

DC Planetary Gear Motor DSMP220

The planetary gear motor DSMP220 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 helical bakelite for noise reduction
- All gear stages: Planetary gears made of metal (sintered or milled)
- Ball bearing and interference suppression filter
- Repeatability $\leq 3^\circ$
- Radial load 10 mm from flange ≤ 10 N
- Axial load ≤ 6 N
- Radial clearance ≤ 0.04 mm
- Axial clearance ≤ 0.2 mm
- Operating temperature: -10 °C bis $+60$ °C

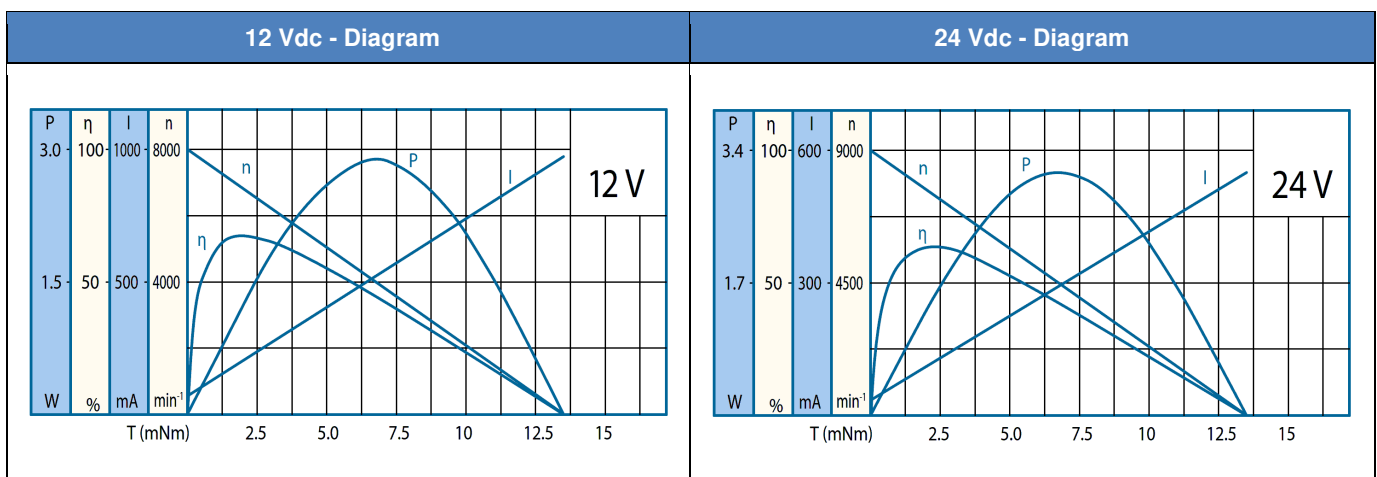
The planetary gear motor can be equipped with a 2-channel Hall sensor for positioning purposes.



Type code (all options can be combined)

DSMP220	-	12	-	0004	-	B	F	E
Type	Voltage	Gear reduction i		Bearing	Filter	Optionally		
	12 Vdc 24 Vdc	4 1998		Ball bearing	Varistor	E: Hall sensor Without cover		

Motor specifications



Motor – additional technical specifications

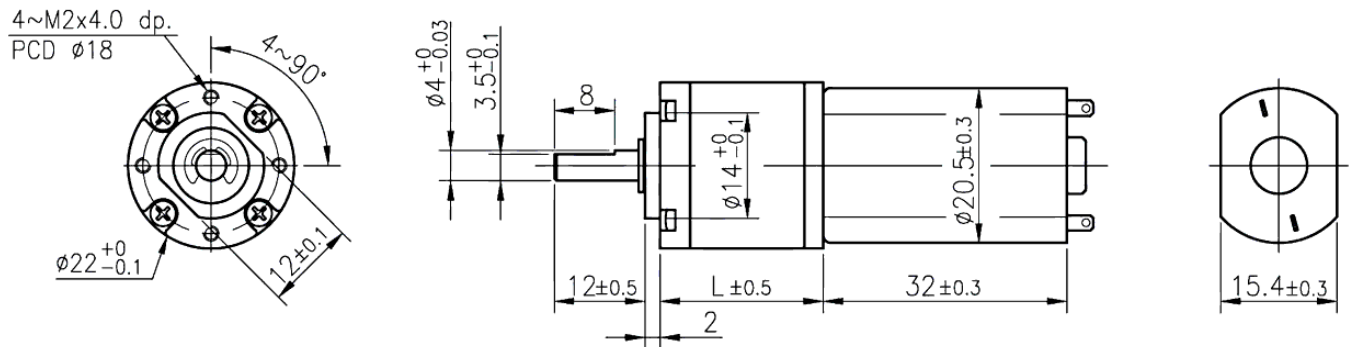
Voltage in Vdc	Rated torque in Ncm	Rated speed in U/min	Rated current in mA	No-load speed in U/min	No-load current in mA	Rated output in W
12	0.22	6,700	≤ 200	8,000	≤ 70	1.5
24	0.22	7,400	≤ 110	9,000	≤ 40	1.7

Planetary gear motor – technical specifications

Gear stages		1		2		3					4					5					
Gear length L in mm		14.4		18.05		21.7					25.35					29.0					
Weight in g		58		62		66					81					96					
Gear reduction i		4	14	16	19	53	62	72	84	104	198	231	270	316	370	455	742	1014	1249	1621	1996
12 Vdc	Rated torque in Ncm	0.77	2.15	2.50	2.95	6.95	8.10	9.50	11.0	13.7	21.0	25.0	25.0	25.0	25.0	30.0	30.0	30.0	30.0	30.0	
	Rated speed in U/min	1450	470	405	348	127	109	93	79	64	34	29	25	22	19	15.5	9.5	7.4	6.0	4.6	3.8
24 Vdc	Rated torque in Ncm	0.77	2.15	2.50	2.95	6.95	8.10	9.50	11.0	13.7	21.0	25.0	25.0	25.0	25.0	30.0	30.0	30.0	30.0	30.0	
	Rated speed in U/min	1600	518	450	384	140	120	103	88	71	37	32	28	23.5	21.0	17.5	10.5	8.0	6.6	5.0	4.2

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 20.3 mm and a depth of approx. 8.5 mm and accordingly lengthens the geared motor by this value. In this version the Hall sensor is without cover.

Number of pulses per revolution	2 x 3 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 – 85 % RH		

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