

For combination with:
DC-Micromotors:
M2232U..CS, M2232U..GS

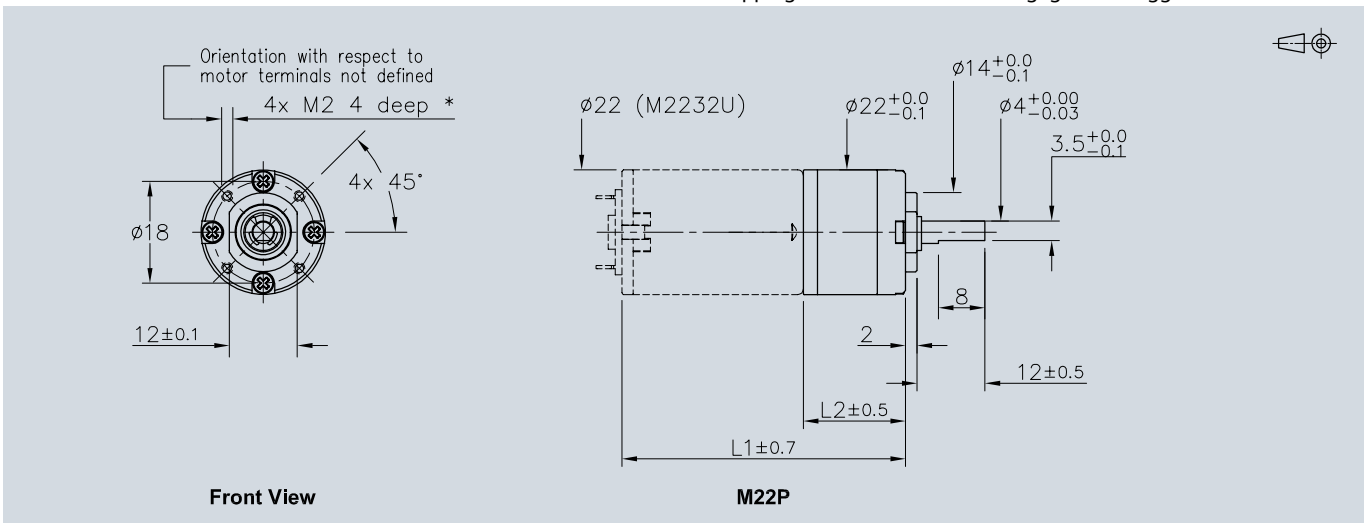
Series M22P

	M22P...YS	M22P...YB
Housing material	metal	metal
Geartrain material (all metal gears optional)	metal with plastic first stage	metal with plastic first stage
Recommended max. input speed for:		
– continuous operation	5,000 rpm	5,000 rpm
Backlash, at no-load	≤ 3°	≤ 3°
Bearings on output shaft	sleeve bearings	ball bearings
Shaft load, max.:		
– radial (10 mm from mounting face)	≤ 8 N	≤ 10 N
– axial	≤ 6 N	≤ 6 N
Shaft press fit force, max.	≤ 49 N	≤ 49 N
Shaft play (on bearing output):		
– radial	≤ 0.08 mm	≤ 0.05 mm
– axial	≤ 0.20 mm	≤ 0.20 mm
Operating temperature range	– 10 to + 60 °C (20% to 85% RH)	– 10 to + 60 °C (20% to 85% RH)

Specifications

reduction ratio (nominal)	number of gear stages	weight sleeve type	weight ball bearing type	length without motor L2	length with motor M2232U L1	output torque		direction of rotation (reversible)	efficiency
						continuous operation	intermittent operation		
		g	g	mm	mm	M max. mNm	M max. mNm		%
4:1	1	27	26	14.40	46.40	100	300	=	80
14:1	2	31	30	18.05	50.05	100	300	=	80
16:1	2	31	30	18.05	50.05	150	450	=	70
19:1	2	31	30	18.05	50.05	150	450	=	70
24:1	2	31	30	18.05	50.05	150	450	=	70
53:1	3	35	34	21.70	53.70	200	600	=	60
62:1	3	35	34	21.70	53.70	200	600	=	60
72:1	3	35	34	21.70	53.70	200	600	=	60
84:1	3	35	34	21.70	53.70	200	600	=	60
104:1	3	35	34	21.70	53.70	200	600	=	60
198:1	4	40	39	25.35	57.35	250	750	=	50
231:1	4	40	39	25.35	57.35	250	750	=	50
270:1	4	40	39	25.35	57.35	250	750	=	50
316:1	4	40	39	25.35	57.35	250	750	=	50
370:1	4	40	39	25.35	57.35	250	750	=	50
455:1	4	40	39	25.35	57.35	250	750	=	50
742:1	5	44	43	29.00	61.00	300	900	=	40
1,014:1	5	44	43	29.00	61.00	300	900	=	40
1,621:1	5	44	43	29.00	61.00	300	900	=	40
1,996:1	5	44	43	29.00	61.00	300	900	=	40

* 4:1 Ratio comes with 1.6mm dia. screw holes without internal threads. Self tapping M2 screws with 3mm engagement suggested.



How to order a M22P

Part number	Ratio	Description
M22P0004YS000	4:1	Sleeve Bearings
M22P0014YS000	14:1	Sleeve Bearings
M22P0016YS000	16:1	Sleeve Bearings
M22P0019YS000	19:1	Sleeve Bearings
M22P0024YS000	24:1	Sleeve Bearings
M22P0053YS000	53:1	Sleeve Bearings
M22P0062YS000	62:1	Sleeve Bearings
M22P0072YS000	72:1	Sleeve Bearings
M22P0084YS000	84:1	Sleeve Bearings
M22P0104YS000	104:1	Sleeve Bearings
M22P0198YS000	198:1	Sleeve Bearings
M22P0231YS000	231:1	Sleeve Bearings
M22P0270YS000	270:1	Sleeve Bearings
M22P0316YS000	316:1	Sleeve Bearings
M22P0370YS000	370:1	Sleeve Bearings
M22P0455YS000	455:1	Sleeve Bearings
M22P0742YS000	742:1	Sleeve Bearings
M22P1014YS000	1014:1	Sleeve Bearings
M22P1621YS000	1621:1	Sleeve Bearings
M22P1996YS000	1996:1	Sleeve Bearings

M22P0004YB000	4:1	Ball Bearings
M22P0014YB000	14:1	Ball Bearings
M22P0016YB000	16:1	Ball Bearings
M22P0019YB000	19:1	Ball Bearings
M22P0024YB000	24:1	Ball Bearings
M22P0053YB000	53:1	Ball Bearings
M22P0062YB000	62:1	Ball Bearings
M22P0072YS000	72:1	Ball Bearings
M22P0084YB000	84:1	Ball Bearings
M22P0104YB000	104:1	Ball Bearings
M22P0198YS000	198:1	Ball Bearings
M22P0231YB000	231:1	Ball Bearings
M22P0270YS000	270:1	Ball Bearings
M22P0316YB000	316:1	Ball Bearings
M22P0370YB000	370:1	Ball Bearings
M22P0455YB000	455:1	Ball Bearings
M22P0742YS000	742:1	Ball Bearings
M22P1014YB000	1014:1	Ball Bearings
M22P1621YS000	1621:1	Ball Bearings
M22P1996YB000	1996:1	Ball Bearings