Mercury specifications

February
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v.1

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1. Specifications table

Description	Value
Dimensions	Crossed roller bearing OD: 70mm Flange OD: 93mm Body OD: 70mm Total length: ● M30: 77.5mm ● M50: 81.1mm ● M65: 86.5mm
Weight	● M30: 890g ● T50: 930g ● T65: 960g
Reduction mechanism	Strain wave gear output stage. Motor coupling via single-stage involute gear drive.
Total reduction ratio	198.3:1
Total backlash	< 5 arcminutes
Input voltage	15→24V DC (24V recommended)
Maximum current (limited internally)	3A
Standby current	6mA
Motor type	Brushless DC, 16 pole, 3 phase
Maximum stall torque	● M30: 18 Nm ● M50: 30 Nm ● M65: 40 Nm
Rated torque	● M30: 6 Nm ● M50: 10 Nm ● M65: 15 Nm
Maximum rpm	19.1 rpm
Resolution	0.088°
Maximum operating angle (non-continuous mode)	-92160°→+92160°
Temperature	10→55°
Communications mechanism	Half duplex asynchronous serial (TTL)
Maximum baud rate	1 Mbps

Servo ID range	0→252 (254 for broadcast ID)
Measured quantities	Position, angular velocity, acceleration, torque, temperature, voltage, current...
Control algorithms	Position P, velocity PI, Current PI, Feedforward, trapezoidal velocity profile, torque mode, dead zone, home calibration...
Electrical connections	2 x 3-way XH series headers (connected in parallel)