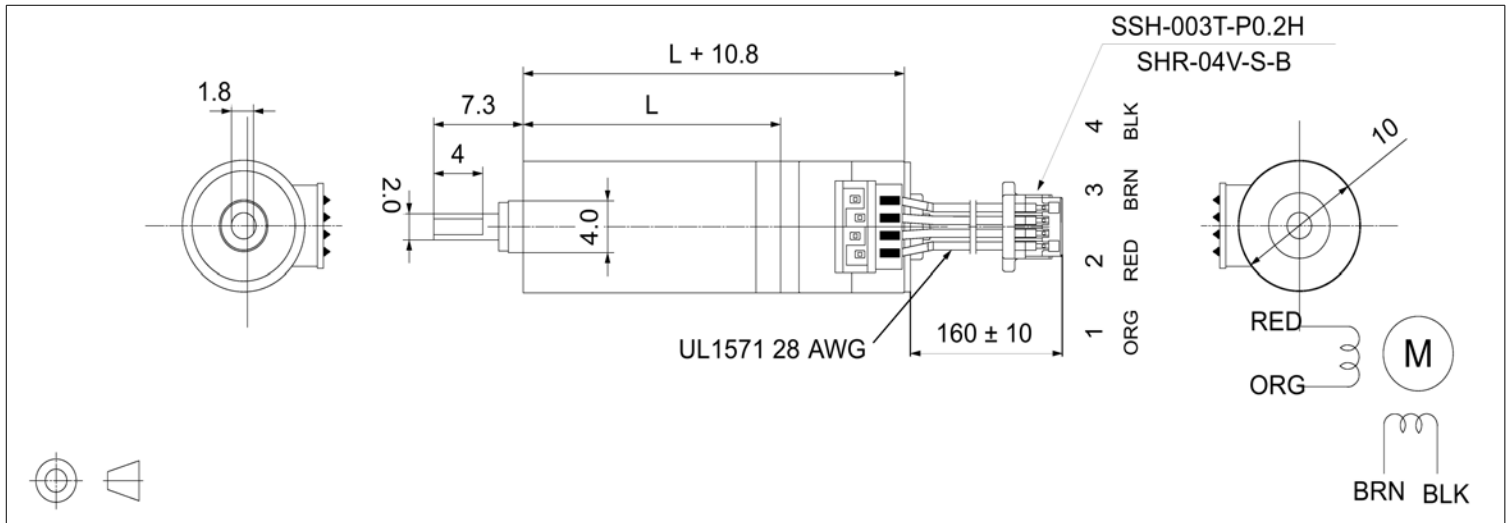


Stepper Gearmotor - 10 mm Ø



18° / Step - Exact Ratio Metal Planetary

Global Motion Products



Not to Scale - Dimensions in millimeters (mm)

Nominal Voltage	5.0 Volts	Holding Torque	15.00 mNm
Nominal Current per Phase	0.400 Amps	Max Starting Frequency	1,200 step/sec
Number of Phases	2	Pull In Torque	0.6 mNm
Phase Resistance	12.50 Ohms	Pull In Torque at Step Rate Of	500 step/sec
Phase Inductance	5.50 mH	Pull Out Torque at Step Rate Of	0.79 mNm
Step Angle	18.00 degree	Pull Out Rate	500 step/sec
Angular Accuracy	± 7 % Full Step		

Drive Type Voltage - Bipolar - 2 Phases On - Full Step - Performance will improve with a Current Driver

Characteristics - Specifications at 22°C

Ratio	Gearbox Efficiency %	Speed at Pull Out Torque Rate rpm	Holding Torque mNm		Pull Out Torque at Rate Above mNm	Length L mm	Gearmotor Mass grams	Order Part Number
4.0:1	85 %	375.0 rpm	51 mNm	2.0 mNm	2.7 mNm	23.0 mm	12 g	A100004TS00
16.0:1	75 %	93.8 rpm	180 mNm	7.1 mNm	9.5 mNm	26.1 mm	13 g	A100016TS00
64.0:1	65 %	23.4 rpm	624 mNm	24.5 mNm	32.9 mNm	29.2 mm	14 g	A100064TS00
256.0:1	55 %	5.9 rpm	2,112 mNm	83.1 mNm	111.2 mNm	32.3 mm	16 g	A100256TS00
1,024.0:1	45 %	1.5 rpm	6,912 mNm	271.9 mNm	364.0 mNm	35.4 mm	17 g	A101024TS00
4,096.0:1	40 %	0.4 rpm	24,576 mNm	966.7 mNm	1,294.3 mNm	38.5 mm	19 g	A104096TS00

CAUTION Output torque estimates neglect input friction torque and are NOT gearbox ratings. Stepper motor performance depends on drive technique. Voltage/Current Mode, One Phase/Two Phase On, Half Step, Microstep, L/R, Unipolar/Bipolar. Reflected inertia alters performance.

Relative Humidity Oper. 20% to 85%

Options Bearing Sleeve
Options: Coreless and Iron Core DC Motors. 2 Channel Magnetic Encoders including low power versions. Brushless dc motors. Winding variations. Wire cable and connector options.

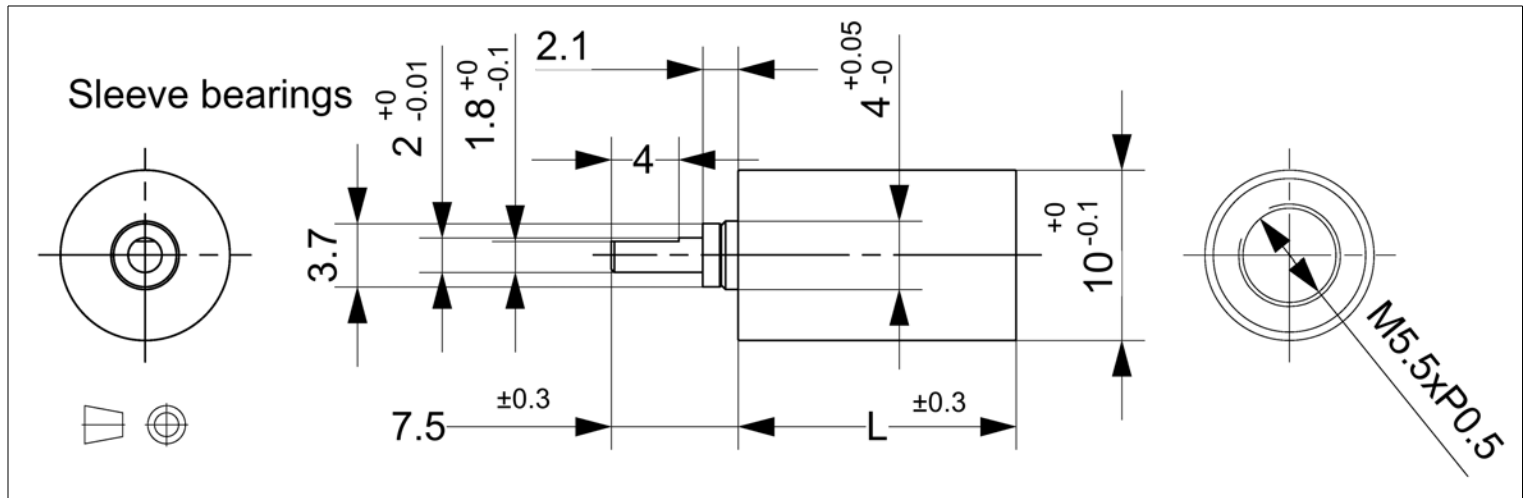
* Rotational Sense of Gearbox Same as Motor in All Ratios

Planetary Gearbox - 10 mm Ø Metal



Value Series Exact Ratio Metal Gearboxes

Global Motion Products



Not to Scale - Dimensions in millimeters (mm)

Ratio	Efficiency %	Continuous Torque mNm	Continuous Torque oz-in	Length L mm	Mass grams	Direction of Rotation*	Order Part Number
4.00:1	85 %	5 mNm	0.7 oz-in	12.20	6.2	Same	P100004AS00
16.00:1	75 %	10 mNm	1.4 oz-in	15.30	7.2	Same	P100016AS00
64.00:1	65 %	29 mNm	4.2 oz-in	18.40	8.2	Same	P100064AS00
256.00:1	55 %	39 mNm	5.6 oz-in	21.50	10.2	Same	P100256AS00
1,024.00:1	45 %	49 mNm	6.9 oz-in	24.60	11.2	Same	P101024AS00
4,096.00:1	40 %	59 mNm	8.3 oz-in	27.70	13.2	Same	P104096AS00

Radial Load Rating	≤ 1.0 N	Radial Play	≤ 0.05 mm	Max Temperature Operating	60°C
Radial Load Distance	5 mm	Axial Play	≤ 0.20 mm	Min Temperature Operating	-10°C
Axial Load	≤ 2.0 N	Backlash	≤ 3.0 °	Relative Humidity Operating	20% to 85%
Press Fit Force - Max	≤ 4.9 N	Bearing	Sleeve	Characteristics and Specifications at 22°C	

The P10 x x x MS00 Series is available as a complete gearmotor with 2 Phase Bipolar Permanent Magnet 18° Stepper Motor, Coreless DC Motors w/optional 2 Channel low Current /low Voltage Encoder 12 PPR per channel, and conventional low cost iron core dc motors, and BLDC Motors.

Options: Permanent Magnet Two Phase Bipolar Stepper Motors. Coreless and Iron Core DC Motors. 2 Channel Magnetic Encoders including low power versions.

* Rotational Sense of Gearbox Output Shaft to Motor Shaft

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RoHS Compliant

B - July 2012

Specifications Subject to change without notice