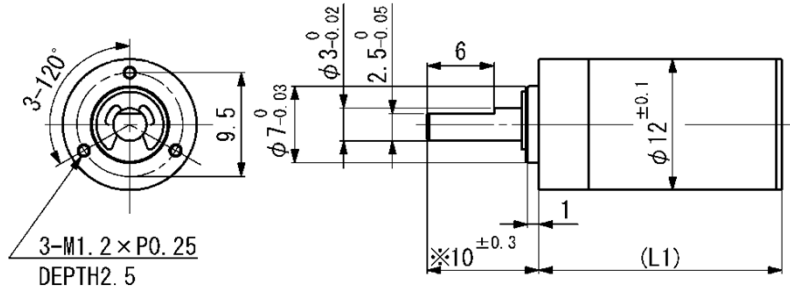


# SPG12

## Planetary gearhead



Dimension in

Note) Dimension marked ※ is measured with shaft pushed against gearhead.

General specifications	SPG12	
1 Housing material	Metal	
2 Geartrain material	Steel	
3 Recommended max. input speed	8000	rpm
4 Operation temperature range	-10...+60	°C
5 Backlash at no-load per stage	≤ 1	°
6 Bearings on output shaft	Sintered sleeve bearings	
7 Max. shaft radial load (7mm from flange)	4 (25)	N
8 Max. shaft axial load	2	N
9 Max. shaft press fit force	30	N
10 Shaft radial play	≤ 0.03	mm
11 Shaft axial play	≤ 0.3	mm
12 Max. allowable torque (Continuous)	100	mNm
13 Max. allowable torque (Intermittent)	200	mNm

General specifications	SPG12-	3.5	4.8	12	23	58	107	509	
14 Reduction ratio (absolute value)		3.50 : 1	4.80 : 1	12.25 : 1	22.56 : 1	58.19 : 1	107.17 : 1	509.07 : 1	
15 Number of stage		1	1	2	2	3	3	4	
16 Efficiency		85.0	85.0	72.3	72.3	61.4	61.4	52.2	%
17 Direction of rotation		=	=	=	=	=	=	=	
18 Gearhead length: L1		14.2	14.2	18	18	21.8	21.8	25.7	mm
19 Weight		11.6	11.6	14.1	14.1	16.6	16.6	19.1	g

Combination		Reduction ratio ( Motor+gearhead total length)							
Type	Model name	3.5	4.8	12	23	58	107	509	
Brushed coreless motor	CMS12-15..P	26.2	26.2	30	30	33.8	33.8	37.7	mm
	CMS12-20..P	34.2	34.2	38	38	41.8	41.8	45.7	mm
	CMS12-30..P	44.2	44.2	48	48	51.8	51.8	55.7	mm
Brushless coreless motor	BMS12-15..P	29.2	29.2	33	33	36.8	36.8	40.7	mm
	BMS12-21..P	35.2	35.2	39	39	42.8	42.8	46.7	mm
	BMS12-30..P	44.2	44.2	48	48	51.8	51.8	55.7	mm



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