

hammond  
POWER SOLUTIONS



# INDUSTRIAL APPLICATIONS

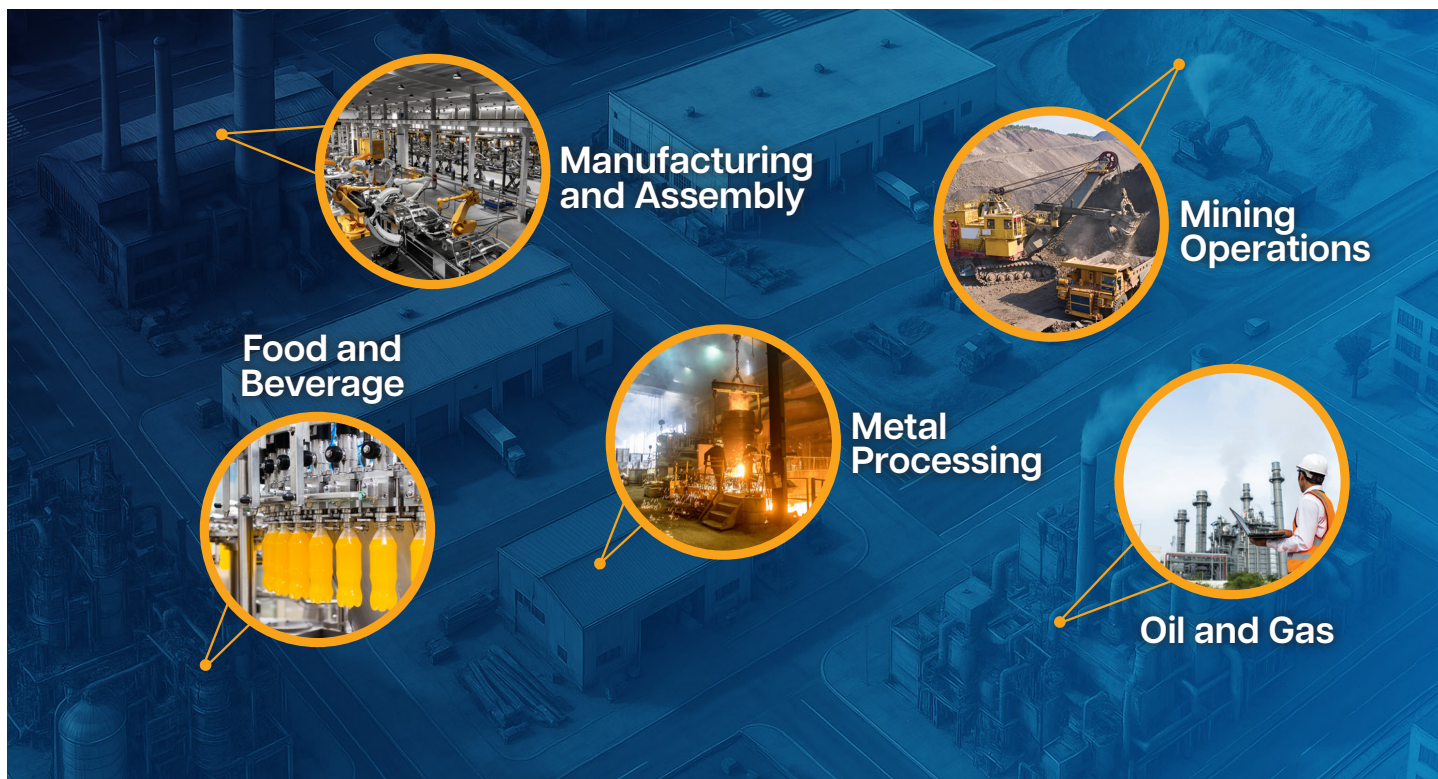
HPS Dry-Type Transformers and Power Quality  
Products for Demanding Environments





## HPS SOLUTIONS FOR INDUSTRIAL APPLICATIONS

HPS delivers proven dry-type transformer and power quality solutions that help industrial operations run reliably, efficiently, and safely. Built for any environment, our products support uptime, simplify preventative maintenance, and reduce operational risks—so your facilities run the way they are intended to.

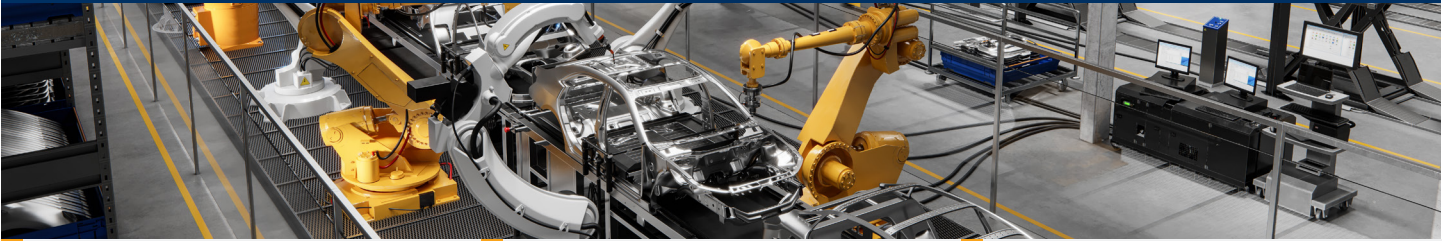


**HPS offers dry-type transformers and power quality product solutions** for all industrial applications.

Find the product that best meets your needs:

| Products  | Applications             |                   |                  |           |                 |
|---|--------------------------|-------------------|------------------|-----------|-----------------|
|   | Manufacturing & Assembly | Mining Operations | Metal Processing | Oil & Gas | Food & Beverage |
| <b>Dry-Type Transformers</b>                      |                          |                   |                  |           |                 |
| Drive Isolation Transformers                      | ✓                        | ✓                 | ✓                | ✓         | ✓               |
| Encapsulated Transformers for Hazardous Locations |                          | ✓                 | ✓                | ✓         | ✓               |
| General Purpose Distribution Transformers         | ✓                        | ✓                 | ✓                | ✓         | ✓               |
| Control Transformers                              | ✓                        |                   |                  |           | ✓               |
| <b>Power Quality Products</b>                     |                          |                   |                  |           |                 |
| dV/dT Filters                                     | ✓                        | ✓                 | ✓                |           | ✓               |
| HPS TruWave Active Harmonic Filters               | ✓                        |                   | ✓                | ✓         | ✓               |
| Passive Harmonic Filters                          | ✓                        |                   | ✓                | ✓         | ✓               |
| Reactors  | ✓                        | ✓                 | ✓                | ✓         | ✓               |
| SineWave Motor Protection Filters                 |                          | ✓                 |                  | ✓         |                 |

## Manufacturing & Assembly



### Challenges

- Voltage instability across production lines
- Harmonics and noise from drives and automation equipment

### HPS Solutions

- General-purpose
- Drive isolation transformers
- Control transformers
- Passive filters

### Impact

- Fewer equipment faults
- Consistent uptime across shifts

## Metal Processing



### Challenges

- High-current loads (furnaces, and presses)
- Severe harmonic distortion

### HPS Solutions

- Harmonic-mitigating
- Drive isolation transformers
- Passive filters at power source

### Impact

- Lower energy losses
- Protection for sensitive downstream systems

## Oil & Gas



### Challenges

- Hazardous-area compliance (Class I Div 2)
- Voltage instability in remote sites

### HPS Solutions

- Sealed, non-ventilated transformers
- Filters
- Reactors for VFD-driven pump systems

### Impact

- Code-compliant performance
- Reliable power across field assets



## Mining Operations



### Challenges

- Harsh, remote conditions with vibration/dust
- Long cable runs to motor loads

### HPS Solutions

- **Encapsulated transformers for outdoor use**
- **dV/dT filters**
- **Reactors**

### Impact

- Maximized uptime in harsh environments
- Extended equipment, motor life and protection

## Food & Beverage



### Challenges

- Moisture/contaminant exposure
- Large inductive and motor-driven loads

### HPS Solutions

- **Cast resin transformers for harsh environments**
- **Control transformers for automation loads**
- **Optional stainless-steel enclosures for washdown and corrosion-prone areas**

### Impact

- Resilient power distribution
- Reduced service interruptions

## STANDARD ENCLOSURE TYPES

HPS offers a complete range of NEMA-rated enclosures (Types 1, 2, 3R, 4, 4X, and 12), along with practical options like drip shields, grounding kits, bottom cable entry, rodent protection, and stainless steel for washdown use.

| Enclosure Type | Description   |
|----------------|---|
| Type 1         | Indoor use. Protects against solid objects and accidental contact. Suitable for clean, dry control rooms or equipment cabinets. |
| Type 2         | Indoor use. Adds limited protection against dripping water. Used in lightly humid environments.                                 |
| Type 12        | Indoor use. Protects against circulating dust, falling dirt, and dripping liquids.  |
| Type 3R        | Outdoor rated. Shields equipment from rain, sleet, and snow.  |
| Type 4         | Sealed enclosure for indoor/outdoor use. Handles direct hose-downs.   |
| Type 4X        | Like Type 4, but made from corrosion-resistant materials. Ideal for washdown zones or coastal/chemical areas.                   |

*Note: Enclosure availability may vary by product. Use the HPS configurator or contact us to confirm.*



# ENGINEERED ADVANTAGES IN EVERY DETAIL

What truly sets HPS apart is our proprietary features that make your job easier and protect against weather, dust, and debris in demanding industrial environments.



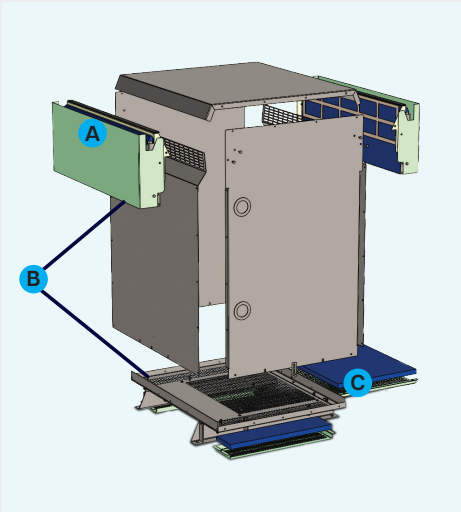
*Note: Feature availability may vary by product. Use the HPS configurator or contact us to confirm.*

## HPS Type 3RE Plus Enclosure

We took the standard 3R enclosure and made it better— It's a smarter, more rugged solution built to extend the life of your transformer and minimize risks in harsh outdoor and demanding worksite conditions.

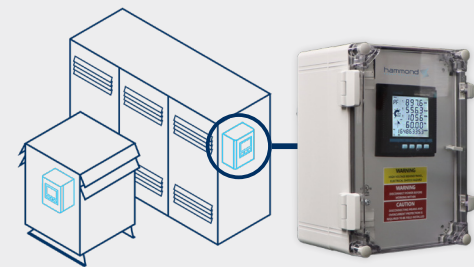


|                             | Quick Filter Replacement (A) | Sealed Cable Entry Points (B) | Base-Mounted Filters (C) |
|-----------------------------|------------------------------|-------------------------------|--------------------------|
| Standard NEMA 3R Enclosure  | X                            | X                             | X                        |
| HPS Type 3RE Plus Enclosure | ✓                            | ✓                             | ✓                        |



# PREVENTATIVE MAINTENANCE AND MANAGEMENT

Smart ideas that keep your business running.



## IIoT Smart Transformers

Remote Real Time Monitoring

Act on power quality insights in real time, with secure integration that operates within your firewall to reduce cybersecurity risks.



## Infrared Window

On-Site Proactive Maintenance

Perform thermal checks without shutdowns for faster, safer maintenance routines.



## PRODUCT SOLUTIONS LEGEND

Our color-coded icons make it easy to identify where HPS solutions tackle common industrial challenges. These visual cues help connect product features to real-world needs across a range of demanding applications.

- **Hazardous Locations** – Designed for use in Class I, Division 2 environments with flammable gases or vapors.
- **Mitigates Harmonics** – Reduces harmonic distortion from non-linear loads like VFDs to protect system health.
- **Line Side Protection** – Shields upstream equipment from electrical disturbances like harmonics and voltage spikes.
- **Load Side Protection** – Safeguards sensitive downstream equipment from power quality issues and transients.
- **Energy Efficient** – Meets or exceeds efficiency standards to reduce energy waste and operating costs.
- **Washdown** – Built with corrosion-resistant materials for use in sanitary or washdown areas.
- **Compact** – Optimized footprint for space-constrained installations without sacrificing performance.

## DRY-TYPE TRANSFORMER SOLUTIONS FOR INDUSTRIAL APPLICATIONS

Industrial operations demand power that's reliable and built for the environment. HPS offers a full range of dry-type transformers—general purpose, control, drive isolation, and encapsulated—designed to solve common power challenges across manufacturing, mining, processing, and energy-intensive facilities.

### Drive Isolation Transformers

Provide electrical isolation and voltage matching for VFDs in motor control systems. Reduce harmonics, enhance motor protection, and ensure reliable operation in conveyor systems, fans, and process equipment.



### Encapsulated Transformers for Hazardous Applications

Offer robust protection against dust, moisture, and corrosion. Ideal for mining, metal processing, oil & gas facilities where environmental conditions challenge traditional transformer designs.



### General Purpose Distribution Transformers

Provide reliable voltage conversion across facility systems, supporting lighting, motors, and production lines. Built for durability and ease of installation in a wide range of industrial environments.



### Open Style Control Transformers

Deliver consistent, low-voltage power to control panels, automation systems, and sensors—ensuring safe and stable operation of industrial equipment under varying load conditions. Supplies clean, stable voltage to industrial control panels.



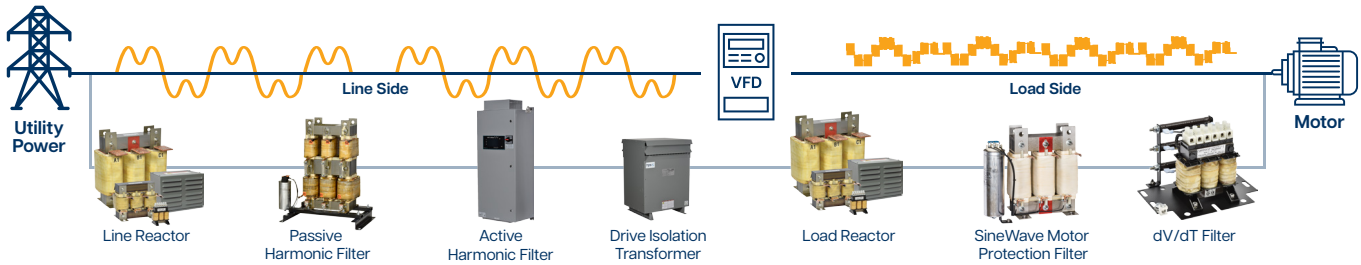
**Legend**

|                       |                       |                        |                        |                    |            |           |
|-----------------------|-----------------------|------------------------|------------------------|--------------------|------------|-----------|
| ● Hazardous Locations | ● Mitigates Harmonics | ● Line Side Protection | ● Load Side Protection | ● Energy Efficient | ● Washdown | ● Compact |
|-----------------------|-----------------------|------------------------|------------------------|--------------------|------------|-----------|



# POWER QUALITY SOLUTIONS FOR INDUSTRIAL APPLICATIONS

Industrial electrical systems are exposed to power disturbances that waste energy, damage equipment, and disrupt operations. HPS power quality solutions actively condition and correct electrical signals to ensure cleaner power, higher system reliability, and reduced maintenance issues. Our solutions protect your entire electrical infrastructure.



## Line Side Solutions

- Minimizes harmonic distortion for a cleaner power supply
- Helps prevent transformer overheating and nuisance trips
- Supports IEEE 519 compliance for electrical system reliability

## Load Side Solutions

- Shields motors and cables from voltage spikes and high dV/dT
- Improves motor lifespan and helps avoid unplanned downtime

## dV/dT Filters

Minimize voltage spikes and reduce motor insulation stress in systems with long cable runs between VFDs and motors. Improve motor longevity and reduce maintenance in high-performance industrial applications.



## HPS TruWave™ Active Harmonic Filters

Continuously monitor and correct power distortions from VFDs and non-linear loads in real time. Reduce system stress, prevent overheating, and ensure compliance with IEEE-519 power quality standards.



## Passive Harmonic Filters

Provide cost-effective harmonic mitigation at the source, improving power factor and reducing energy loss in industrial motor and drive systems. Filters harmonics at the source, improving power factor and protecting downstream equipment.



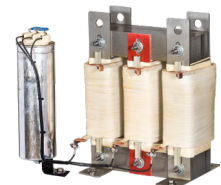
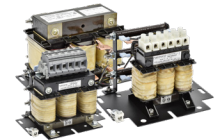
## Reactors

Limit inrush current, reduce voltage spikes, and smooth waveforms for motors and drives. Protect sensitive equipment from damage while increasing the lifespan of power electronics. Smooths out voltage spikes and protects motors from inrush currents.



## SineWave Motor Protection Filters

Designed for motor-driven systems in industrial environments, SineWave Filters smooth out PWM waveforms from VFDs to closely replicate a true sine wave. Ideal for applications with long motor leads—such as conveyors, pumps, and cooling fans—these filters reduce motor noise, prevent insulation breakdown, and extend equipment life in demanding installations.



**Legend**    ● Hazardous Locations    ● Mitigates Harmonics    ● Line Side Protection    ● Load Side Protection    ● Energy Efficiency    ● Washdown    ● Compact



# HPS CAPABILITIES

## COMPANY

Hammond Power Solutions (HPS) enables electrification through its broad range of dry-type transformers, power quality solutions and related magnetics. HPS' standard and custom-designed solutions are essential and ubiquitous in electrical distribution networks within an extensive range of industries including renewable energy, e-mobility, data centers, microgrids, and industrial/commercial settings.

HPS has manufacturing plants in Canada, the United States (U.S.), Mexico and India and sells products around the globe.

**Founded:** 1917

**Number of employees:** 1,532

**Ownership:** Hammond Power Solutions (HPS) is a public company traded on the Toronto Stock Exchange ("HPS.A")

## Why Choose HPS for Industrial Applications?

### Proven Reliability

HPS transformers and power quality solutions are trusted by industrial companies worldwide for their durability and high performance in extreme conditions.

### Compliance & Safety

HPS solutions meet or exceed industry standards, ensuring compliance with IEEE, UL, CSA, and other regulatory requirements for industrial applications.

### Energy Efficiency & Sustainability

Our multi-pulse and converter transformers help reduce energy losses and optimize operational efficiency, making them an essential component for sustainable industrial power solutions.

### Custom Engineering Expertise

HPS designs transformers tailored for unique industrial needs, including specialized drive isolation, voltage conversion, and power quality enhancement solutions.



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