

**OEM670 Torque & Step & Direction Drive Specifications**

Parameter	Value
<b>Power Input</b>	Voltage 24-75 VDC Current 0-12 amps
<b>Power Output-Motor</b>	Peak Current 12 A (approx 2 sec max duration at 45°C ambient temperature) Continuous Current 6A Voltage 90 VDC max Peak Power 840 W (1.1 hp) @ 75 V supply voltage Continuous Power 420 W (0.56 hp) Switching Frequency 20 kHz Bandwidth 2 kHz typical (dependent on motor) Transconductance 1 volt = 1.2 amp Commutation 120° hall effect sensors for six-state commutation method or brushed DC motor Short-Circuit Protected Yes
<b>Power Output-Hall Effect Sensors</b>	Voltage +5 VDC ±0.5 VDC Current 50 mA max Short-Circuit Protected No
<b>Power Output-to Controller Output Stage on OEM670T</b>	Voltage +15 VDC ±1.5 VDC; -15 VDC ± 1.5 VDC Current 10 mA max Short-Circuit Protected No
<b>Power Output-to Encoder on OEM670SD</b>	Voltage +5 VDC Current 200 mA max, each output Short-Circuit Protected No
<b>Control Inputs-OEM670T</b>	Command Input -10 V to +10 V analog voltage; 1 volt input = 1.2 amp output Enable Input Active LOW: 0-0.8 V @ 2 mA; when disabled: internal 2.49 kΩ pull-up resistor to +5 VDC
<b>Control Inputs-OEM670SD</b>	Step +/Step - 5 V max input; Input current: 12 mA max, 6.3 mA min Direction +/Direction - 5 V max input; Input current: 12 mA max, 6.3 mA min; Pos input = Clockwise rotation
<b>Hall Inputs</b>	Low State 0-0.8 V High State Internal 1 kΩ pull-up resistor to +5 V Input Frequency 0-2 kHz max
<b>Signal Outputs-OEM670T</b>	Fault Output Active High: open collector output, max volts = 24 VDC; Inactive LOW: 0-0.4 VDC @ 0-20 mA Current Monitor -10 V to +10 V analog voltage; scale: 1 V corresponds to 1.2 A output; Output Impedance: 10 KΩ LEDs Green = power; Red = various fault conditions
<b>Signal Outputs-OEM670SD</b>	Fault Output-Isolated 50 V max voltage; 10mA max current Fault Output-non-isolated 24 V max voltage; 20 mA max current Velocity Monitor 1 V per 10kHz pre-quad encoder frequency Current Monitor 1 V output per 1.2A motor current; Output Impedance: 10 KΩ LEDs Green = power; Red = various fault conditions
<b>Protective Circuits</b>	Short Circuit Turns off outputs to motor; latched Overtemperature 55°C ±5°C trip temperature; latched Overvoltage 95 V ±5 V trip voltage; latched Undervoltage 21.5 V max; not latched Current Foldback Configurable with 3 resistors Position Error (OEM670SD) 2,047-16,383 post-quad encoder counts
<b>Motor Characteristics</b>	Minimum Inductance 50 μH (micro Henrys) Minimum Resistance 0.25 Ω Loop Gain Adjustment Configurable with one resistor Motor Type Compumotor recommends the OEM670 Series with NeoMetric and J Series (slotted) motors and the OEM675 Series with SM Series (slotless) motors.
<b>Environmental</b>	Minimum Temperature 0°C (32°F) Max Temperature 45°C (113°F) Max Heatplate Temperature 45°C (113°F) Package Dissipation Heatplate: 0-30 W, depending on motor current; PP = (I <sub>AVG</sub> /12 A) 30 W; Cover: 3 watts max
<b>Physical</b>	Power Connector 10-pin screw terminal: 14 awg max wire size Input/Output Connector 25-pin D connector Approx Dimensions 5" x 1.6" x 3.5" (127 x 41 x 90) Weight OEM670T: 12 oz; OEM670SD: 14 oz

Drives & Drive/Controllers