

5% PASSIVE HARMONIC FILTER



Harmonics produced on an electric power system from non-linear loads can adversely affect system infrastructure and loads. TCI's HarmonicShield™ (HSD) with PQconnect is a series drive-applied passive harmonic filter with intelligent control that limits current harmonic distortion to less than 5% over a wide load range. Due to the effects of harmonics distortion from variable frequency drives (VFD), IEEE 519-2014 standards require various levels of harmonic mitigation. The HSD reduces current THD to less than 5%.

The HSD with PQconnect offers industry leading performance even at light loads and under the harshest of conditions. The HSD filter is a stand-alone input device that is furnished in its own enclosure and mounted adjacent to the drive/VFD. It is designed to reduce harmonics caused by drives and VFDs.

Features of the HSD with PQconnect:

- Limits current harmonic distortion to less than 5% over a wide load range
- IEEE 519-2014 compliant
- Cost effective, maintenance-free filter design - no mechanical adjustments needed
- Convection cooled and no moving parts
- Intelligent control and monitoring available with PQconnect
- 3 HP-1000 HP range
- 480 VAC; 600 VAC
- Made in the USA

Typical VFD Applications

- Oil and Gas Pumps
- Water/Wastewater Pump Systems
- HVAC Compressors and Blowers
- Irrigation Pumps
- Extruders

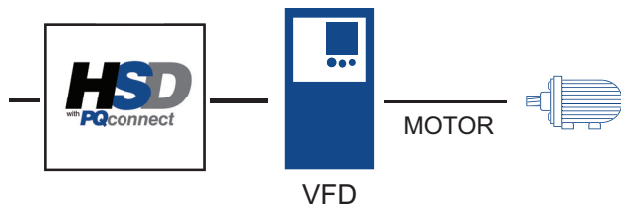


Technical Specifications	
Voltage	480 VAC; 600 VAC
Frequency	60 Hz
Power Rating	3 - 1000 HP
Load Types	3-phase diode bridge rectifier loads such as PWM AC drives
Immunity from Voltage Distortion	Less than 5% THID at full load with THVD as high as 0.5%*
Overload Capability	200% of current rating for up to 3 minutes/hour
Communication Options	Modbus RTU over RS485
Environmental Conditions	
Operating Ambient Temperature	-40°C (-40°F) - 40°C (104°F)
Maximum Ambient Storage Temperature	60°C (140°F)
Maximum Elevation	Up to 1,000 m (3,300 ft) without derating. Consult factory for higher elevations.
Maximum Humidity	95% non-condensing
Reference Technical Standards	
Enclosure Options	UL Type 1 or UL Type 3R
Agency Approvals	cULus Listed

*For High Background Voltage Distortion applications, please use TCI's HGP configured for High Background Voltage Distortion.

NOTE: The HSD is classified as an Auxiliary Device, not an industrial control panel. Under UL and NFPA NEC guidelines an SCCR rating or marking is not required.

Typical HSD Application

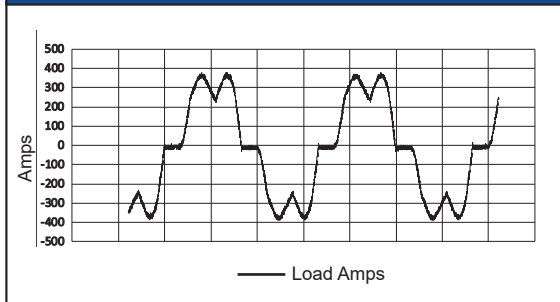


Please see web site for configuration guidelines.

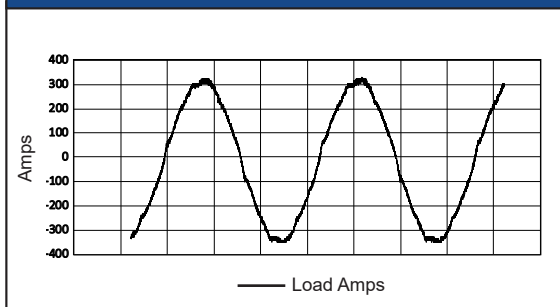
Performance Guarantee - Select & install the appropriate HarmonicShield® Harmonic Filter in a variable torque, variable frequency AC drive application, within our published technical specifications and we guarantee that the input current distortion will be less than or equal to 5% THID for standard HSD Series filters at full load, and less than 8% at 30% load. If a properly sized and installed filter fails to meet its specified THID level, TCI will provide material for necessary modifications or replacement filter at no charge.

Part Numbering	
Series	HSD 0150 A W 3 0 0 0 0
Horse Power	0150
Voltage Rating	A = 480 V C = 600 V
Frequency	W = 60 Hz
Enclosure	1 = UL Type 1 3 = UL Type 3R
Option	0 = No contactor 1 = With contactor
Option	0 = Standard, no lugs 1 = Lugs
Option	0 = Standard 1 = PQconnect
Option	0 = Standard

Current Waveform Without HSD



Current Waveform With HSD



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