

0.04-0.5 kW brushless servo motors

ACM series

The ACM series of Brushless servo motors have been developed specifically for use with the economic Model 631 packaged brushless drive. The motor-drive combination provides a fully self contained servo system with an integrated motion controller offering advanced control features at economic pricing levels

Key features:

- Low system cost combined with high dynamic performance
- Maintenance-free 3 phase brushless construction
- Alternative body lengths offer peak torque ratings up to 3.7 Nm.
- Low inertia rotor for high acceleration & rapid reversals
- Robust resolver feedback for both commutation and position with resolution up to 8192 counts per revolution.
- Optional parking brake
- Sinewave drive technology to provide smooth operation.
- High thermal dissipation characteristics for cool running
- Connection via multi-pin connectors which may be rotated to any position to suit installation requirements.
- Standard range of cables for simple commissioning.



ACM series servo motor dimensions:

Dimensions: mm

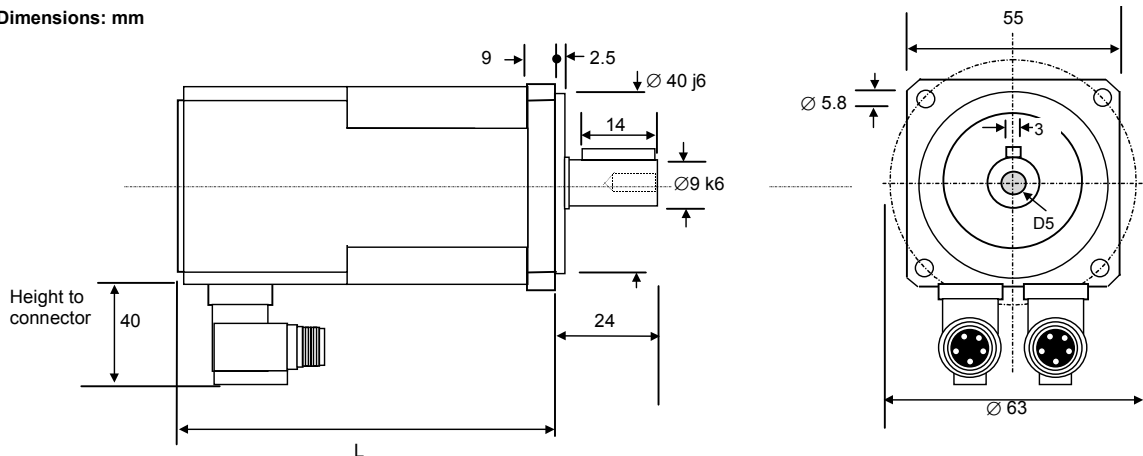


Table of Dimensions: mm.

Motor model Number		ACM2n 0010	ACM2n 0030	ACM2n 0045	ACM2n 0070	ACM2n 0130
Frame Size (square)		55	55	55	55	55
Body Length	L	98	123	143	163	234
Body length with brake	L	131	156	176	196	267
Tapped hole in shaft	D5	M3 x 10 deep	M3 x 10 deep	M3 x 10 deep	M3 x 10 deep	M3 x 10 deep

Specification & performance using 631 series integrated brushless servo drivers

Motor Options:		ACM2n 0010	ACM2n 0030	ACM2n 0045	ACM2n 0070	ACM2n 0130
Matched Integrated Drive		-4/0-3 631-001-230F00	-4/0-3 631-001-230F00	-4/0-3 631-002-230F00	-4/0-3 631-002-230F00	-4/0-3 631-004-230F00
Rated Torque	Nm	0.1	0.3	0.45	0.7	1.3
Peak Torque	Nm	0.4	0.75 (* 1.0)	1.66	1.9	3.7
Output Power	kW	0.04	0.125	0.19	0.29	0.54
Rotor Inertia	Kgcm ²	0.05	0.1	0.15	0.20	0.33
Note *	Peak torque can be increased to value shown by specifying the next larger Drive					
Rated Speed	4,000 rpm					
Integral resolver position feedback	dual track, resolution: programmable to 8192 counts per rev.					
Enclosure	totally enclosed, self cooling					
Integral Parking Brake	Available as standard option					
Ambient temperature range	0 to + 40 deg. C					

Geared brushless servo motors

HPE / ACM series

- High peak torque provides high acceleration & deceleration capability
- Capable of withstanding factor 2 emergency shock loads without damage
- Low backlash construction provides accurate positioning and long life
- High torsional rigidity for stable operation in high speed positioning.
- Low torque ripple for smooth operation in velocity servo applications
- Planetary construction for high torque to volume ratio
- High reliability and serviceability

Planetary geared servo motor dimensions:

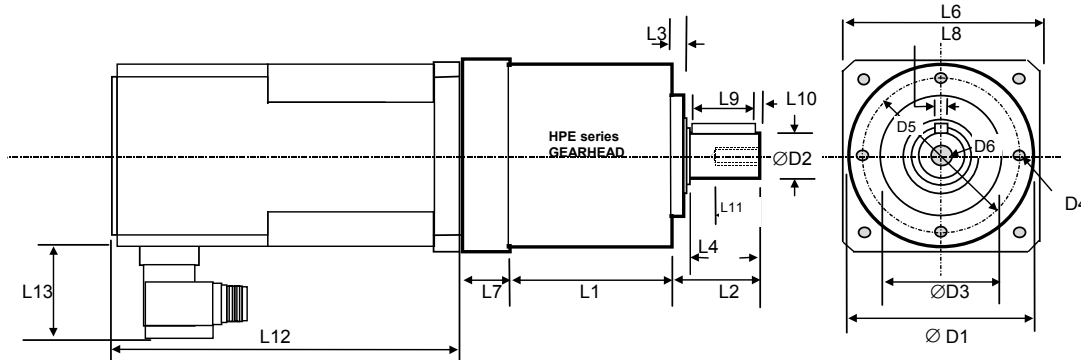


Table of Dimensions: mm

Gearhead Motors		HPE50		HPE70	
		ACM2n 0045 ACM2n 0070	ACM2n 0030	ACM2n 130	ACM2n 0045 ACM2n 0070 ACM2n 130
Gearbox Version		HPE50-S	HPE50-D	HPE70-S	HPE70-D
Gearbox Diameter	D1	50	50	70	70
Output shaft diameter	D2	12 k6	12 k6	16 k6	16 k6
Gearbox mounting register	D3	35 h6	35 h6	52 h6	52 h6
Gearbox mounting holes	D4	4 x M4	4 x M4	10 deep	10 deep
mounting hole PCD	D5	44	44	62	62
Shaft fixing bolt diameter	D6	Tapped M4	Tapped M4	M5	M5
Gearbox Length	L1	53	74.5	...69	91.5
Overall Output Shaft length	L2	24.5	24.5	36	36
Gearbox register length	L3	4	4	5	5
Free shaft length	L4	18	18	28	28
Motor flange size	L6	55	55	76	76
Adaptor length	L7	19	19	22	22
Output shaft key width	L8	4 h9	4 h9	5 h9	5 h9
Output shaft Key length	L9	14	14	25	25
Key distance to shaft end	L10	2	2	2	2
Shaft fixing tapped length	L11	8	8	10	10
Motor body length	L12	See motor data	See motor data	See motor data	See motor data
Height to motor connector	L13	40	40	40	40

Performance of geared servo motors

Gearbox Model	Gear Ratio n:1	Motor Model	Rated Speed (rpm)	Rated Torque (Nm)	Peak Torque (Nm)	Maximum Emergency Torque (Nm)	Max. Backlash (arc. min.)
HPE50-S	5	ACM2n-0045	800	1.94	7.8	7.8	
	5	ACM2n-0070	800	3.2	9.0	9.0	≤ 12
	10	ACM2n-0045	400	3.9	11.5	16.0	
HPE50-D	25	ACM2n-0030	160	5.7	11.5	17.0	≤ 15
HPE70-S	10	ACM2n-0130	300	11.0	30	34	≤ 12
	25	ACM2n-0070	160	13.3	32	42.0	
HPE70-D	25	ACM2n-0130	120	18	33	75.0	≤ 15
	50	ACM2n-0045	80	14.7	32	72.2	

Other combinations of gear ratio and motor are available on request.
For ultra low backlash specify HP series gearheads.