The Project Asylum

Minebea Stepper Motor Information & Specifications

(Minebea Stepper Motor Data Circa 1999)

Minebea Stepper Motor Part Number Decoding Table

(Example Motor: 28BB-H151-11)

28	B	B	-	H	1	51	-	11
Size	**Type**	**Step Angle (Degree)**		**Motor Construction**	**Motor Lengths**	**Different Windings**		**Ver.**
Motor Outside Diameter In Tenths Of An Inch (Example: Size 28 = 2.8")		A = 15 B = 7.5 J = 18 M = 1.8 Q = 5 S = 3.6 U = 3.75 W = 1.875 Y = 0.9		Phase C = 2 & 4 Hybrid H = 2 & 4 PM K = 2 & 4 Hybrid M = 2 & 4 Hybrid Q = 2 & 4 Hybrid	0 to 9	01 to 99 01 to 99 = Standard L1 to L9 = w/ Leadscrew G1 to G9 = w/ Gear P1 to P9 = w/ Pulley		
B = Permanent Mag. L = Precision Hybrid K = Precision Hybrid P = Precision Hybrid								

Specifications for Permanent Magnet Minebea Stepper Motors

Series	# of Models in Series	Motor Type	Size mm	Step deg	Best Accuracy arcmin	Rated Current /Phase Amps		Nominal Voltage Volts	
06BJ-H	2	PM	15	18.0	10.8	0.1	0.3	5.0	12.0
08BJ-H	2	PM	20	18.0	10.8	0.2	0.4	2.1	3.8
15BA-H	3	PM	35	15.0	9.0	0.2	0.8	2.0	8.0
15BB-H	4	PM	35	7.5	2.3	0.2	0.8	2.0	8.0
17BB-H	3	PM	43.2	7.5	2.3	0.3	0.5	5.4	7.5
23BB-H	3	PM	57.4	7.5	2.3	0.3	0.8	4.9	12.0

Model Number	Wind-ing Type	Rated Volts	Rated I /Phase Amps	Winding Resist /Phase Ohms	Holding Torque g-cm	Induc-tance mH	Rotor Inertia g-cm^2	Detent Torq. g-cm	Wt. g
06BJ-H005	Bi	5.0	0.25	20.0	27	7.0	0.06	2.5	8
06BJ-H012	Bi	12.0	0.12	100.0	30	37.0	0.06	2.5	8
08BJ-H007	Uni	3.8	0.19	20.0	40	7.0	0.2	10	30
08BJ-H040	Bi	2.1	0.35	6.0	40	5.0	0.2	10	30
15BA-H051P	Uni	8.0	0.23	35.0	165	18.0	4.0	40	100
15BA-H073P	Uni	4.0	0.40	10.0	155	5.0	4.0	40	100
15BA-H043P	Bi	2.0	0.80	2.5	220	3.4	4.0	40	100
15BB-H051P	Uni	8.0	0.23	35.0	165	27.0	4.0	30	100
15BB-H073P	Uni	4.0	0.40	10.0	155	6.7	4.0	30	100

15BB-H170P	Uni	6.6	0.22	30.0	190	17.0	1.5	35	65
15BB-H043P	Bi	2.0	0.80	2.5	205	4.5	4.0	30	100
17BB-H262P	Uni	5.4	0.45	12.0	500	11.0	12.0	80	140
17BB-H267P	Uni	7.5	0.30	25.0	480	19.0	12.0	80	140
17BB-H240P	Bi	5.4	0.45	12.0	670	27.0	12.0	80	140
23BB-H251P	Uni	5.0	0.75	6.6	1,200	9.0	30.0	150	280
23BB-H252P	Uni	12.0	0.34	36.0	1,200	32.0	30.0	150	280
23BB-H246P	Bi	4.9	0.75	6.5	1,400	17.0	30.0	150	280

Specifications for Hybrid Minebea Stepper Motors

Model Number	Rated Volts	Rated I /Phase Amps	Winding Resist /Phase Ohms	Holding Torque g-cm	Induc-tance mH	Rotor Inertia g-cm^2	Detent Torque g-cm	Wt. g
14PM-M204	12.00	0.18	65.0	330	24.0	11.0	50	110
14PM-M206	5.20	0.40	13.0	330	4.8	11.0	50	110
16PY-Q207	10.00	0.25	40.00	380	8.5	13.0	30	120
16PY-Q204	3.96	0.90	4.40	500	1.6	13.0	30	120
16PU-M003	4.20	0.70	6.0	700	4.0	17.0	110	175
16PU-M006	7.60	0.40	19.5	700	10.5	17.0	110	175
17PM-K016V	8.80	0.40	22.00	1,500	19.5	34.0	80	200
17PM-K017V	4.40	0.80	5.50	1,500	5.7	34.0	80	200
17PM-K018V	3.00	1.20	2.50	1,500	2.8	34.0	80	200
17PM-K316V	9.60	0.40	24.00	1,700	25.8	45.0	100	250
17PM-K301V	4.80	0.80	6.00	1,700	7.1	45.0	100	250
17PM-K303V	3.20	1.20	2.70	1,700	3.3	45.0	100	250
17PM-K111V	10.00	0.40	25.00	2,200	33.4	56.0	120	300
17PM-K101V	5.00	0.80	6.20	2,200	8.6	56.0	120	300
17PM-K103V	3.60	1.20	3.00	2,200	4.4	56.0	120	300
17PM-K402V	6.00	0.80	7.50	3,400	7.0	75.0	200	350
17PW-M003	4.90	0.65	7.5	1,200	6.2	17.0	250	200

Model Number	Rated Volts	Rated I /Phase Amps	Winding Resist /Phase Ohms	Holding Torque g-cm	Induc-tance mH	Rotor Inertia g-cm^2	Detent Torque g-cm	Wt. g
17PS-M001V	3.20	0.40	7.9	450	5.4	17.0	50	200
17PU-H008V	3.70	0.90	4.10	600	2.9	34.0	180	200
17PU-H010V	4.80	0.80	6.00	750	3.4	34.0	180	200
17PU-H309V	6.10	0.80	7.60	1,000	5.2	45.0	250	250
17PU-H312V	9.50	0.50	19.0	1,000	17.0	45.0	250	250
17PM-K204VT	2.40	0.80	3.0	1,250	2.6	28.0	60	180
17PM-K018VT	3.50	1.00	3.5	1,700	2.7	34.0	70	220
17PU-H204VT	2.40	0.80	3.0	750	2.1	28.0	120	180
17PU-H018VT	3.50	1.00	3.5	1,150	2.0	34.0	150	220
23LY-C205	4.00	1.10	3.6	3,000	5.3	55.0	250	360

23LY-C201	5.50	0.78	7.1	3,000	8.3	55.0	250	360
23LY-C202	3.75	1.25	3.0	3,000	4.5	55.0	250	360
23LY-C301	3.00	1.70	1.8	4,000	4.5	110.0	300	450
23LY-C303	5.10	1.00	5.1	4,000	13.0	110.0	300	450
23LY-C305	6.00	0.85	7.1	4,000	18.0	110.0	300	450
23LY-C002	4.30	1.60	2.7	4,800	7.2	160.0	350	560
23LY-C001	8.50	0.85	10.0	4,800	30.0	160.0	350	560

Model Number	Rated Volts	Rated I /Phase Amps	Winding Resist /Phase Ohms	Holding Torque g-cm	Induc-tance mH	Rotor Inertia g-cm^2	Detent Torque g-cm	Wt. g
23LM-C250V	3.00	1.50	2.00	3,200	2.5	55.0	500	360
23LM-C213V	2.20	2.00	1.10	3,200	1.3	55.0	500	360
23LM-C343V	3.30	1.50	2.20	4,300	3.5	110.0	550	450
23LM-C355V	2.50	2.00	1.25	4,300	2.3	110.0	550	450
23LM-C047V	4.70	1.50	3.10	5,200	6.1	160.0	600	540
23LM-C055V	3.40	2.00	1.70	5,200	3.5	160.0	600	540
23LM-K250V	3.00	1.50	2.00	2,400	3.0	55.0	180	360
23LM-K213V	2.20	2.00	1.10	2,400	1.6	55.0	180	360
23LM-K343V	3.30	1.50	2.20	3,400	3.9	110.0	230	450
23LM-K355V	2.50	2.00	1.25	3,400	2.6	110.0	230	450
23LM-K047V	4.70	1.50	3.10	4,000	6.5	160.0	260	540
23LM-K055V	3.40	2.00	1.70	4,000	3.7	160.0	260	540
23KM-C250V	3.30	1.50	2.20	4,400	2.6	150.0	200	470
23KM-C379V	4.10	1.50	2.70	8,000	3.6	230.0	300	590
23KM-C032V	5.10	1.50	3.40	9,500	5.4	280.0	350	680
23KM-C716V	6.30	1.50	4.20	14,000	6.8	440.0	600	1,050
23KM-K250V	3.30	1.50	2.20	3,700	3.1	150.0	200	470

Model Number	Rated Volts	Rated I /Phase Amps	Winding Resist Phase Ohms	Holding Torque g-cm	Induc-tance mH	Rotor Inertia g-cm^2	Detent Torque g-cm	Wt. g
23KM-K379V	4.10	1.50	2.70	5,600	4.2	230.0	300	590
23KM-K032V	5.10	1.50	3.40	7,400	6.4	280.0	350	680
23KM-K716V	6.30	1.50	4.20	12,000	8.0	440.0	600	1050
23LQ-C202V	3.90	1.10	3.50	2,300	4.0	55.0	370	360
23LQ-C309V	6.75	1.00	6.75	3,100	8.6	110.0	380	450
23LQ-C055V	3.40	2.00	1.70	3,600	2.7	160.0	450	540
34PM-C101	3.00	4.00	0.75	20,000	3.5	1,100.0	1,300	2,400
34PM-C108	12.00	1.00	12.00	20,000	56.0	1,100.0	1,300	2,400
34PM-C007	5.50	1.25	4.40	12,000	14.5	560.0	900	1,400
34PM-C049	1.70	4.70	0.36	12,000	1.65	560.0	900	1,400

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ca 1999)

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