

48QDM15

BRUSHLESS DC MOTOR DRIVER

Features		
Change parameters via the debug software PC through USB interface		
Current and speed double closed loop design, high torque at low speed, smooth operation		
High torque high speed output, the maximum speed reaches 10000rpm/min(depend on speed of motor)		
Speed regulation: 0-5V analog and 10Hz-300Hz PWM speed control, user-friendly		
With EN(enable), FG(speed pulse output), DIR(direction) signal input terminal		
Output alarm signal for user detection		
With protection function of over current, fan control, hall sensor phase error and motor block		
Electrical Characteristics		
Power supply	DC24V~48V (capacity according to motor power selection)	
Input Max current	≤15A(depend on motor and rated load)	
Input Max power	Max 720W	
Insulation resistance	>500M Ω at normal temperature	
Insulation strength	0.5KV, 1min at normal temperatures and pressures	
Working Environment		
Cooling	natural cooling or forced air cooling	
Working environment	Situation	avoid dust, oil mist and corrosive gases
	Temperature	0℃ ~ +50℃
	Humidity	< 80% RH, no condensation, no frost
	Vibration	<0.5G(4.9m/s ²) 10Hz-60Hz (non-continuous operation)
Storage temperature	-20℃ ~ +65℃	
Dimension	150x97.5x53mm	
Weight	≈0.55kg	



Instructions for the wiring port and indicator light		
Function	Mark	Description
Indicator light	POWER	Green indicator light, power on indicates normal power supply
	ALARM	Red light, slow flash-waiting, quick flash-operating and changing with motor speed, constant light-error
RS232 communication port	TTL	Display speed by connecting speed display board. Set drive parameters by connecting computer. See the debugging software instructions
Control	+5V1	Control signal power supply positive(Built-in power output)
	VSP	External speed control signal, 0-100% of the motor speed adjustment through external potentiometer
	X1	Reserved function terminal
	FG	Motor speed pulse output, motor actual speed can be converted by measuring the frequency of this signal
	DIR	Motor CW/ CCW rotation control ,CW when not connecting GND1 and CCW connecting GND1, cut off the power when CW and CCW switching
	EN	Enable control, motor running (on-line) connecting GND1 and stops(off-line) when not connecting GND1
	ALM	Alarm output, when the circuit is in alarm state, the output low (OC gate output)
	GND1	Control signal power ground
Hall	+5V2	Hall power supply positive
	HU	Hall sensor signal U phase input
	HV	Hall sensor signal V phase input
	HW	Hall sensor signal W phase input
	GND2	HALL power ground
Motor and power	U,V,W	motor three-phase output signals, connect the motor windings
	GND,V+	DC24V~48V power supply input

