

Superior dV/dT Protection for Motors



UTILITY



KDR



DRIVE



V1k



MOTOR

V1000

KLC-Series Motor Protection Filters



- **High Performance**
 - Limit Peak Voltage
 - Increase Voltage Rise Time
- **Reduced Filter Size**
 - Smaller Mechanical Layout
- **Common Mode Current Reduction of at least 30%**
 - Reduce Bearing Pitting and Fluting
- **Manufacturer's Warranty**
 - V1000 Output Filters are warranted against Manufacturer's defect for one year from the date of original purchase
- **Performance Guarantee**
- **Specific Applications can reach 3000 feet**
 - (individual results may vary)
- **UL and CUL Listed**
- **Single Motor or Multiple Motor Capable**
- **Efficiency is greater than 98%**
- **SCCR available**

Exceptional Motor and Cable Protection in a Compact Design

The next installment of the KLC-Series Filter provides excellent protection in a user-friendly package. This compact design has been developed with space sensitive applications in mind. The V1000 greatly reduces motor failures on VFD applications by limiting the magnitude of voltage spikes to levels below 1000 volts and slows down the rate of change of PWM switching by a factor of three. The V1000 has demonstrated success in protecting the cable and motor insulation by reducing the damaging effects of reflected wave.

Common Mode currents, which can lead to bearing pitting and fluting, are typically reduced by 30%. Extensive testing has demonstrated that TCI's V1000 filter is effective at reducing Common Mode currents, without costly machine modifications.

Designed to be installed within ten feet of the drive output terminals, V1000 Filters are easily accessible for both installation and maintenance. The superior performance

increases process uptime and motor life. The V1000 provides the outstanding performance that our customers have come to expect from the KLC-Series Output Filters.

Unsuppressed dV/dT and Reflected Wave causes Motor failures

Peak Voltages on a 480V system can reach 1200 to 1600 V, causing rapid breakdown of motor insulation, leading to motor failure. On 600 V systems, the peak voltages can easily reach 2100 V. If this is left uncontrolled, insulation failure may occur. The same peak voltages that damage the motor can also damage the cable. Since the V1000 filters are designed to be placed at the output of the Drive, these units will also protect the cable runs.

Simplicity, reliability and efficiency

175, Jules-Léger, Boucherville, QC Canada J4B 7K8

phone: 1 866 540-0412 fax: 1 866 499-9115 www.transfabtms.com

transfab
TMS

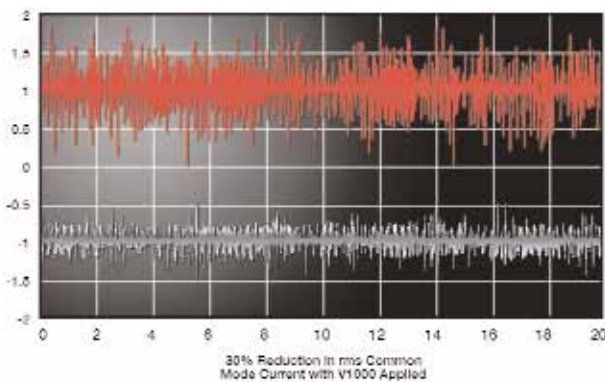
V1k KLC-Series Motor Protection Filters

Characteristics

Current Rating:	2 - 750 Amps
Inverter Carrier Frequency:	Minimum - 900 Hz, Maximum - 8 kHz
Fundamental Frequency:	0 - 60 Hz (above 60 Hz subject to application review)
Efficiency:	> 98%
Insulation Rating:	600V Class
Insulation Class:	Class H (180° C) or Class R (220° C)
Ambient Temperature:	40° C
Altitude (Maximum):	1,000 m (3,000 ft) Derating necessary above 1,000 meters
Agency Approvals:	CUL, UL
Enclosures:	Open, UL Type 1
Lead Length:	Specific applications can reach 3,000 feet (individual results may vary)

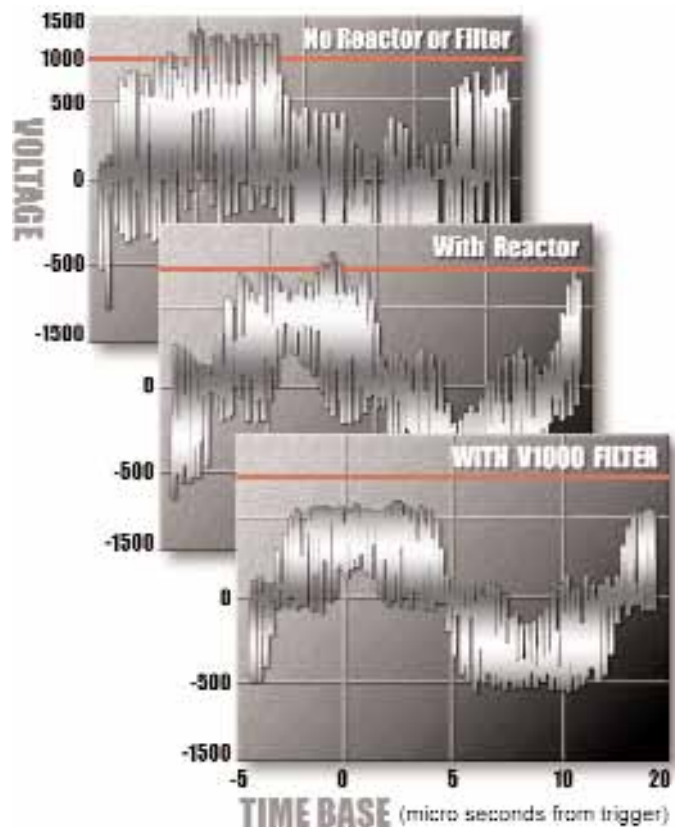
Common Mode Motor Bearing Current

Common mode voltage occurs when the voltages on the three output lines of a drive do not sum "instantaneously" to zero. The V1000 slows the rate of change of PWM switching as seen by the load, resulting in increased capacitive coupling impedance between bearings and bearing races. This increased impedance reduces bearing pitting and fluting caused by common mode currents. The protection of bearings ensures increased motor life and process up-time.



Carrier Frequency 8khz

500 Feet of Cable



© 2008 Transfab TMS
Effective 03/30/06

Printed in Canada

Part Number: 25306

Revision B

Simplicity, reliability and efficiency