

Output Protection Offerings

dV/dt, Reactors, and Sine Wave Product Families

TCI offers a wide variety of output protection options to suit a range of applications. High quality components and a robust design allow TCI's line reactors, dV/dt filters, and sine wave filters to deliver best in class performance under the harshest conditions and in the most challenging applications.

KDR and KLR reactors are constructed with durability in mind and can be used on both the input and output of a VFD. When used on the output of a drive, KDR and KLR reactors reduce voltage distortion at the motor terminals extending the service life and minimizing insulation stress on any motor.

The VIK dV/dt Filter provides motor protection by limiting voltage spikes to below 1,000 V for applications with lead lengths from 100-1,000ft. The VIK greatly extends the life of the motor and cable, offers a 30% reduction in common mode current, increases the voltage rise time and slows pulse transitions to reduce dV/dt.

TCI offers two sine wave filter options; the KMG MotorGuard and the MSD MotorShield. Sine wave filters convert the PWM wave form to a near sinusoidal wave form by eliminating the carrier frequency, allowing sensitive applications to take advantage of the efficiencies and savings that PWM output power supplies and VFDs can offer.

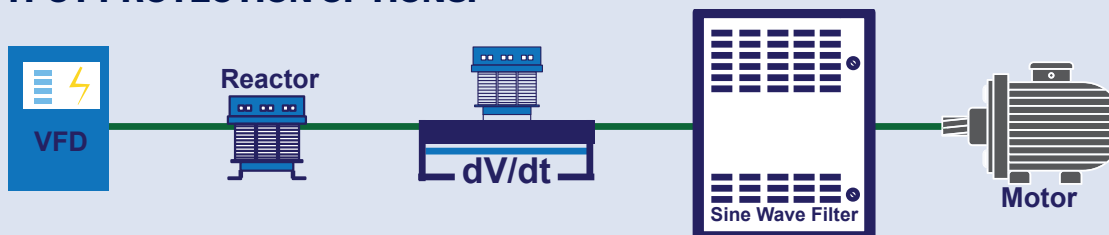
ADDITION OF PQCONNECT:

PQconnect on TCI's sine wave filters provides critical preventative maintenance and troubleshooting benefits to ensure smooth and long-term functionality. KMG with PQconnect enables pumping and VFD process control adjustments to optimize uptime and prevent power quality issues. Real-time power quality data can be used to monitor and trend for early detection of abnormal conditions.

FEATURES:

- Reactors feature strong and durable design specifically for VFD applications.
- VIK reduces common mode by a minimum of 30%.
- VIK limits voltage spikes to below 1,000 V for specific applications, and KMG and MSD eliminate high dV/dt voltage spikes ensuring optimal motor and cable protection.
- Sine Wave filters offer less than 5% THVD performance
- TCI Sine Wave Filters offer universal acceptance - can be used with virtually all AC induction motors, lead lengths and lead types and used with a wide range of carrier frequencies.

OUTPUT PROTECTION OPTIONS:



Technical Specifications

	KMG Sine Wave Series	MSD Sine Wave Series	V1K dV/dt Filter	KDR Line Reactor
Application Voltages	208 V - 600 V			208 V - 690 V
480 VAC Current Ratings	8 - 750 Amps	9 - 480 Amps 40 - 960 Amps	2 - 750 Amps	0.5 - 1500 Amps
600 VAC Current Ratings	8 - 600 Amps	8 - 450 Amps 500 - 850 Amps		
VFD Carrier Frequency	2 - 16 kHz		2-4 kHz	Up to 8 kHz
Fundamental/ Output Frequency	Up to 80 Hz (derating above 80Hz)		0-60Hz (derating above 60Hz)	Up to 60 Hz (derating above 60Hz)
Reactor Insulation Class	Class H (180°C) or better			
Motor Lead Length	Up to 15,000 ft. for specific applications		Up to 1,000 ft.	Up to 100 ft.
Over-Load Rating	150% rated current for 1 minute per hour		200% rated current for 2 minutes per hour 150% rated current for 5 minutes per hour	200% rated current for 3 minutes per hour
Ambient Temperature	Open: -30°C (-22°F) to 50°C (122°F) Enclosed: -30°C (-22°F) to 40°C (104°F)		-40°C (-40°F) to 40°C (104°F)	
Maximum humidity	95%, non-condensing			
Operating Altitude	Up to 2,000 m (6,600 ft.) without derating			
Agency Approvals	cULus Listed			
Enclosure Options	Open, UL Type 1	Open, UL Type 1/3R	Open, UL Type 1, UL Type 3R Open, UL Type 1, UL Type 3R	
Warranty	One year of useful service, not to exceed 18 months from date of shipment.			For the life of the drive with which the reactor is installed

APPLICABLE ACROSS INDUSTRIES:



**HVAC compressors
& blowers**



**HVAC/R chiller
systems**



**Water/wastewater
pump systems**



Irrigation pumps



**Oil & gas
applications**