

P542 - Series Geared Stepper Motors

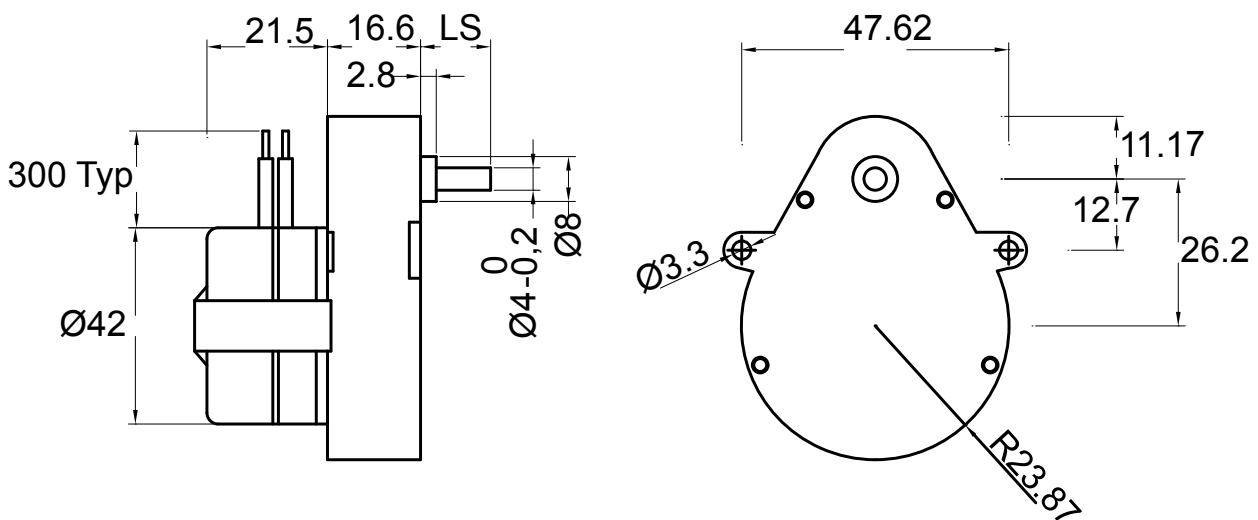
The P542 series provides a combination of optimum performance and price for use in instrumentation applications which require digital control of position or speed.

Features include:

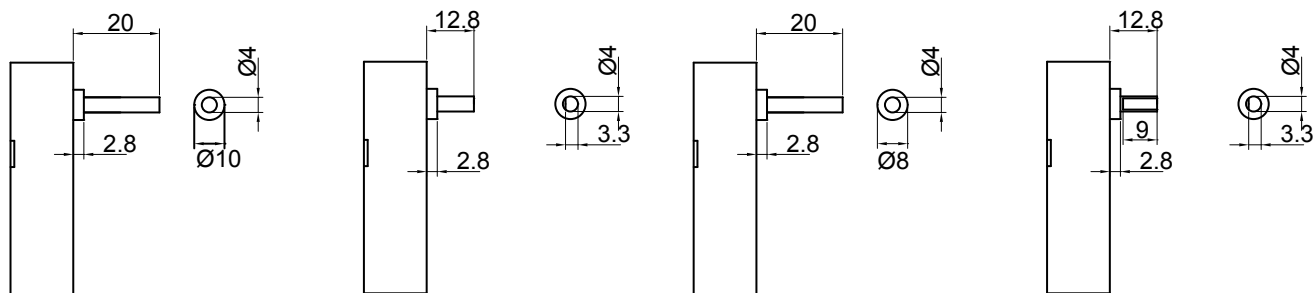
- High performance permanent magnet stepper motor.
- Uni-polar and bipolar motor types.
- Precision gear head incorporating metal gears and bronze gearing for optimum torque transmission.
- Wide range of standard gear ratio options from stock.
- Choice of output shaft options.
- Special shaft and gear ratios to meet customer special requirements.



Outline dimensions (mm)



Outline dimensions (mm) - Shaft options



Shaft Length LS

- L81 Option** Type: Plain / Length: 20mm
- L82 Option** Type: With Flat / Length: 12.8mm / Flat Length: 9mm
- L01 option** Type: Plain/Length:20mm/Spigot:10mm
- L02 option** Type: Flat/Length: 12.8mm/ Flat Length: 9mm/Spigot:10mm

P542-L48 Uni-Polar Geared Stepper Motor

L48 xx motor specifications

Standard motor versions		P542-L48 1U	P542-L48 2U	Step rate @ typical working torque L/R : 200 Hz L/4R: 450 Hz
Number of phases		4	4	
Rated voltage (L/R Drive)	V	5	12	
Current per phase	mA	960	400	
Resistance per phase	Ohm	5.2	30	
Inductance per phase	mH	2.1	11.3	

P542-L48 series Geared Stepper Motor motor specification and part numbers

Geared Stepper Motor	Ratio	Steps per rev at Output	Holding Torque Ncm	Maximum Continuous Torque Ncm*	Efficiency
P542-L48 -G01....	25:6	200	20	20	80
-G03	25:4	300	25	25	80
-G04	25:3	400	35	35	80
-G05	10:1	480	40	40	70
-G06	25:2	600	45	45	70
-G08	50:3	800	60	60	70
-G09	20:1	960	65	65	70
-G11	25:1	1200	70	70	70
-G14	100:3	1600	75	75	70
-G16	125:3	2000	80	80	70
-G17	50:1	2400	80	80	70
-G19	125:2	3000	80	80	65
-G21	250:3	4000	80	80	65
-G23	125:1	6000	80	80	65
-G27	250:1	12000	80	80	65
-G34	500:1	24000	85	85	58
-G41	1250:1	60000	90	90	58
-G62	1500:1	720000	100	100	43

* Maximum rating of gearbox



P542-L48 Bi-Polar Geared Stepper Motor

L48 xx motor specifications

Standard motor versions		P542-L48 1B	P542-L48 2B	Step rate @ typical working torque L/R : 200 Hz L/4R: 450 Hz
Number of phases		2	2	
Rated voltage (L/R Drive)	V	5	12	
Current per phase	mA	960	400	
Resistance per phase	Ohm	5.2	30	
Inductance per phase	mH	4.2	22.3	

P542-L48 series Geared Stepper Motor motor specification and part numbers

Geared Stepper Motor	Ratio	Steps per rev at Output	Holding Torque Ncm	Maximum Continuous Torque Ncm*	Efficiency
P542-L48 -G01....	25:6	200	20	20	80
-G03	25:4	300	25	25	80
-G04	25:3	400	35	35	80
-G05	10:1	480	40	40	70
-G06	25:2	600	45	45	70
-G08	50:3	800	60	60	70
-G09	20:1	960	65	65	70
-G11	25:1	1200	70	70	70
-G14	100:3	1600	75	75	70
-G16	125:3	2000	80	80	70
-G17	50:1	2400	80	80	70
-G19	125:2	3000	80	80	65
-G21	250:3	4000	80	80	65
-G23	125:1	6000	80	80	65
-G27	250:1	12000	80	80	65
-G34	500:1	24000	85	85	58
-G41	1250:1	60000	90	90	58
-G62	1500:1	720000	100	100	43

* Maximum rating of gearbox



P542-M48 Uni-Polar Geared Stepper Motor

M48 xx motor specifications

Standard motor versions		P542 -M48 1U	P542- M48 2U	Step rate @ typical working torque L/R : 200 Hz L/4R: 450 Hz
Number of phases		4	4	
Rated voltage (L/R Drive)	V	5	12	
Current per phase	mA	550	230	
Resistance per phase	Ohm	9.1	52.4	
Inductance per phase	mH	8.1	51.7	

P542-M48 series Geared Stepper Motor motor specification and part numbers

Geared Stepper Motor	Ratio	Steps per rev at Output	Holding Torque Ncm	Maximum Continuous Torque Ncm*	Efficiency
P542-M48 -G01....	25:6	200	20	20	80
-G03	25:4	300	25	25	80
-G04	25:3	400	35	35	80
-G05	10:1	480	40	40	70
-G06	25:2	600	45	45	70
-G08	50:3	800	60	60	70
-G09	20:1	960	65	65	70
-G11	25:1	1200	70	70	70
-G14	100:3	1600	75	75	70
-G16	125:3	2000	80	80	70
-G17	50:1	2400	80	80	70
-G19	125:2	3000	80	80	65
-G21	250:3	4000	80	80	65
-G23	125:1	6000	80	80	65
-G27	250:1	12000	80	80	65
-G34	500:1	24000	85	85	58
-G41	1250:1	60000	90	90	58
-G62	1500:1	720000	100	100	43

* Maximum rating of gearbox



P542-M48 Bi-Polar Geared Stepper Motor

M48 xx motor specifications

Standard motor versions		P542- M48 1B	P542-M48 2B	Step rate @ typical working torque L/R : 200 Hz L/4R: 450 Hz
Number of phases		2	2	
Rated voltage (L/R Drive)	V	5	12	
Current per phase	mA	550	230	
Resistance per phase	Ohm	9.1	52.4	
Inductance per phase	mH	16.7	85.7	

P542-M48 series Geared Stepper Motor motor specification and part numbers

Geared Stepper Motor	Ratio	Steps per rev at Output	Holding Torque Ncm	Maximum Continuous Torque Ncm*	Efficiency
P542-M48 -G01....	25:6	200	20	20	80
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-G62	1500:1	720000	100	100	43

* Maximum rating of gearbox

P542 series ordering code

P542	M48	2U	G04	L82
Series	Motor Type	Motor Winding	Ratio	Shaft