



*"The Right Control  
for your Application"*

KB ELECTRONICS, INC.

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**SUBJECT: KBTC – DC DRIVES For TORQUE LIMITING**

The KBTC DC Drives are designed to control a motor's torque, by limiting motor current. Unlike a traditional DC Drive, which controls voltage and limits current, the main potentiometer of the KBTC sets the current limit. Also, motor current will not vary over the speed range. If the load is less than the current set-point, the KBTC goes to max voltage.

Typical applications include winders, and tension rolls in web processing lines such as found in paper, textile, blown film and coating industries. The KBTC DC Torque Drive is used in tension control applications with dancers and load cells, receiving a reference from equipment such as that produced by Mag Power. The KBTC DC Torque Drive is for single direction operation only, where the motor is driving the load. For regenerative or reversing applications, use our KBRG DC Regenerative Drive family in one of the two available torque modes.

There are two models of the KBTC torque limiting DC Drive. Both are rated for a maximum output current of 10 amps (8 amps max without an auxiliary heat sink). The KBTC-125 model operates from 115 VAC, and drives up to a 1 HP, 90-130 volt DC motor. The KBTC-225 model operates from a 230 VAC, and drives up to a 2 HP, 180 volt DC motor. Both of these drives are modified versions of the KBIC DC Drive, with identical mounting and physical dimensions. The KBTC connections are the same as a KBIC. It can use the same accessories, such as the Barrier Terminal Board and Barrier Terminal Kit. An SI-5 signal isolator can also be used to allow a remote voltage or milliamp current signal to set motor torque. The drive utilizes a fixed value of Plug-in Horsepower Resistor (0.015 ohm) for all motor sizes.

There is only one trimpot on the drive. The MAX trimpot will allow the customer to set the maximum available current (0-100% of 10 amps) to accommodate smaller motors. The inhibit and auto inhibit circuits work the same way as the KBIC, and each drive includes a fixed acceleration capacitor to control the rate of rise of current in the motor when first turned on.

The KBTC-125 model is KB part# 9100. The KBTC-225 model is KB part# 9101. If you require any additional information, please feel free to contact us.

Sincerely,

Richard Fritts  
National Sales Manager