

DC Planetary Gear Motor DSMP320

The planetary gear motor DSMP320 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
- 1-stage: gear stage made of sintered metal gear wheels
- Multi-stage: 1st gear stage made of plastic gear wheels (POM)
2nd to 4th gear stage made of sintered metal gear wheels
- Ball bearing and interference suppression filter
- Repeatability $\leq 2,5^\circ$
- Radial load 10 mm from flange ≤ 35 N
- Axial load ≤ 25 N
- Radial clearance $\leq 0,05$ mm
- Axial clearance $\leq 0,3$ mm
- Operating temperature: -10°C to $+60^\circ\text{C}$

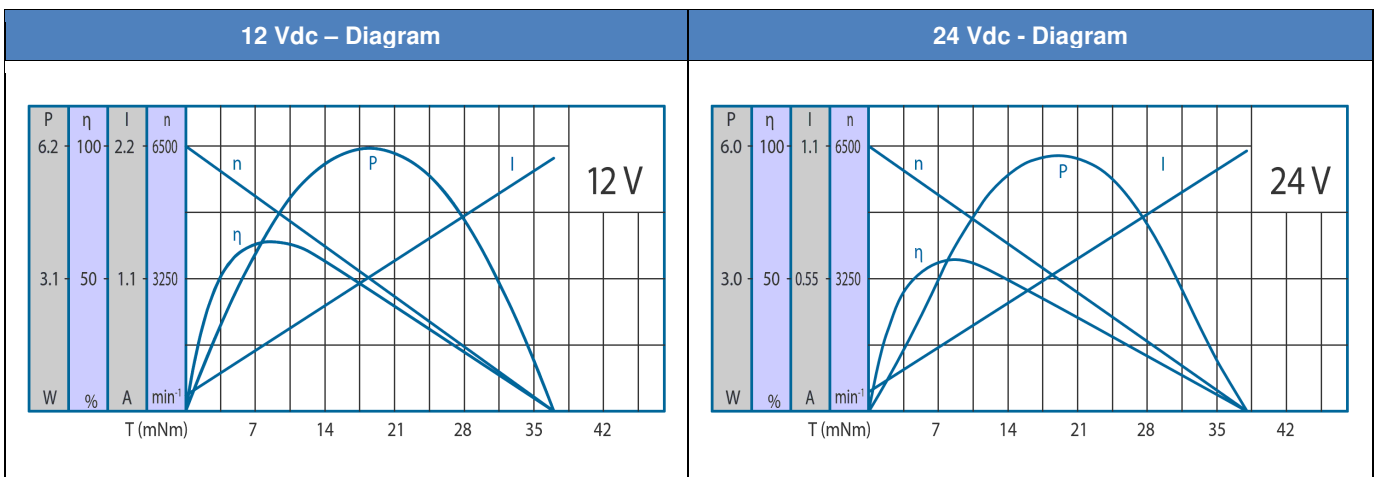
The planetary gear motor can be equipped with a 2-channel Hall sensor for positioning purposes.



Type code (all options can be combined)

DSMP320	-	12	-	0003	-	B	F	E
Type		Voltage		Gear reduction i		Bearing	Filter	Optionally
		12 Vdc 24 Vdc		5 939		Ball bearing		E: Hall sensor

Motor specifications



Motor – additional technical specifications

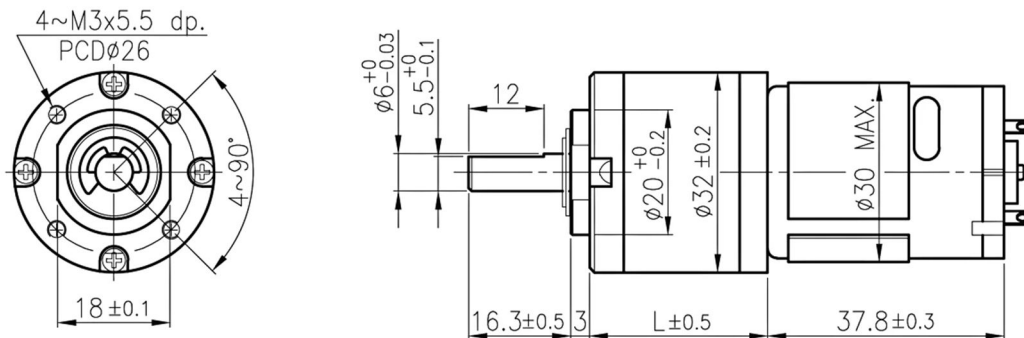
Voltage in Vdc	Rated torque in Ncm	Rated speed in U/min	Rated current in mA	No-load speed in U/min	No-load current in mA	Rated output in W
12	0.78	5,290	≤ 530	6,500	≤ 150	4.22
24	0.74	5,250	≤ 250	6,500	≤ 85	3.97

Planetary gear motor – technical specifications

Gear stages		1			2			3			4				
Gear length L in mm		20,6			27,0			33,4			39,8				
Weight in g		174			194			219			245				
Gear reduction i		5	14	19	27	35	51	71	100	139	189	264	516	721	939
12 Vdc	Rated torque in Nm	0,03	0,08	0,10	0,14	0,19	0,23	0,33	0,46	0,65	0,73	1,00	1,20	1,20	1,20
	Rated speed in U/min	995	373	270	195	150	104	74	53	38	28	20	11,2	8,3	6,3
24 Vdc	Rated torque in Nm	0,03	0,07	0,10	0,14	0,18	0,22	0,31	0,44	0,61	0,69	0,97	1,20	1,20	1,20
	Rated speed in U/min	990	370	265	191	150	103	74	53	38	28	20	11,2	8,3	6,3

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 32.2 mm and a depth of approx. 14.2 mm and accordingly lengthens the geared motor by this value.

Number of pulses per revolution	2 x 7 pulses		<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		

 MSW Motion Control GmbH	Drive System Europe by MSW® A trade mark of MSW Motion Control GmbH	
	MSW Motion Control GmbH Vertriebsgesellschaft Schloßstr. 32/34. 33824 Werther (Westf.) Germany	anfrage@msw-motion.de www.msw-motion.de Tel.: +49 (0)5203 919200