

Mercury specifications

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v.1

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1. Specifications table

Description	Value
Dimensions	T30: 64mm (W) x 64mm (D) x 68mm (H) T50: 64mm (W) x 64mm (D) x 71mm (H) T65: 64mm (W) x 64mm (D) x 77mm (H)
Weight	T30: 500g T50: 540g T65: 570g
Reduction mechanism	Harmonic drive output stage. Motor coupling via single-stage involute gear drive.
Reduction ratio	120:1
Total backlash	< 5 arcminutes
Input voltage	15→24V DC
Maximum current (limited internally)	3A
Standby current	6mA
Motor type	Brushless DC, 16 pole, 3 phase
Maximum stall torque	T30: 18 Nm T50: 30 Nm T65: 40 Nm
Rated torque	T30: 6 Nm T50: 10 Nm T65: 15 Nm
Maximum rpm	T30: 42 rpm T50: 44 rpm T65: 40 rpm
Resolution	0.088°
Maximum operating angle (non-continuous mode)	8640°
Temperature	10→55°
Communications mechanism	Half duplex asynchronous serial (TTL)
Maximum baud rate	1 Mbps
Servo ID range	0→253 (254 for broadcast)
Measured quantities	Position, angular velocity, acceleration, torque, temperature, voltage, current...

Control algorithms	Position PID, velocity PI, Feedforward, trapezoidal velocity profile, torque mode, dead zone, home calibration...
Electrical connections	2 x 3-way XH series headers (connected in parallel)