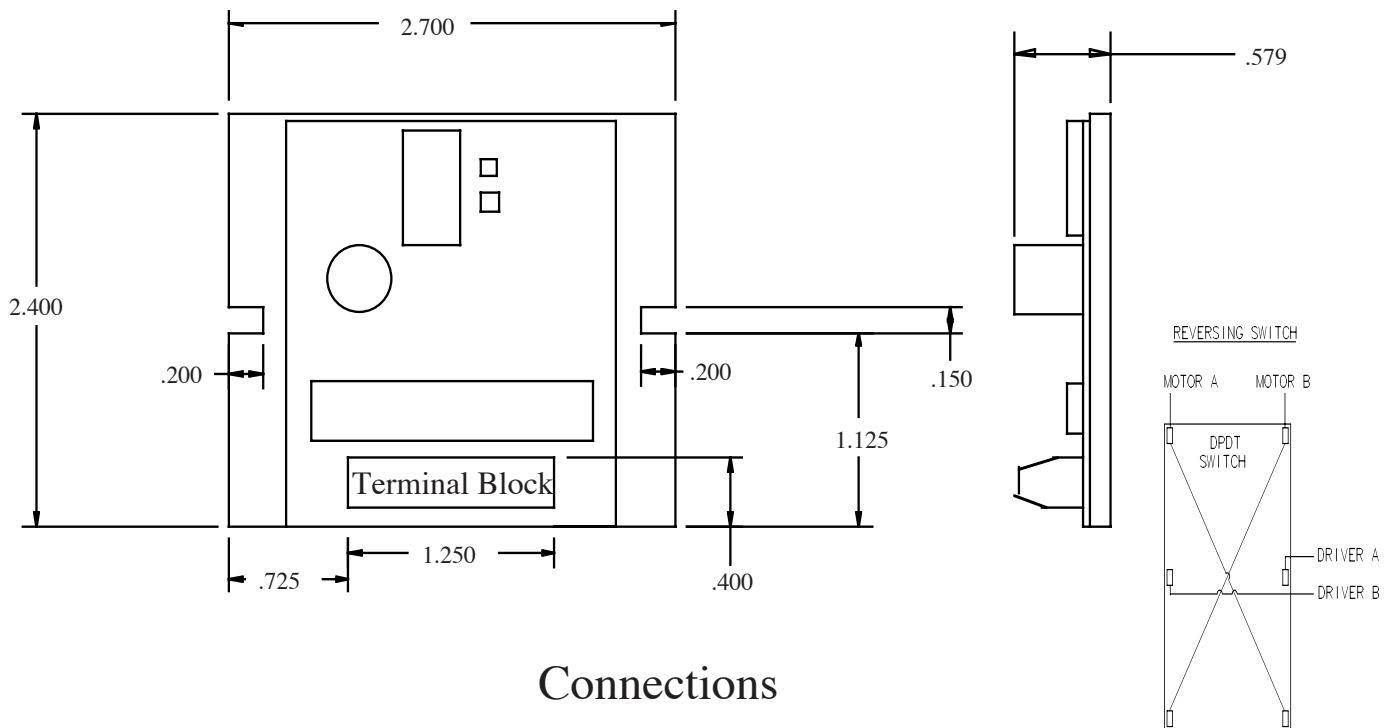
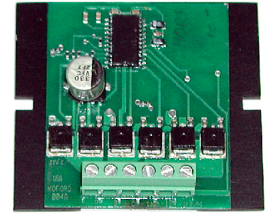


Provides high efficiency commutation to any three phase DC motor with any number of poles. Does not require motor to have a center tap. Sensorless commutation requires only three wires between the motor and drive reducing wiring and reducing cost. They are also very efficient eliminating the power consumption resulting from the use of hall sensors. Operating voltage range is 4 to 18 volts. Motor speed varies directly with input voltage. There is no speed control or current limit function provided by the drive. Rather these are supplied by the power source to the drive if required. This unit provides exceptional efficiency with an controller current draw of only .006 amps at any voltage. Controller resistance is approximately .025Ω. Continuous current is 10 amps, however brief excursions (0.1 seconds or less) up to 15 amps can be tolerated. The power source for the controller should have current limiting if the possibility exists that the motor could draw more than 15 amps in the application. This may be in the form of a three terminal linear regulator, or the built in current limit of a switching power supply. If the motor is run from rechargeable batteries often they will have sufficient series resistance to prevent excessive current. This drive is capable of operating up to 270,000 rpm with a two pole slotless motor such as the Koford 22S series of motors. The direction of motor rotation can be reversed by switching any two of the motor leads. In applications such medical/dental handpieces where it is desired that the motor be capable of running in both directions, this can be accomplished through the use of a DPDT switch. Preferably the type with a center off position should be used to prevent excessive reversing currents and voltages which might result from reversing direction at full motor speed. Sensorless drives provide excellent results for handpieces, pumps blowers, scanners etc. They are not suitable for heavy inertial loads for applications such as flywheel energy storage or centrifuges etc. A tach output is supplied in the form of a 6 pulse per revolution square wave alternating between ground and the input voltage. The measured tach frequency x 20/poles equals rpm, for example a 2 pole motor at 1,000 hz is running at 10,000 rpm.



Connections

Phase A Phase B Phase C Tach V+ 18V max Ground

Ordering information:

mail@koford.com • phone 937-695-1275 • fax 937-695-0237 • www.koford.com

Part number: S18V15A