SIGGEAR / ELECTROMECHANICAL TRANSMISSION

SG-2877

3 Nm Hub Gear Motor | 24 VDC | Planetary 9.75:1

PUBLIC CATALOGUE REFERENCE | Rev0.1 | 2026-11-19

DIAMETER	RATED TORQUE	RATED SPEED	RATIO
99 mm	**3 Nm**	**130 rpm ±10%**	**9.75:1**

Published specifications

Rated voltage	24 VDC	Housing diameter	99 mm
Rated motor power	45 W	Body thickness	64 +/-0.2 mm
Rated current	< 3 A	Published overall length	117 mm
No-load output speed	140 rpm ±10%	Source 2D overall	117 +/-0.5 mm
Rated output speed	130 rpm ±10%	Gear / housing	POM / PA66
Rated output torque	3 Nm	Mechanical backlash	< 1.5°
Momentary peak torque	10 Nm	Ingress protection	IP67
Reduction ratio	9.75:1	Weight	780 ± 20 g

Motor / controller reference

Standard feedback	Hall sensors, 120 deg	Phase inductance	0.75 +/-8% mH
Motor structure	18 slots / 20 poles	Full-range phase current	15 A max (catalogue)
Insulation	Class B	Rated bus-current limit	7.5 A max (catalogue)
Motor rated load	0.3 N.m	Locked-rotor current	< 8 A (catalogue)
Phase resistance	0.82 +/-8% mOhm (supplier label - verify unit)		

Standard: BLDC motor, planetary reduction and Hall feedback. External controller required unless explicitly included. No standard CANopen, RS485, integrated driver or full control kit is claimed.

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24 V factory-source test observations

Feature points copied from the supplied performance table. Ambient: 22.5-22.6 C (source screenshot). These are bench measurements, not permissible continuous duty points.

Feature point	Speed rpm	Torque N.m	Out W	U V	I A	In W	Eff.
No load	166.81	0.0000	0.000	24.019	0.3345	8.034	0.00%
Maximum efficiency	139.90	3.1068	45.511	23.980	2.5398	60.904	74.73%
Maximum output	82.741	10.589	91.745	23.981	7.4025	177.52	51.68%
Maximum torque (test)	48.589	14.214	72.318	23.981	10.404	249.51	28.98%

The test table may include loads above the published momentary peak-torque rating. Maximum torque in a test is NOT a safe rated or peak operating limit.

Mechanical reference / CAD status

Reference drawing	SG2877-3Nm / revision A
Drawing date	2025-07-04
Drawing outer diameter	99 +/-0.1 mm
Drawing overall length	117 +/-0.5 mm
3D exchange format	Parasolid text transmit .x_t (not STEP)
2D source release	Reference drawing only; not approved manufacturing tolerances
CAD release	Source geometry not validated for public integration

Source reconciliation and design-in

Public overall length 117 mm agrees with supplied Rev A 117 +/-0.5 mm drawing.

- Confirm version-matched pilot, shaft, housing envelope and mounting requirements with SigGear engineering.
- Choose controller, continuous duty, ambient temperature and protection method for final assembly. Peak torque is not the continuous rating.
- This PDF is a public reference. Do not substitute it for the original 2D drawing, factory-controlled tolerances or an approved Parasolid / STEP design release.

Engineering enquiries

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