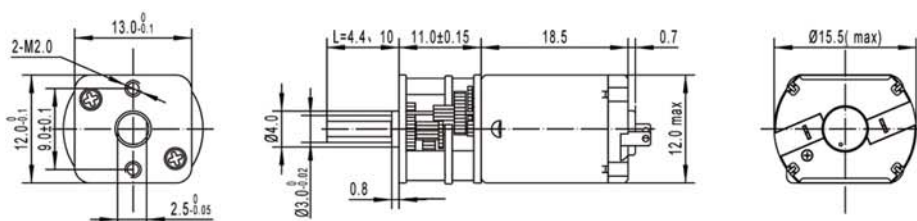


ETC23-GM12-030PA 13x12mm gearbox plus 030 & 050 permanent magnet DC motor

- Small size dc gear motor with low speed and big torque
- 13mm gear motor provide 0.05Nm torque and more reliable
- Suitable to small diameter, low noise and big torque application
- Reduction Ratio: 3、10、17、20、35、63、86、115、150、250、360



Gear Motor Dimensions (mm)



Motor Technical Data

Motor model No.	Rated voltage	No-load speed	No-load current	Rated speed	Rated torque	Rated current	Output power	Stall torque	Stall current
	VDC	r/min	mA	r/min	g.cm	mA	W	g.cm	A
TFF-030PA-09220	6	11500	35	9000	5	140	0.45	23	0.60
TFF-030PA-10180	5	11500	45	9000	5	200	0.45	23	0.75
TFF-030PA-06400	12	12500	20	9750	5	75	0.50	23	0.27

Gear motor Technical Data

Gearbox with motor: GM13-030PA-09220-XXX

Reduction ratio	3	10	20	35	63	86	115	150	250	360
Length mm	11	11	11	11	11	11	11	11	11	11
No-load speed rpm	3600	1100	550	310	175	130	96	73	44	30
Rated speed rpm	3000	900	450	260	140	105	78	60	38	28
Rated torque kg.cm	0.01	0.03	0.06	0.1	0.19	0.26	0.35	0.45	0.5	0.5
Max.momentary tolerance torque kg.cm	0.05	0.14	0.28	0.48	0.9	1.2	1.6	1.9	2.9	3.0

Gearbox with motor

GM13-030PA-10180-XXX

Reduction ratio	3	10	20	35	63	86	115	150	250	360
Length mm	11	11	11	11	11	11	11	11	11	11
No-load speed rpm	3600	1100	550	310	175	130	96	73	44	30
Rated speed rpm	3000	900	450	260	140	105	78	60	38	28
Rated torque kg.cm	0.01	0.03	0.06	0.1	0.19	0.26	0.35	0.45	0.5	0.5
Max.momentary tolerance torque kg.cm	0.05	0.14	0.28	0.48	0.9	1.2	1.6	1.9	2.9	3.0

Gearbox with motor

GM13-030PA-06400-XXX

Reduction ratio	3	10	20	35	63	86	115	150	250	360
Length mm	11	11	11	11	11	11	11	11	11	11
No-load speed rpm	4000	1200	610	350	195	140	105	83	50	35
Rated speed rpm	3250	975	485	280	155	110	85	65	41	30
Rated torque kg.cm	0.01	0.03	0.06	0.1	0.19	0.26	0.35	0.45	0.5	0.5
Max.momentary tolerance torque kg.cm	0.05	0.14	0.28	0.48	0.9	1.2	1.6	1.9	2.9	3.0