

CAPGuard KTR

Three Phase Tuning Reactor



PRODUCT SPECIFICATIONS

- λ 3 Phase, 600V Class
- λ Gapped Iron Core Inductor
- λ Copper Windings
- λ 40°C Ambient Temperature / 155°C Maximum Operating Temperature
- λ Available in NEMA 1 Enclosure
- λ Current Sense Windings for External Monitoring of Power Factor Bank.

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Applications

CAPGuard KTR tuning reactors are designed to be used in conjunction with power factor correction capacitors whenever nonlinear loads are present. Tuning reactors can be installed with existing power factor correction banks or as part of a new installation. Typical applications include any facility that applies power factor correction capacitors to avoid penalty or to allow for more efficient energy consumption.

Before CAPGuard KTR

Since all distribution systems contain some amount of parasitic inductance, the addition of power factor correction capacitors creates a parallel resonant tank circuit. The frequency of resonance is a function of the amount of inductance and capacitance in that system. When nonlinear loads are present, the harmonic frequencies generated by these loads may force the tank circuit into uncontrolled resonance. (Resonance occurs when the system resonant frequency is too close to one of the nonlinear load harmonic frequencies.) This can cause failure of either capacitor protection fuses, of the capacitors themselves, or of both.

After CAPGuard KTR

CAPGuard KTR tuning reactors prevent uncontrolled system resonance by force-tuning the capacitors to a harmless resonant frequency. In an application where a high percentage of the connected load is three phase adjustable speed drives, high amounts of the 5th, 7th, 11th, and 13th harmonics will be present. CAPGuard KTR tuning reactors are designed to offer an inductance which will tune existing capacitors well below these frequencies, preventing resonance and, therefore, fuse or capacitor failure.



Application Notes and Codes

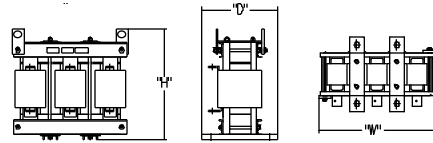
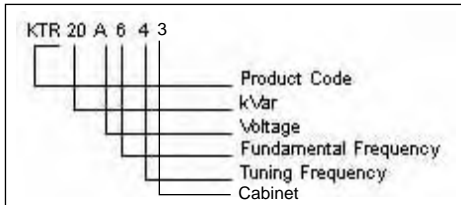
KTR tuning reactors are applied in increments of kVar. Other parameters are voltage, fundamental frequency and tuning frequency. Products listed in the following table are suitable for installations requiring 4th harmonic tuning of a 480V, 60Hz

system. For other voltages and frequencies, consult TCI.

KTR Warranty: 5 years from date of purchase.

The information contained in this brochure is subject to change without notice.

Part Number Code



Tables

480V, 240Hz KTR

Part Number*	Termination kVar	Connection		Fundamental Frequency (Hz)	Tuned Frequency (Hz)	Dimensions (in.)		
		Type	Type			Height	Width	Depth
KTR10A64(2)	10	TB	4-18AWG	60	240	5.6	7	4
KTR15A64(2)	15	TB	4-18AWG	60	240	7	8.75	4.25
KTR20A64(3)	20	TB	4-18AWG	60	240	8.5	10	4.75
KTR25A64(3)	25	TB	4-18AWG	60	240	8.5	10	4.75
KTR30A64(3)	30	TB	4-18AWG	60	240	8.5	10	5.75
KTR40A64(3)	40	TB	4-18AWG	60	240	8.5	10	5.75
KTR50A64(3)	50	BUSBAR	.28" Hole	60	240	8.5	10	5.75
KTR60A64(4)	60	BUSBAR	.28" Hole	60	240	12.4	13.5	9
KTR80A64(4)	80	BUSBAR	.28" Hole	60	240	12.4	13.5	9
KTR100A64(4)	100	BUSBAR	.28" Hole	60	240	12.4	13.5	10.25
KTR120A64(4)	120	BUSBAR	.28" Hole	60	240	12.4	13.5	10.25
KTR150A64(5)	150	BUSBAR	.56" Hole	60	240	17.25	17	10.25
KTR200A64(5)	200	BUSBAR	.56" Hole	60	240	17.25	17	10.25

* Numbers in parenthesis indicate NEMA 1 cabinet size for the enclosed KTR option. This number should be added to the end of the standard KTR part number when ordering an enclosed KTR. The NEMA 1 enclosures used for KTR are the same enclosures that are used with the TCI KLR product line.

KTR Enclosures

Part Number†	Dimensions (in.)		
	Height	Width	Depth
KLR-CAB 1	8	8	6
KLR-CAB 2	12	12	6
KLR-CAB 3	16	16	16
KLR-CAB 4	19	18	16
KLR-CAB 5	30	24	24

† Use this part number when ordering NEMA 1 cabinet as a separate item.

