

HARMONIC MITIGATION

HMT Three-Phase Zig-Zag Transformers

Product

The HMT (Harmonic Mitigating Transformer) is a three phase transformer with 0° or -30° displacement between the primary and the secondary.

The HMT is used to reduce current harmonics on the primary side of a transformer and voltage distortion on the load. A single HMT reduces the flow of triplen harmonics, 3rd, 9th, 15th, 21st, etc into the transformer primary. Used together on the same power line a 0° and -30° HMT will also reduce the 5th and 7th harmonics.

These transformers are designed to reduce voltage distortion when powering non-linear loads.

Applications

- For use in environments with non-linear loads such as computers and variable speed drives
- Where there is high computer, printer and communication equipment usage, and stable operation is necessary
- Medical facilities including hospitals
- Data centers
- Office buildings
- Schools

Specifications

- DOE-2016 efficiency
- 3 phase, 60 Hz
- 480V primary
- Zig-Zag secondary design voltage 208Y/120V
- 0° and -30° phase shifts
- 15 – 1,500 kVA range
- Aluminum windings
- K-13 standard
- 150°C temperature rise
- 220°C insulation class
- NEMA 3R enclosure
- Heat-cured ASA-61 gray powder coating finish
- Electrostatic shield
- Cores of high quality electrical steel
- UL / cUL Rated



Features, Functions, Benefits

- Space saving design for easy handling and installation
- Termination lugs provided for ease of installation through 75 kVA
- Vibration isolation pads provide quiet operation

Standards

- Meets DOE-2016 standard for energy efficiency
- Built in accordance with NEMA, ANSI, UL and CSA standards
- UL and CSA Listed

Options and Accessories

Consult factory for more information

- 50 Hz
- Other voltages available
- Copper windings
- K-4 and K-20
- Dual electrostatic shield
- 115°C, 80°C temperature rise

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Standard models

480V Δ — 208Y/120V, Phase shift of 0°, K13, 150°C temperature rise							
kVA	Catalog Number	Primary Tap Configurations		Dimensions (inches)			Net Wt (lbs)
		FCAN	FCBN	Height	Width	Depth	
15	424-9164-008	2 @ 2.5%	2 @ 2.5%	25	22	22	310
30	424-9194-008	2 @ 2.5%	2 @ 2.5%	28	25	23.5	400
45	424-9214-008	2 @ 2.5%	2 @ 2.5%	32	27	26	585
75	424-9234-008	2 @ 2.5%	2 @ 2.5%	38	29	29	775
112	424-9254-008	2 @ 2.5%	2 @ 2.5%	42	33	32.5	1,000
150	424-9264-008	2 @ 2.5%	2 @ 2.5%	46	35	37	1,530
225	424-9294-008	2 @ 2.5%	2 @ 2.5%	46	35	37	1,660
300	424-9314-008	2 @ 2.5%	2 @ 2.5%	60	48	43.5	2,360
500	424-9344-008	2 @ 2.5%	2 @ 2.5%	72	52	44	3,760

Dimensions subject to change without notice. Consult factory if exact measurements are critical.

PIONEER DRY TYPE TRANSFORMER DIVISION offers multiple options for handling harmonics through its Jefferson Electric and Harmonics Limited branches.

JEFFERSON ELECTRIC offers a full line of transformers within the 600 volt class, manufactured to NEMA, ANSI, UL and CSA standards.

HARMONICS LIMITED adds Harmonic Suppression Systems (HSS®) to complete our offerings. This patented technology is designed to improve power quality, reduce energy consumption and restore system capacity in an electrical distribution system by eliminating the flow of 3rd harmonic current.

If you have any questions about these units, please contact us. technical_services@jeffersonelectric.com

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