

SYNCHRONOUS MOTOR FAMILY

Series 59mm (PA, PB) Geared Synchronous Motor



Torque Range:	Up to 200 oz-in [1412 mN-m]
Output Speed:	1 to 600 RPM
Insulation Class:	Class A (105°C)
Lead Wire:	4 leads 22AWG (approx. 8.5 inches [215.9 mm])
Operation Ambient Temp:	-10°C to +40°C (approx.)
Gear Unit:	Zinc Die Cast - AGMA 7 Standard with hardened steel gears
Shaft Bearing:	Sleeve Bearing (Ball Bearing Available upon request)
 Recognition:	E53578(N), Component-Impedance Protected Motors, 115Vac Standard Rotor
 Certification:	Card No. 42576, Motors and Generators, 115 Vac, 60 Hz, Standard Rotor, 7.5 watts max. PA, 10 watts max. PB
Capacitor is required for operation. Capacitor supplied with 115 Vac motors.	
Note: Typical data subject to change without notification	

The PA and PB geared motors are the work horses of the HURST® product line. All gears are hobbled to AGMA 7 standards. Pinions are extruded from a special steel with a modified long addendum tooth form to provide higher strength. Both pinions and gear teeth are case hardened and rotate upon hardened and ground steel studs. Synthetic lubrication is used throughout. Gearing is scaled to provide a maximum gear train loading of 200 oz-in [1412 mN-m].

Model	Part Number	Reduction	Rated Torque (oz-in)	Rated Torque (mN-m)	Output Speed (RPM)	Maximum gear train loading	Input Power (watts)	Voltage (VAC) 50HZ	Voltage (VAC) 60HZ	Capacitor Value (mfd)	Capacitor not supplied	Weight (oz)	Weight (g)	Hi-Torque Rotor
PA	3202-001	600	200	1412.3	0.5		7.5		115	0.68		18	510.3	
PA	3202-003	300	200	1412.3	1	X	7.5		115	0.68		18	510.3	
PA	3202-059	300	200	1412.3	1		7.5		24	15 100VDC +/-10%	X	18	510.3	
PA	3202-068	300	200	1412.3	1		7.5		220	0.18 440VAC +/-10%	X	18	510.3	
PA	3202-007	150	174	1228.7	2	X	7.5		115	0.68		18	510.3	
PA	3202-063	150	174	1228.7	2		7.5		24	15 100VDC +/-10%	X	18	510.3	
PA	3202-011	75	152	1073.4	4	X	7.5		115	0.68		18	510.3	
PA	3202-069	62.5	151	1066.3	4		6	220		0.18 440VAC +/-10%	X	18	510.3	
PA	3202-014	50	140	988.6	6	X	7.5		115	0.68		18	510.3	
PA	3202-055	41.67	140	988.6	6		6	230		0.18 440VAC +/-5%	X	18	510.3	

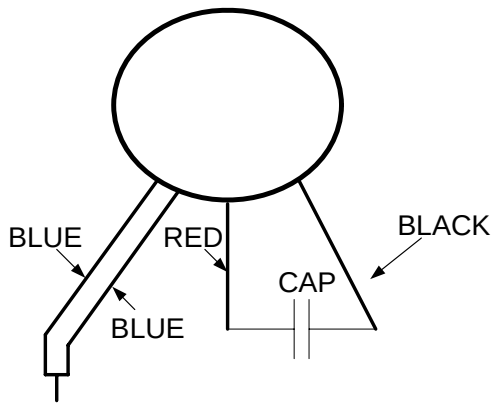
Model	Part Number	Reduction	Rated Torque (oz-in)	Rated Torque (mN-m)	Output Speed (RPM)	Maximum gear train loading	Input Power (watts)	Voltage (VAC) 50HZ	Voltage (VAC) 60HZ	Capacitor Value (mfd)	Capacitor not supplied	Weight (oz)	Weight (g)	Hi-Torque Rotor
PA	3202-066	50	140	988.6	6		7.5		220	0.18 440VAC +/-10%	X	18	510.3	
PA	3202-064	40	134	946.2	7.5		7.5		24	15 100VDC +/-10%	X	18	510.3	
PA	3202-017	30	126	889.8	10	X	7.5		115	0.68		18	510.3	
PA	3202-056	30	126	889.8	10		7.5		24	15 100VDC +/-10%	X	18	510.3	
PA	3202-060	25	126	889.8	10		6	220		0.18 440VAC +/-10%	X	18	510.3	
PA	3202-062	25	126	889.8	10		6	230		0.18 440VAC +/-5%	X	18	510.3	
PA	3202-065	30	126	889.8	10		7.5		220	0.18 440VAC +/-10%	X	18	510.3	
PA	3202-067	30	126	889.8	10		7.5		230	0.18 440VAC +/-5%	X	18	510.3	
PA	3202-019	20	116	819.1	15		7.5		115	0.68		18	510.3	
PA	3202-020	16.67	99	699.1	18		7.5		115	0.68		18	510.3	
PA	3202-070	15	89	628.	20		7.5		115	0.68		18	510.3	
PA	3202-024	10	64	451.	30		7.5		115	0.68		18	510.3	
PA	3232-003	10	82.5	582.6	30		9.5		115	0.85		18	510.3	X
PA	3202-026	5	32	226	60		7.5		115	0.68		18	510.3	
PA	3202-052	5	32	22	60		7.5		24	15 100VDC +/-10%	X	18	510.3	
PA	3232-004	5	41	289.5	60		9.5		115	0.85		18	510.3	X
PA	3202-058	2.5	16	113	120		7.5		24	15 100VDC +/-10%	X	18	510.3	
PA	3232-007	2.5	20.5	144.8	120		9.5		115	0.85		18	510.3	X
PB	3204-001	600	200	1412.3	1		10		115	0.82		18	510.3	
PB	3204-003	300	174	1228.7	2		10		115	0.82		18	510.3	
PB	3204-080	300	174	1228.7	2		10		24	18 100VDC +/-10%	X	18	510.3	
PB	3204-007	150	152	1073.4	4		10		115	0.82		18	510.3	
PB	3204-009	100	140	988.6	6		10		115	0.82		18	510.3	
PB	3204-013	60	126	889.8	10		10		115	0.82		18	510.3	
PB	3204-041	50	126	889.8	10		10	115		1		18	510.3	
PB	3204-050	40	116	819.1	15		10		115	0.82		18	510.3	

Model	Part Number	Reduction	Rated Torque (oz-in)	Rated Torque (mN-m)	Output Speed (RPM)	Maximum gear train loading	Input Power (watts)	Voltage (VAC) 50HZ	Voltage (VAC) 60HZ	Capacitor Value (mfd)	Capacitor not supplied	Weight (oz)	Weight (g)	Hi-Torque Rotor
PB	3204-060	40	116	819.1	15		10		24	18 100VDC +/-10%	X	18	510.3	
PB	3204-017	30	110	776.8	20		10		115	0.82		18	510.3	
PB	3234-025	25	20	141.2	20		11	115		1		18	510.3	
PB	3234-026	25	131	925.1	20		11	220		0.27 440VAC +/-10%	X	18	510.3	
PB	3234-027	30	110	776.1	20		11		115	1		18	510.3	
PB	3234-014	25	106	748.5	24		11		115	1		18	510.3	
PB	3204-019	20	77	543.7	30		10		115	0.82		18	510.3	
PB	3204-083	16.67	77	543.7	30		10	230		0.25440VAC +/-10%	X	18	510.3	
PB	3234-001	11	101	713.2	30	X	11		115	1		18	510.3	X
PB	3234-017	20	101	713.2	30		11		24	22 100VDC +/-10%	X	18	510.3	
PB	3234-019	16.67	101	713.2	30		11	230		0.25 440VAC +/-10%	X	18	510.3	
PB	3234-020	16.67	94	663.8	36		11		24	22 100VDC +/-10%	X	18	510.3	
PB	3204-022	12	49	346	50		10		115	0.82		18	510.3	
PB	3234-002	12	67	473.1	50		11		115	1		18	510.3	X
PB	3234-011	12	67	473.1	50		11		24	22 100VDC +/-10%	X	18	510.3	
PB	3204-024	10	41	289.5	60		10		115	0.82		18	510.3	
PB	3204-046	8.33	41	289.5	60		10	115		1		18	510.3	
PB	3204-059	8.33	41	289.5	60		10	230		0.25 440VAC +/-10%	X	18	510.3	
PB	3204-081	10	41	289.5	60		10		230	0.20 440VAC +/-10%	X	18	510.3	
PB	3234-003	10	56	395.4	60		11		115	1		18	510.3	X
PB	3234-023	8.33	47	331.9	60		10	24		22 100VDC +/-10%	X	18	510.3	
PB	3234-024	8.33	47	331.9	60		8.5	240		0.22 440VAC +/-10%	X	18	510.3	
PB	3234-004	8.5	47	331.9	72		11		115	1		18	510.3	
PB	3204-026	5	20	141.2	120		10		115	0.82		18	510.3	
PB	3204-071	4.17	20	141.2	120		10	220		0.27 440VAC +/-10%	X	18	510.3	

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PB	3204-086	5	20	141.2	120		10		24	18 100VDC +/-10%	X	18	510.3	
PB	3234-006	5	28	197.7	120		11		115	1		18	510.3	X
PB	3204-029	3	12	84.7	200		10		115	0.82		18	510.3	
PB	3234-007	3	17	120	200		11		115	1		18	510.3	X
PB	3234-016	2.5	12	84.7	240		11		115	1		18	510.3	
PB	3234-008	2	11.25	79.4	300		11		115	1		18	510.3	
PB	3204-033	1.67	6	42.4	360		10		115	0.82		18	510.3	
PB	3234-009	1.67	9.5	67.1	360		11		115	1		18	510.3	X

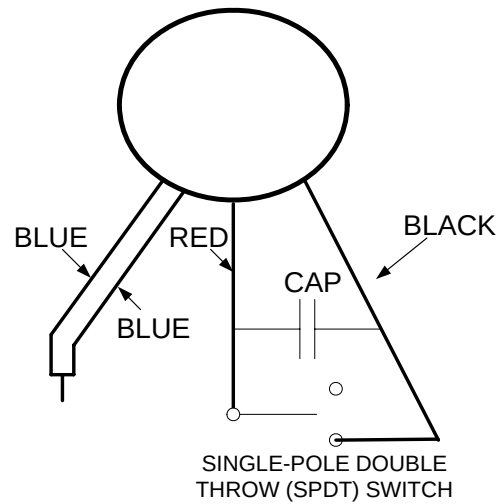


Wiring Diagram



Capacitors are non-polarized and must always be connected between the red and black leads. Always connect the (2) coil blue leads together. Connect the power supply to the blue leads and red lead to produce clockwise (CW) rotation viewing shaft end. Connect the power supply to the blue leads and black lead to produce counter-clockwise (CCW) rotation viewing shaft end.

Optional Wiring Diagram with Switch



Capacitors are non-polarized and must always be connected between the red and black leads. Always connect the (2) coil blue leads together. Connect the power supply to the blue leads and red lead to produce clockwise (CW) rotation viewing shaft end. Connect the power supply to the blue leads and black lead to produce counter-clockwise (CCW) rotation viewing shaft end.