

# Distribution TransFilter™

## ULTRA-HIGH EFFICIENCY HARMONIC MITIGATING TRANSFORMERS

### PRODUCT BENEFITS

- Ultra-High Efficiency at 0% - 100% THD<sub>i</sub>
- Saves Energy by Reducing Harmonic Losses
- Reduces Apparatus Heating and A/C Costs
- Increases Primary Feeder and Bus Capacity
- Reduces K-Factor of Non-Linear Loads
- Reduces Voltage Distortion to <5%THD<sub>v</sub> (IEEE 519-1992)
- Balances Three-Phase Currents
- Restores Computer's Ride-Through Capability
- Meets NEMA TP-1 and CSA C802.2-00 Standards
- EPA Energy Star® Compliant
- Assures Distribution System Compatibility with Loads



### PRODUCT DESCRIPTION

*Distribution TransFilter™* - Harmonic Mitigating Transformers are Ultra-High Efficiency three-phase distribution transformers that have been specifically designed to mitigate the power quality problems associated with non-linear, load-generated harmonic currents in three-phase electrical distribution systems.

*Distribution TransFilters™* have been designed as a cost-effective alternative to conventional and K-Rated Transformers.

De-rated Distribution Transformers or K-Rated Transformers are only intended to survive in a harmonic environment. By contrast, *Distribution TransFilters™* will cancel positive and negative sequence harmonic currents on their primary bus or within their dual output secondary windings.

In addition, some three-phase, four-wire configurations will cancel zero sequence harmonic fluxes within the three-phase magnetic core.

Type DV *Distribution TransFilters™* provide ultra-low zero sequence impedance for application as stand-alone mitigation solutions where 120/208V circuit lengths are limited. Lower cost, Type DY units, with reduced zero sequence capacity, are normally used in combination with either *Mini-Z™* or *I<sub>0</sub>Filter™* zero sequence harmonic filters.

*Distribution TransFilters™* are also available with multiple outputs for addition cancellation of positive and negative sequence harmonics currents.



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## SELECTION TABLES

kVA	Enclosure Size (Inches)	Weight (lbs.) *
15	20.50W x 20.75D x 26.25H	310
30	20.50W x 20.75D x 26.25H	420
45	24.50W x 22.00D x 31.50H	580
75	30.75W x 27.75D x 30.75H	900
112.5	30.75W x 27.75D x 30.75H	1200
150	40.00W x 31.00D x 44.00H	1550
225	40.00W x 31.00D x 44.00H	2200
300	40.00W x 31.00D x 44.00H	2400
500	46.00W x 40.00D x 62.00H	2900
Other up to 3500kVA		

\* = Approx

THE ABOVE DATA APPLIES TO SINGLE OUTPUT CONFIGURATIONS UP TO 600V, WITH NEMA 1 ENCLOSURE AND STANDARD TEMPERATURE RISE (150°C). SELECTION OF MULTIPLE OUTPUTS AND SOME OPTIONS MAY CHANGE ENCLOSURE SIZE AND WEIGHTS. CONSULT FACTORY FOR DETAILED PRODUCT DATA SHEET FOR THESE AND OTHER CONFIGURATIONS. SPECIFIC ENCLOSURE USED DETERMINED BY FACTORY UNLESS SPECIFIED.

## TECHNICAL SPECIFICATIONS

UL Listed  
 CSA Approved  
 Related Standards: CSA C9-M1981, CSA 22.2 No.47-1977  
 CSA C802.2-00, UL-506, ANSI C75.11  
 NEMA ST-20, NEMA TP-1  
 Voltage Class: 1.2kV [Standards to 35kV]  
 BIL Rating: 30kV [Standard for Class]  
 Voltage: 208/120 [All Standards to 35kV]  
 Frequency: 60Hz. [50Hz][400Hz][Other]  
 Type: ANN  
 Temp. Rise: 150° C [130°C][115°C][80°C][Other]  
 Zero Seq. Imp. < 0.95% @ 60Hz  
 Zero Seq. React. < 0.3% @ 60Hz.  
 Insulation Class: 220° C  
 Colors: PQI White [ASA 61][Other]

PQI Warranty - 10 years pro-rated.  
 PQI HarMitigator & Distribution TransFilter are trademarks of Power Quality International, Inc.

## Definitions

Type: DV (Low Z<sub>0</sub>)  
 Type: DY (Medium Z<sub>0</sub>)  
 Hz: Frequency  
 kVA: Rating of unit  
 PV: Primary Voltage  
 SV: Secondary Voltage  
 Temp: Temperature Rise: 150°C (Standard)  
 [130°C] [115°C] [80°C] [Optional]

## Options

Enclosure: N1 NEMA 1 (Standard)  
 N3 R NEMA 3R (Optional)  
 Other (Optional)  
 Electrostatic Shield: 1ES – Single Electrostatic Shield  
 2ES – Dual Electrostatic Shield  
 3ES – Triple Electrostatic Shield  
 TS: Thermal Sensors  
 Color: PQI White [Other]

## Part Number Configuration

Type Phase Shift–Hz–kVA–PV:SV–Temp–Options

## Sample Part Number

DV15–60–075–480:120/208–150–N3R–2ES–TS–EPA



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