GridDefender Filters

HPF Passive Harmonic Filters Air-Cooled

Selection Brochure | HPF Harmonic Filters

- Meets IEEE-519
- Simple wiring for fool-proof installation
- Excellent partial load performance
- On-board intelligence
- Generator compatible

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IEEE-519 Compliance. Partial Load Performance. On-board intelligence.

Non-linear loads such as variable frequency drives (VFDs) increase efficiency; however, they significantly pollute the power quality of the site and grid by introducing substantial harmonic current distortion (THD-i). The addition of a CTM GridDefender Passive Harmonic Filter reduces harmonic current distortion below 5%, ensuring compliance with IEEE-519 and protecting other on-site equipment. Furthermore, GridDefender filters perform well under partial load conditions, are generator compatible, and do not require drive control of capacitor contactors (simply customer connections).

PRODUCT HIGHLIGHTS

Meets IEEE-519

VFDs introduce harmonic current distortion on the grid that can cause problems for nearby equipment. The addition of a GridDefender filter reduces current distortion below 5% THD-i, meeting IEEE-519 requirements and eliminating nuisance tripping of the drive, nearby equipment, and circuit breakers.

Simple Customer Connections (3 In / 3 Out)

Control for capacitor contactors is maintained within the filter, with automatic pickup and dropout. This feature greatly simplifies field installation, only requiring three input and three output power connections (temperature monitoring optional). Less connections minimizes the chance of improper installation, which has caused performance issues and failures in competitor filters.

Excellent Partial Load Performance

GridDefender Harmonic Filters not only meet IEEE-519 requirements under full load conditions, they also are designed for partial load performance, with THD-i levels maintained below 8% all the way down to 25% load.

PERFORMANCE SPECIFICATIONS

Typical Applications	Six-Pulse Rectifier (generator compatible)
Input Voltage / Frequency	480 V / 60 Hz
Current Range	240 - 640 A
Maximum THD-i	<5% @ Full Load <8% @ 25% Load
Overload Capability	150% rated current for 1 minute
Maximum Ambient Temperature	50 °C (122 °F) (higher with de-rating)
Enclosure Options	Modular Panel NEMA 3R Cabinet
Capacitor Contactors	Contactor for capacitor disconnect with automatic pickup and drop out (no drive connections required for control)

SELECTION TABLE

Rated Current (A_{RMS})	Est. Motor HP [1]	Part Number [2]	Enclosure	Filter (H x W x D)	Cap Panel (H x W x D)
240	200	HPF240AMA00	Open Panel	15.9 x 36.0 x 27.5	6.4 x 36.0 x 16.0
		HPF240ARA00	NEMA 3R	54.5 x 39.3 x 40.5	Installed in Cabinet
320	250	HPF320AMA00	Open Panel	15.9 x 36.0 x 27.5	9.9 x 36.0 x 16.0
		HPF320ARA00	NEMA 3R	54.5 x 39.3 x 40.5	Installed in Cabinet
410	300	HPF410AMA00	Open Panel	15.9 x 36.0 x 27.5	9.9 x 36.0 x 16.0
		HPF410ARA00	NEMA 3R	54.5 x 39.3 x 40.5	Installed in Cabinet
485	400	HPF485AMA00	Open Panel	15.9 x 36.0 x 29.5	13.4 x 36.0 x 16.0
		HPF480ARA00	NEMA 3R	54.5 x 39.3 x 40.5	Installed in Cabinet
640	500	HPF640AMA00	Open Panel	15.9 x 36.0 x 29.5	13.4 x 36.0 x 16.0
		HPF640ARA00	NEMA 3R	54.5 x 39.3 x 40.5	Installed in Cabinet

[1] *Motor HP estimated based on typical conditions. Actual HP will vary with application. Size filter based on motor FLA.*

[2] *See part number table (right) for additional options.*

Part Number System

HP F 640 A M A 00

- **Passive Harmonic Filter** — HP
- **Forced-Air Cooled** — F
- **Current Rating (Amps)** — 640
- **Drive Voltage / Frequency** — A
  - A = 480 V / 60 Hz
- **Enclosure** — M
  - M = Modular Panel
  - R = NEMA 3R Cabinet
- **Fan Options** — A
  - A = 115 VAC
  - B = 230 VAC
  - D = 24 VDC
- ***Design Options*** — 00

Note: Information is for reference only. Data subject to change without notice.

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