

DC Planetary Gear Motor DSMP521

The planetary gear motor DSMP521 is a high-quality motor-gear combination with the following characteristics:

- Brushed DC motor (12 Vdc or 24 Vdc)
- Motor pinion made of milled metal
- Sun gears made of milled and heat-treated metal
- 1st gear stage made of plastic gear wheels (POM) for noise reduction
- 2nd to 4th gear stage made of sintered metal gear wheels
- Ball bearing and interference suppression filter
- Repeatability $\leq 3,0^\circ$
- Radial load 10 mm from flange ≤ 200 N
- Axial load ≤ 100 N
- Radial clearance $\leq 0,04$ mm
- Axial clearance $\leq 0,3$ mm
- Operating temperature: -10°C to $+60^\circ\text{C}$

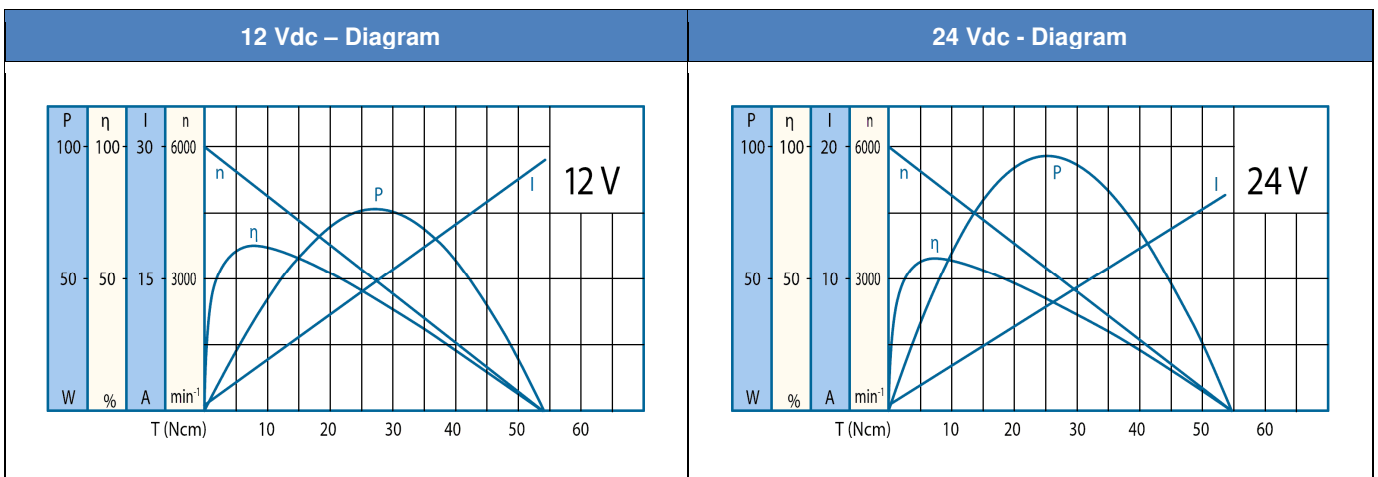
The planetary gear motor can be equipped with a 2-channel Hall sensor for positioning purposes.



Type code (all options can be combined)

DSMP521	-	12	-	0003	-	B	F	E
Type		Voltage		Gear reduction		Bearing	Filter	Optionally
		12 Vdc		i		Ball bearing		E: Hall sensor
		24 Vdc		3				
							
				676				

Motor specifications



Motor – additional technical specifications

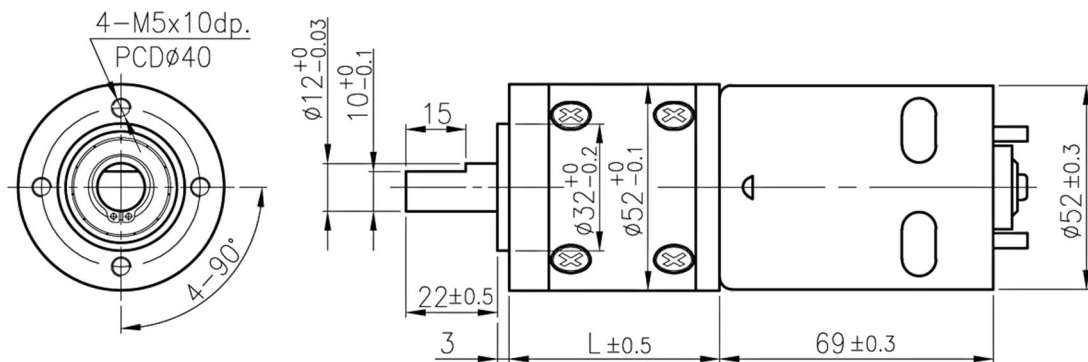
Voltage in Vdc	Rated torque in Ncm	Rated speed in U/min	Rated current in A	No-load speed in U/min	No-load current in mA	Rated output in W
12	7.5	5,150	≤ 5.8	6,000	$\leq 1,550$	39.8
24	8.0	4,983	≤ 3.6	6,000	≤ 600	41.7

Planetary gear motor – technical specifications

Gear stages		1				2				3						4					
Gear length L in mm		53.0				68.5				84.0						99.5					
Weight in g		955				1,140				1,330						1,500					
Gear reduction i		3	4	12	15	19	43	53	66	81	100	113	150	230	285	353	488	546	676		
12 Vdc	Rated torque in Nm	0.21	0.26	0.66	0.80	1.01	1.98	2.45	3.00	3.75	4.60	5.20	5.70	8.85	10	10	10	10	10		
	Rated speed in U/min	1470	1188	420	339	274	120	97	78	63	51	45	34	22	18	14.5	10.5	9.4	7.6		
24 Vdc	Rated torque in Nm	0.22	0.28	0.69	0.86	1.07	2.09	2.59	3.20	3.97	4.90	5.50	6.10	9.37	10	10	10	10	10		
	Rated speed in U/min	1423	1149	406	328	265	116	94	75	61	49	44	33	21.6	17.4	14	10	9	7.3		

Caution: The reductions are rounded down or rounded up. Please ask for the exact values, if you are interested!

Dimensioning



Option: 2-channel Hall sensor

Optionally, the gear motor can be equipped with a magnetic 2-channel Hall sensor. It provides two channels offset by 90°. The Hall sensor has a diameter of 54.0 mm and a depth of approx. 18.0 mm and accordingly lengthens the geared motor by this value.

Number of pulses per revolution	2 x 5 pulses	<p>Extra Resistor(1kΩ) required for signal.</p>	<p>Connector pin assignment:</p> <ul style="list-style-type: none"> 1 red : + Motor 2 black : - Motor 3 brown : Hall sensor Vcc 4 green : Hall sensor GND 5 blue : Hall sensor A 6 violet : Hall sensor B
Operating Voltage	3.5 - 20 Vdc		
Output current per channel	5 mA		
Temperature range	-10 to +60 °C		
Relative humidity of the air	20 - 80 % RH		

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