

Torque Motor

Overview, Motor Performance Table

Introduction to Operation of Torque Motor

The torque motor machine is used in some special occasions so that the static torque can be maintained during operation, which means the stalling won't damage the motor. The torque motor uses small braking current and adopts forced air cooling structure to meet the needs of both short and long-term stalling. It has very soft mechanical characteristics. When the load increases, the speed of the motor decreases, the output torque increases, and the output torque is proportional to the square of the voltage. Therefore, on a device with constant load, as long as the input voltage is changed by the voltage regulator, any speed can be achieved. Due to its high resistance and large starting torque, it can be used in the towing systems with high resistance moments. Its stalling and reversal features also make it possible for it to be used in all kinds of machineries with frequent forward and reverse rotation actions.

Motor Performance Table

Motor model		Rated time	Voltage (V)	Frequency (Hz)	Starting torque (g.cm)	Current (A)	Maximum output (W)	Speed (rpm)	Capacity (μF)
Round shaft	Helical shaft								
2TK3A-A	2TK3GN-A	5Min Cont	110 60	50	510 310	0.30 0.18	3.2 1.4	750	4.0/250
		5Min Cont	110 60	60	510 310	0.47 0.30	3.2 1.4	900	3.0/250
3TK6A-A	3TK6GN-A	5Min Cont	110 60	50	1340 380	0.34 0.22	6.0 2.5	750	6.0/250
		5Min Cont	110 60	60	1340 380	0.34 0.20	6.5 3.0	900	5.0/250
4TK10A-A	4TK10GN-A	5Min Cont	110 60	50	2970 850	0.55 0.40	10.0 3.0	750	10.0/250
		5Min Cont	110 60	60	2970 850	0.53 0.48	10.0 3.0	900	8.0/250
5TK20A-A	5TK20GN-A	5Min Cont	110 60	50	4260 1390	1.09 0.57	20.0 6.0	750	15.0/250
		5Min Cont	110 60	60	4260 1390	0.90 0.55	20.0 6.0	900	12.0/250
5TK40A-A	5TK40GN-A	5Min Cont	110 60	50	7160 2140	1.15 0.72	40.0 10.0	750	20.0/250
		5Min Cont	110 60	60	7160 2140	1.05 0.82	40.0 10.0	900	20.0/250
6TK50A-A	6TK50GN-A	5Min Cont	110 60	50	7960 2450	1.26 0.90	50.0 15.0	750	20.0/250
		5Min Cont	110 60	60	7960 2450	1.26 0.90	50.0 15.0	900	20.0/250
2TK3A-A	2TK3GN-A	5Min Cont	220 120	50	510 310	0.15 0.12	3.2 1.4	750	1.2/500
		5Min Cont	220 120	60	510 310	0.15 0.12	3.2 1.4	900	1.2/500
3TK6A-A	3TK6GN-A	5Min Cont	220 120	50	1340 380	0.17 0.16	6.0 2.5	750	1.5/500
		5Min Cont	220 120	60	1340 380	0.17 0.16	6.5 3.0	900	1.5/500
4TK10A-A	4TK10GN-A	5Min Cont	220 120	50	2970 850	0.23 0.15	10.0 3.0	750	2.0/500
		5Min Cont	220 120	60	2970 850	0.25 0.18	10.0 3.0	900	2.0/500
5TK20A-A	5TK20GN-A	5Min Cont	220 120	50	4260 1390	0.45 0.28	20.0 6.0	750	4.0/500
		5Min Cont	220 120	60	4260 1390	0.46 0.30	20.0 6.0	900	4.0/500
5TK40A-A	5TK40GN-A	5Min Cont	220 120	50	7160 2140	0.95 0.44	40.0 10.0	750	6.0/500
		5Min Cont	220 120	60	7160 2140	0.90 0.50	40.0 10.0	900	6.0/500
6TK50A-A	6TK50GN-A	5Min Cont	220 120	50	7960 2450	0.98 0.46	50.0 15.0	750	8.0/500
		5Min Cont	220 120	60	7160 2450	0.90 0.56	50.0 15.0	900	8.0/500

Wiring diagram

1. Adjusting the voltage of the regulator or the voltage of the controlled power supply may change the motor torque, and when equipped with matching gearbox, it can meet with required criteria.
2. The torque motor generates a large amount of heat during operation, which may make the casing temperature rise over 75°C, and therefore, it needs to be installed at places with good heat dissipation and good ventilation.

