

Compact, quiet, low weight with a high power density, the 42P Series is ideal when space is a premium. The 42P is a planetary gear reducer with net shaped plastic and powder metal gears as an economical choice. A variety of features and gear reductions enable custom design.

SPECIFICATIONS & CONSTRUCTION

Ring Gear: Powder Metal

Planet Gears: Plastic and Powder Metal

Output speeds: 1 to 400 RPM

Voltage: 6Vdc to 36Vdc

Bearings: Dual Ball Bearing on output

Termination: Spade terminals or lead wires

Duty Cycle: Intermittent

Motors Available: 500, LY

Insulation Class: 500=B; LY=F

Rotation: Reversible

End-Bell: Die cast Zinc

Lubrication: Synthetic Grease

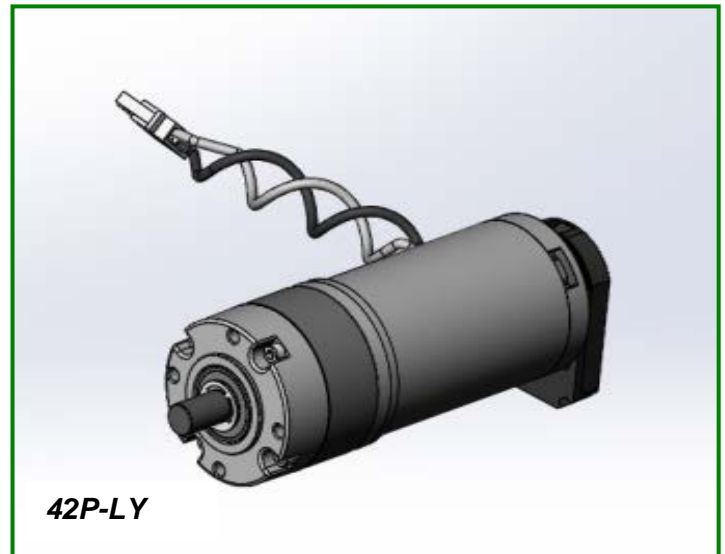
Regulatory Approvals: RoHS

TYPICAL APPLICATIONS

- Pumps
- Medical Equipment
- Pharmaceutical Equipment
- Food Service Equipment

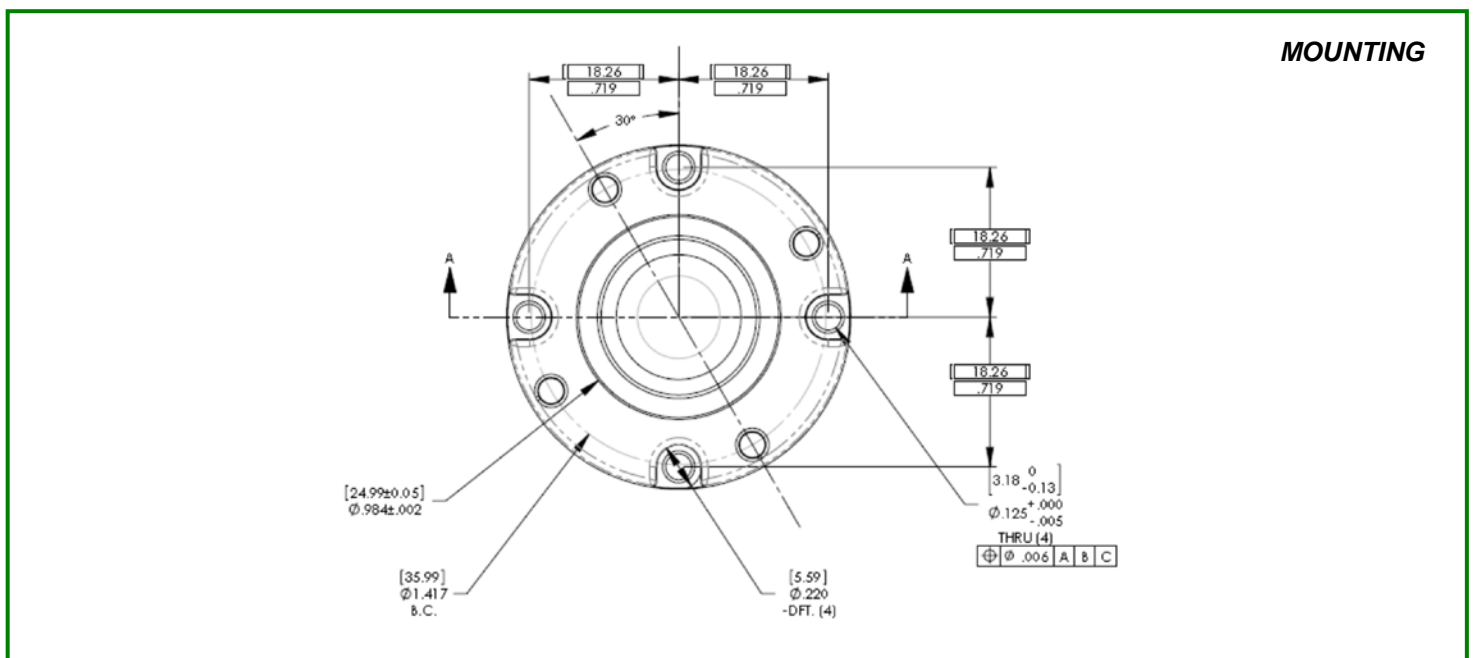
OPTIONAL FEATURES

- Customized output shafts
- Various lead lengths, terminals and connectors
- Ball bearing for motor
- Brakes: Electromagnetic
- EMI Filtering: Internal and External Suppression
- Magnetic Encoder: 2 to 12 PPR Resolution
- Optical or Capacitive: Up to 2048 PPR Resolution

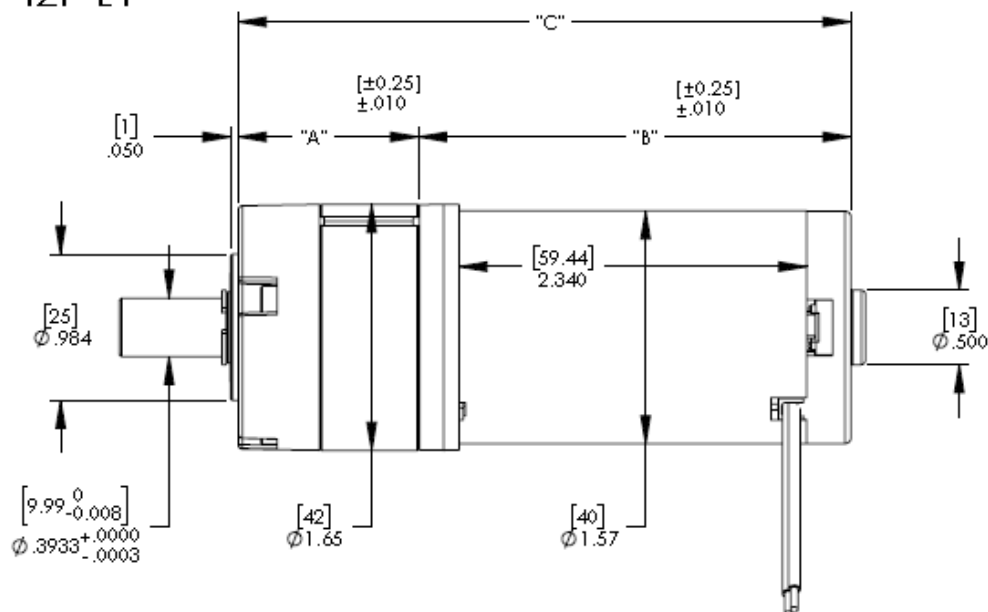


Maximum Permissible Torque: 70 In.Lb (8 Nm)
Speed: Up to 400 RPM

Note: Speed and torque combinations will vary depending on the motor/gearbox combination.



42P-LY



GEAR MOTOR	DIM "A"	DIM "B"	DIM "C" OAL
42P-5008 - SHORT	1.217 [30.9]	2.152 [54.7]	3.369 [85.6]
42P-5008 - LONG	1.516 [38.5]	2.152 [54.7]	3.668 [93.2]
42P-5012 - SHORT	1.217 [30.9]	2.402 [61.0]	3.619 [92.0]
42P-5012 - LONG	1.516 [38.5]	2.402 [61.0]	3.918 [99.5]
42P-5016 - SHORT	1.217 [30.9]	2.652 [67.4]	3.869 [98.3]
42P-5016 - LONG	1.516 [38.5]	2.652 [67.4]	4.168 [105.9]
42P-5024 - SHORT	1.217 [30.9]	3.152 [80.1]	4.369 [111.0]
42P-5024 - LONG	1.516 [38.5]	3.152 [80.1]	4.668 [118.6]

TYPICAL MOTOR PERFORMANCE

Parameter	Symbol	Units	LY-4	LY-4	LY-6	LY-6	LY-8	LY-8	LY-C	LY-C
Voltage	E	Volts	12	24	12	24	12	24	12	24
Continuous Torque	T _c	Oz.in	1.6	1.6	4.7	4.7	6.1	6.1	9.5	9.5
Stall Torque	T _s	Oz.in	17.8	17.8	35.7	35.7	49	49	62.2	62.2
No Load Speed	N ₀	RPM	7050	7050	5750	5750	5950	5950	4985	4985
Friction Torque	T _f	Oz.in	0.74	0.74	0.77	0.77	0.8	0.8	0.86	0.86
Thermal Impedance	R _{th}	°C/Watt	12.27	12.27	11	11	10.1	10.1	8.83	8.83
Maximum Winding Temperature	Θ _{max}	°C	155	155	155	155	155	155	155	155
Torque Constant	K _t	Oz.in/Amp	2.33	4.66	2.7	5.41	2.64	5.27	3.16	6.31
Back-EMF Constant	K _e	V/kRPM	1.34	2.67	1.56	3.11	1.52	3.03	1.82	3.63
Resistance	R _t	Ohms	1.95	7.8	1.69	6.76	1.19	4.76	1.12	4.48
Motor Constant	K _m	Oz.in/√W	1.66	1.66	2.08	2.08	2.42	2.42	3.0	3.0

42P GEAR REDUCER RATINGS

Parameter	1-Stage	2-Stage	3-Stage	4-Stage
Permitted Output Torque (N.m)	1.0	3.0	8.0	8.0
Gear Reducer Efficiency (%)	80	75	70	65
Maximum Load Radial (N)	160	230	300	360
Maximum Load Axial (N)	50	80	110	140
Gear Reducer Length "A"	1.240" [31.5mm]	1.575" [40.0mm]	1.910" [48.5mm]	2.245" [57.0mm]