



TSL-GIM3505-8

Integrated Joint Motor | 8:1 Planetary Gearbox

Rated Voltage	Rated Torque	Peak Torque	Gear Ratio
24 V	0.67 N.m	1.79 N.m	8:1

1. Electrical, Mechanical and Control Parameters

Parameter	Unit	Value
Rated Voltage	V	24
Model of Driver Board	-	GDZ34
Operating Voltage Range	V	12-40
Rated Power	W	37
Rated Torque	N.m	0.67
Peak Torque	N.m	1.79
Rated Speed after Reduction	RPM	230
Maximum Speed after Reduction	RPM	400
Rated Current	A	1.53
Peak Current	A	3.99
Phase Resistance	Ω	5.47
Phase Inductance	mH	0.48
Speed Constant	rpm/V	16.67
Torque Constant	N.m/A	0.44
Number of Pole Pairs	Pairs	11
Gear Ratio	-	8:1
Gearbox Type	-	Planetary

Parameter	Unit	Value
Gear Material	-	Aluminum
Gear Backlash	arcmin	15
Motor Weight (without driver)	g	84.0
Motor Weight (with integrated driver)	g	97.0
Motor Dimensions (without driver)	mm	Ø43 x 23.6
Motor Dimensions (with integrated driver)	mm	Ø43 x 28.8
Maximum Axial Load	N	75
Maximum Radial Load	N	300
Noise	dB	< 60
Communication Protocol	-	CAN & RS485
Secondary Encoder Support (output shaft)	-	No
Ingress Protection Rating	-	IP54
Operating Temperature Range	°C	-20 to +80
Onboard Encoder Resolution	bit	14
Stand-alone Encoder Support	-	Yes
Customizable Brake Support	-	Yes

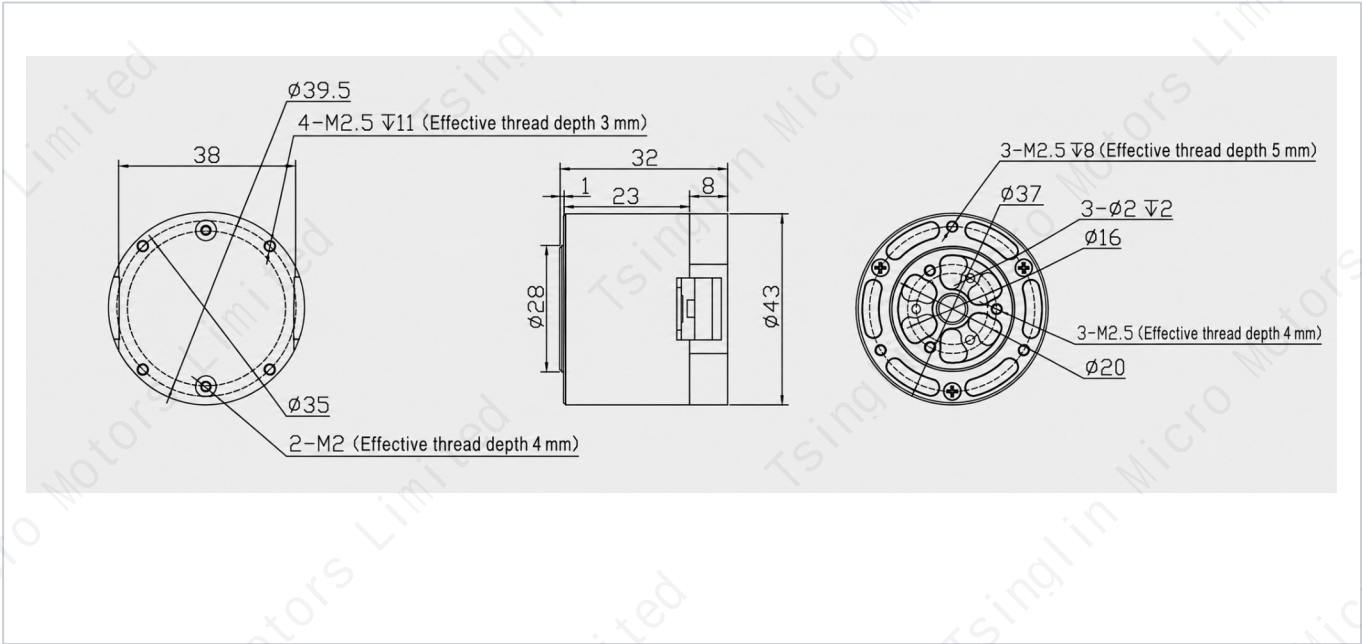
The above parameters are for reference only and can be customized according to customer requirements.

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2. Dimension Drawing

All dimensions are in millimeters unless otherwise specified.



Mechanical Item	Specification
Configuration	TSL-GIM3505-8 motor assembly
Housing Diameter	Ø43 mm
Reference Diameters	Ø20, Ø28, Ø35, Ø37 and Ø39.5 as shown
Threaded Interfaces	M2 and M2.5 threads; effective depths shown in drawing
Mounting Features	Ø2 holes and threaded mounting points as shown

Drawing: TSL-GIM3505-8 - Mechanical Interface

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3. Integrated Driver Configuration

Integrated control, communication and encoder configuration.



Integrated Feature	Specification
Driver Board	GDZ34
Operating Voltage Range	12-40 V
Communication Protocol	CAN & RS485
Onboard Encoder	14-bit resolution
Ingress Protection	IP54
Brake Support	Customizable

Configuration Comparison

Parameter	Without Driver	With Integrated Driver
Motor Dimensions	Ø43 x 23.6 mm	Ø43 x 28.8 mm
Motor Weight	84.0 g	97.0 g
Driver Board	-	GDZ34
Communication	-	CAN & RS485
Encoder Support	Stand-alone encoder: Yes	Onboard encoder: 14-bit
Secondary Encoder on Output Shaft	No	No

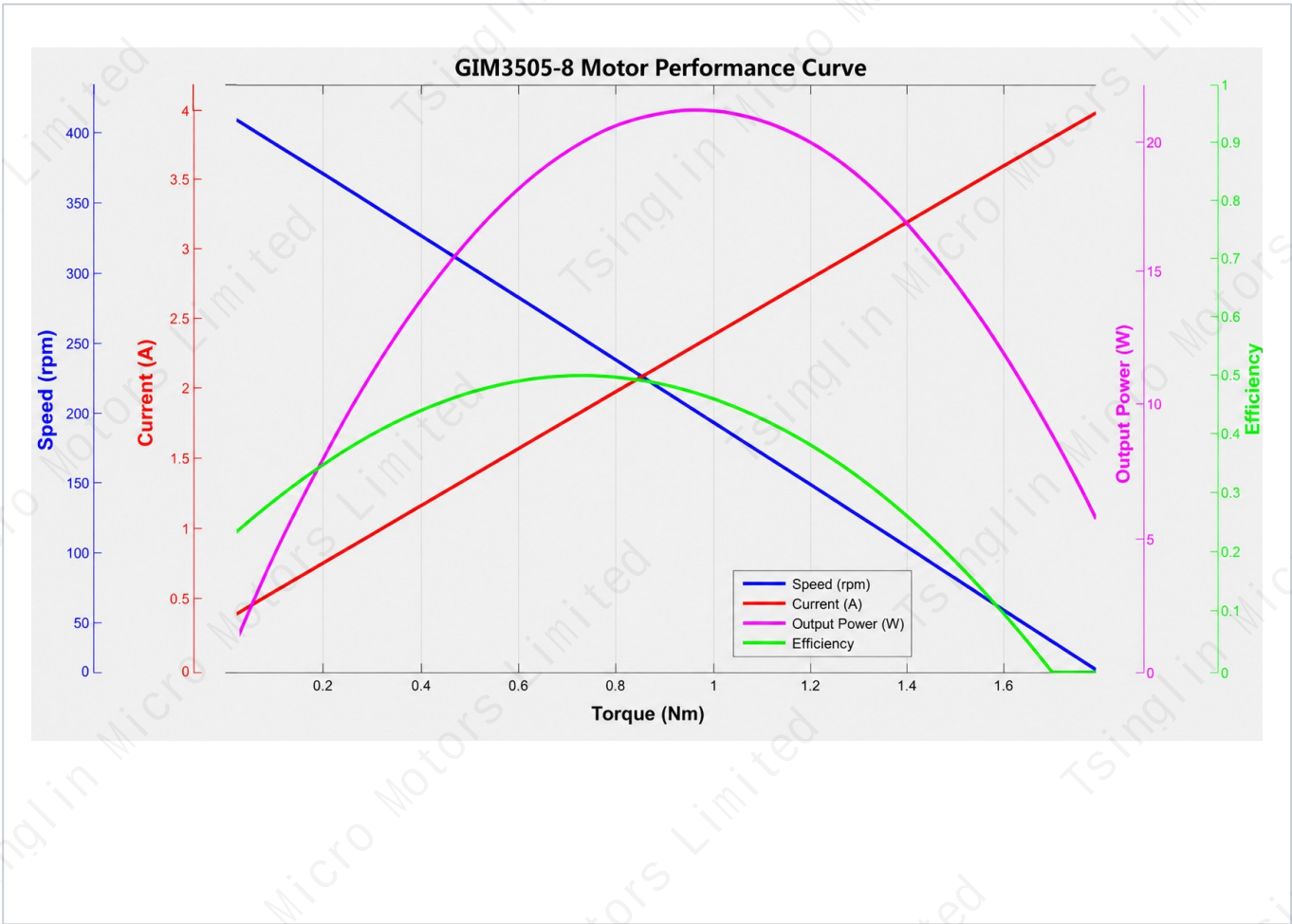
Integrated configuration shown for reference. Final connector and brake options can be customized.

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4. Motor Performance Curve

Speed, current, output power and efficiency versus output torque.



Reference Operating Points

Rated Torque	Rated Speed	Rated Current	Peak Torque	Peak Current
0.67 N.m	230 RPM	1.53 A	1.79 N.m	3.99 A

Performance curves are for reference only and may vary with operating conditions and customer-specific configurations.