RM Rules + Constraints (check relevant sections on power, dimensional limits, and referee system)

Maximum Power Consumption	30 W
Maximum Power Supply Voltage	30 V
Maximum Weight	15 kg *Includes battery weight, but not weight of Referee System
Maximum Size (mm, LWH)	either: 1. 500 by 600 by 850 2. 850 by 500 by 600 *Light Indicator Module and Positioning System Module and its mounting bracket are not included in size restriction. Other Referee System modules must be included *Maximum size of sentry below top surface of sentry rail is no more than 450 mm

Current Information

Current Total Size and Weight	204 mm (*42 mm waste) by 360.83 mm by 271.5 mm 2.34278 kg
Current Weight of Top Plate + Etc	1264.62 g

Motor Information

Characteristic Parameters

Refer to the parameters below to make proper use of your motor.

Motor specifications at rated voltage	
Maximum No-Load Speed	320 rpm
No-Load Current	78 mA
Rated Torque (max continuous torque)	1.2 N·m
Adjustable Speed Range	No-load: 0-320 rpm At rated torque: 0-132 rpm
Torque Pulsation Factor	3.32%
Locating Precision	0.05°
Rated Current	1.62 A
Max Efficiency	67.85%
Stall Torque (continuous)	0.86 N·m
Stall Current (continuous)	0.90 A

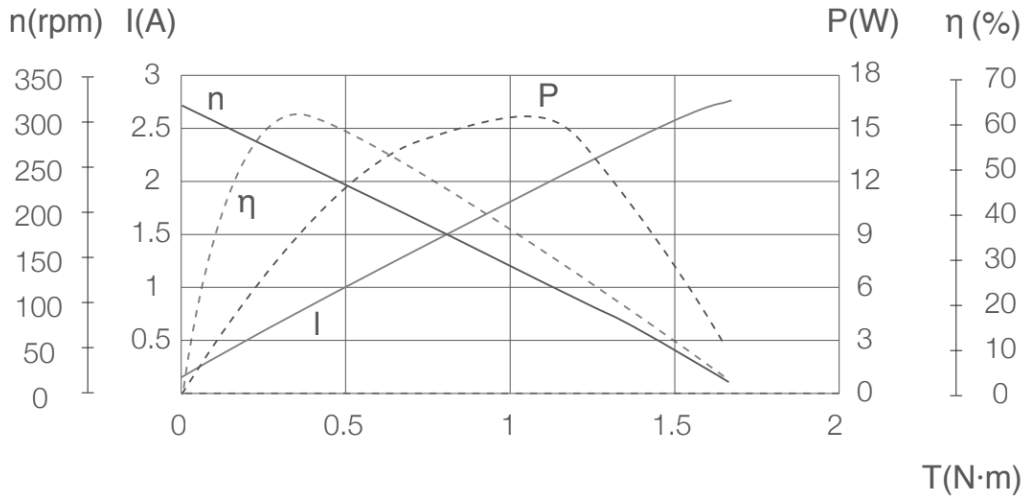
Motor Characteristic Parameters	
Rated Voltage	DC 24 V
Torque Constant	741 mN·m/A
Speed Constant	13.33 rpm/V
Speed/Torque Gradient	156 rpm/(N·m)
Mechanical Time Constant	3 ms
Phase Resistance	1.8 Ω
Phase Inductance	5.78 mH
Operating Temperature Range	32° to 131 ° F (0° to 55° C)
Max Permissible Winding Temperature	257° F (125° C)
Number of Pole Pairs	10
Phase Number	3
Maximum Radial Load of Bearing(dynamic load)	3.5 KN
Basic Static Radial Load of Bearing	2.2 KN
Motor weight	Approx. 468 g
Dimensions	Hallow shaft inner diameter: 18 mm Motor diameter: 66.7 mm Total height: 45 mm
Cable Lengths	XT30 power cable: 500 mm CAN cable: 500 mm PWM cable: 500 mm

η – Electrical Efficiency, T – Torque, I – Current, P – Output Power, n – Rotational Speed

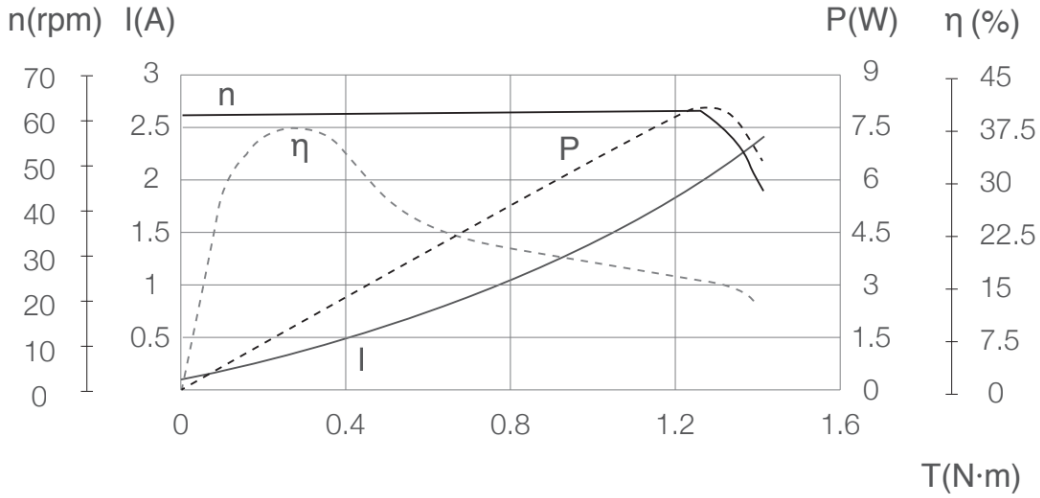
The data above was generated in a laboratory setting with an output of 24 V, at the temperature of 77° F (25° C), and under normal dissipation conditions. These figures should be used for reference only. Make sure to control running time properly in accordance with actual working temperature, dissipation, etc.

Performance

Load Characteristics (speed open-loop control)



Load Characteristics (speed closed-loop control)



Operating Range