

DC-Gearmotor

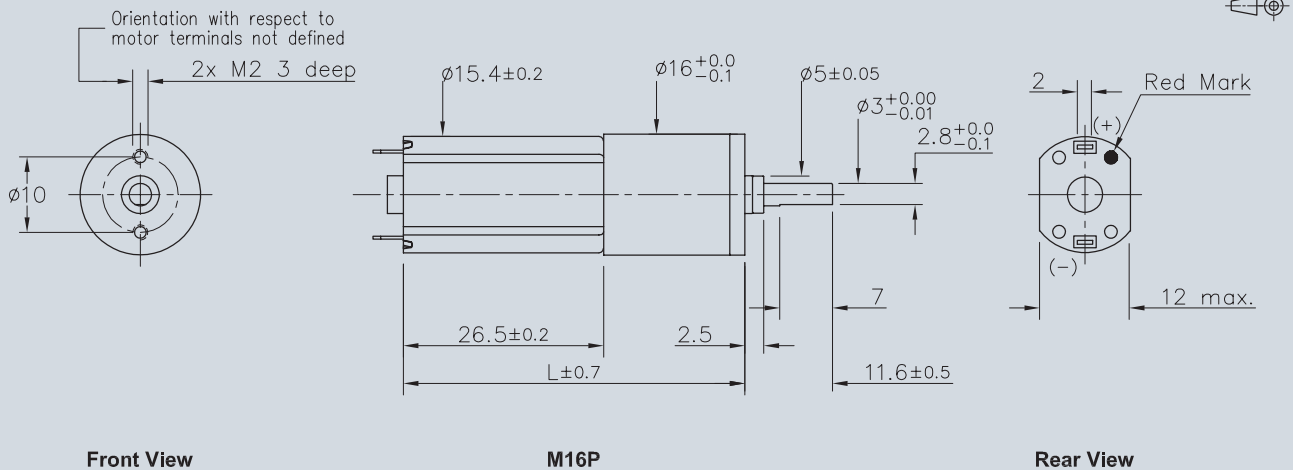
Series M16P

	M16P	YSGT1	YSGT2	YSGT3	YSGT4	YSGT5		
Nominal voltage	U_N	3	6	9	12	24	Volt	
Winding resistance	R	$\pm 12\%$	2.7	10.3	24	50	Ω	
Output power	$P_{2 \text{ max.}}$		0.49	0.57	1.16	0.36	W	
No-load speed (motor)	n_o	$\pm 12\%$	8,000	7,800	8,700	8,000	13,000	rpm
Speed constant	k_n		2,800	1,375	1,050	725	566	rpm/V
Back-EMF constant	k_E		0.32	0.72	.95	1.38	1.8	mV/rpm
Torque constant	k_M		3.4	6.95	9.12	13.2	16.9	mNm/A
Current constant	k_I		0.29	0.14	0.11	0.08	0.06	A/mNm
Slope of n-M curve	$\Delta n/\Delta M$		2,232	2,050	2,760	2,750	2,215	rpm/mNm
Rotor inductance	L		1,100	4,100	8,500	13,400	19,400	μH
Rotor inertia	J		0.74	0.75	0.71	0.61	0.63	gcm^2
Bearings on output shaft	sleeve bearings							
Housing material	metal							
Geartrain material	metal							
Backlash, at no-load	$\leq 3^\circ$							
Shaft load max.:								
– radial at (10 mm from bearing)	$\leq 4.9 \text{ N}$							
– axial	$\leq 4.9 \text{ N}$							
Shaft press fit force, max.	$\leq 14.7 \text{ N}$							
Shaft play:								
– radial (on bearing output)	$\leq 0.08 \text{ mm}$							
– axial	$\leq 0.20 \text{ mm}$							
Operating temperature range	$-10 \dots +60 \text{ }^\circ\text{C}$							

Specifications

reduction ratio (nominal)	output speed (12V winding) up to n_{max}	weight g	length with motor L mm	output torque		direction of rotation (reversible)	efficiency %
				continuous operation (12V winding) M max. mNm	intermittent operation (12V winding) M max. mNm		
4:1	1,330	37	41.55	2	4	=	80
14:1	430	41	45.20	6	12	=	70
19:1	315	41	45.20	8	16	=	70
29:1	205	41	45.20	12	24	=	70
62:1	100	45	48.85	22	44	=	60
72:1	85	45	48.85	25	50	=	60
84:1	73	45	48.85	29	58	=	60
104:1	59	45	48.85	37	74	=	60
128:1	48	45	48.85	45	90	=	60
157:1	39	45	48.85	54	108	=	60
231:1	26	49	52.50	69	138	=	50
316:1	19	49	52.50	93	186	=	50
370:1	16	49	52.50	108	216	=	50
455:1	13.5	49	52.50	132	264	=	50
561:1	11	49	52.50	167	234	=	50
690:1	8.9	49	52.50	206	412	=	50
1014:1	6	53	56.15	235	470	=	40
1621:1	3.8	53	56.15	294	588	=	40
1996:1	3.2	53	56.15	294	588	=	40
3027:1	2.3	53	56.15	294	588	=	40

How to order a M16P



Part number	Ratio	Voltage	Gearhead bearing	Stocked items
M16P0004YSGT4	4:1	12	sleeve	X
M16P0014YSGT4	14:1	12	sleeve	X
M16P0019YSGT4	19:1	12	sleeve	X
M16P0029YSGT4	29:1	12	sleeve	X
M16P0062YSGT4	62:1	12	sleeve	X
M16P0072YSGT4	72:1	12	sleeve	X
M16P0084YSGT4	84:1	12	sleeve	X
M16P0104YSGT4	104:1	12	sleeve	X
M16P0128YSGT4	128:1	12	sleeve	X
M16P0157YSGT4	157:1	12	sleeve	X
M16P0231YSGT4	231:1	12	sleeve	X
M16P0316YSGT4	316:1	12	sleeve	X
M16P0370YSGT4	370:1	12	sleeve	X
M16P0455YSGT4	455:1	12	sleeve	X
M16P0561YSGT4	561:1	12	sleeve	X
M16P0690YSGT4	690:1	12	sleeve	X
M16P1014YSGT4	1014:1	12	sleeve	X
M16P1621YSGT4	1621:1	12	sleeve	X
M16P1996YSGT4	1996:1	12	sleeve	X
M16P3027YSGT4	3027:1	12	sleeve	X
M16P0004YSGT5	4:1	24	sleeve	X
M16P0014YSGT5	14:1	24	sleeve	X
M16P0019YSGT5	19:1	24	sleeve	X
M16P0029YSGT5	29:1	24	sleeve	X
M16P0062YSGT5	62:1	24	sleeve	X
M16P0072YSGT5	72:1	24	sleeve	X
M16P0084YSGT5	84:1	24	sleeve	X
M16P0104YSGT5	104:1	24	sleeve	X
M16P0128YSGT5	128:1	24	sleeve	X
M16P0157YSGT5	157:1	24	sleeve	X
M16P0231YSGT5	231:1	24	sleeve	X
M16P0316YSGT5	316:1	24	sleeve	X
M16P0370YSGT5	370:1	24	sleeve	X
M16P0455YSGT5	455:1	24	sleeve	X
M16P0561YSGT5	561:1	24	sleeve	X
M16P0690YSGT5	690:1	24	sleeve	X
M16P1014YSGT5	1014:1	24	sleeve	X
M16P1621YSGT5	1621:1	24	sleeve	X
M16P1996YSGT5	1996:1	24	sleeve	X
M16P3027YSGT5	3027:1	24	sleeve	X

Voltages 3, 6, 9 are not stocked