | SCD 28 |
| 0.15 | QC15XECB | NQ0 | 3.75 | 5.25 | 7.25 | 11 | W | SCD 28 |
| 0.20 | QC20XECB | NQ1 | 4.50 | 5.75 | 7.25 | 13 | W | SCD 28 |
| 0.25 | QC25XECB | NQ1 | 4.50 | 5.75 | 7.25 | 14 | W | SCD 28 |
| 0.35 | QC35XECB | NQ1 | 4.50 | 5.75 | 7.25 | 15 | W | SCD 28 |
| 0.50 | QC50XECB | NQ2 | 5.00 | 4.75 | 9.25 | 18 | W | SCD 28 |
| 0.75 | QC75XEKB | NQ2 | 5.00 | 4.75 | 9.25 | 20 | W | SCD 28 |
| 1 | Q1C0XEKB | NQ3 | 5.88 | 5.50 | 10.00 | 26 | W | SCD 28 |
| 1.5 | Q1C5XEKF | NQ3 | 5.88 | 5.50 | 10.00 | 32 | W | SCD 28 |
| 2 | Q002XEKF | NQ4 | 7.00 | 6.50 | 11.25 | 52 | W | SCD 28 |
| 3 | Q003XEKF | NQ5 | 10.00 | 7.75 | 17.25 | 65 | W | SCD 28 |
| 5 | Q005XEKF | NQ5 | 10.00 | 7.75 | 17.25 | 105 | W | SCD 28 |
| 7.5 | Q007XEKF | NQ6 | 12.25 | 9.25 | 20.88 | 145 | W | SCD 28 |
| 10 | Q010XEKF | NQ6 | 12.25 | 9.25 | 20.88 | 195 | W | SCD 28 |

For shielded units up to 0.50 kVA, replace the suffix "CB" with a "KB".

The above export model units carry the CE Mark.

