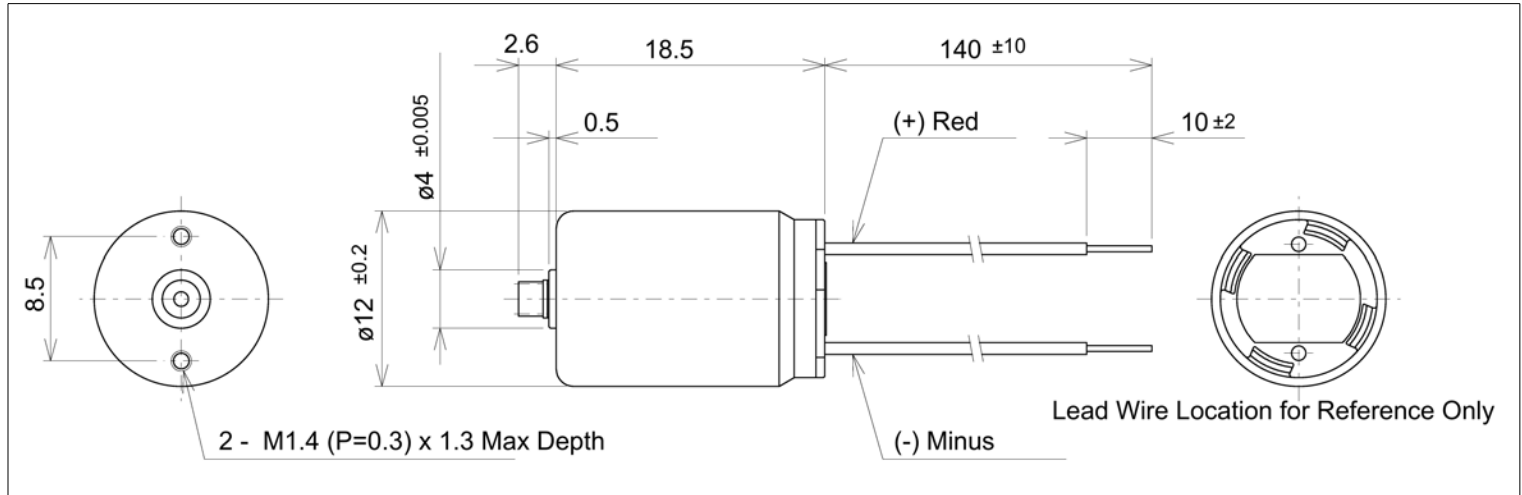


Coreless DC Motor - 12 mm Ø x 18



C12P03SY000 0.25 Watts Peak

Global Motion Products



Not to Scale - Dimensions in millimeters (mm)

Nominal Voltage	3.0 Volts	3.0 Volts	3.0 Volts
No-Load Speed	6,900 rpm	6,900 rpm	6,900 rpm
Stall Torque	1.5 mNm	15.0 gcm	0.21 oz-in
No-Load Current	0.017 Amps	0.017 Amps	0.017 Amps
Peak Output Power	0.25 Watts	0.25 Watts	0.25 Watts
Torque Constant	3.97 mNm/A	40.43 gcm/A	0.56 oz-in/A
Terminal Resistance	8.10 Ohms	8.10 Ohms	8.10 Ohms
Back-EMF Constant	0.42 V/krpm	0.42 V/krpm	0.42 V/krpm
Inductance	0.092 mH	0.092 mH	0.092 mH
Rotor Inertia	0.080 kg-m ² x10 ⁻⁷	0.080 gm cm ²	0.011 x10 ⁻⁴ oz in sec ²
Mechanical Time Constant	4.1 msec	4.1 msec	4.1 msec
Slope of Speed/Torque Curve	4,698.6 rpm/mNm	460.0 rpm/gcm	33,179.2 rpm/oz-in
Speed Constant	2,408 rpm/Volt	2,408 rpm/Volt	2,408 rpm/Volt
Motor Constant	1.39 mNm/√Watt	14.21 gcm/√Watt	0.20 oz-in/√Watt

Ratings below are at 60°C. At room temperature the ratings would be considerably higher.

Rated Power @ 5,700 rpm	0.09 Watts	0.09 Watts	0.09 Watts
Rated Torque @ 5,700 rpm	0.2 mNm	2.0 gcm	0.03 oz-in
Rated Current @ 5,700 rpm	0.065 Amps	0.065 Amps	0.065 Amps

Part Number: How to Order C12P03SY000 Characteristics - Specifications at 22 °C

Radial Load Rating	Radial Play	Max Temperature	65 °C
Radial Load Distance	Thrust Play	Min Temperature	-10 °C
Axial Load	Magnet Type NdFeB	Max Winding Temp	100 °C
Press Fit Force - Max	Bearing Type Sleeve Bearings	Mass	10.4 grams
Gearbox Options	12 mm Precision Short Length Spur Gearbox.		
Encoder Options	Must select 10 mm Ø or 13 mm Ø Coreless DC Motor series for encoder option.		
Options - Other	Wire Lead Type/Length, Connectors, Lubrication. Windings. Shaft length.		

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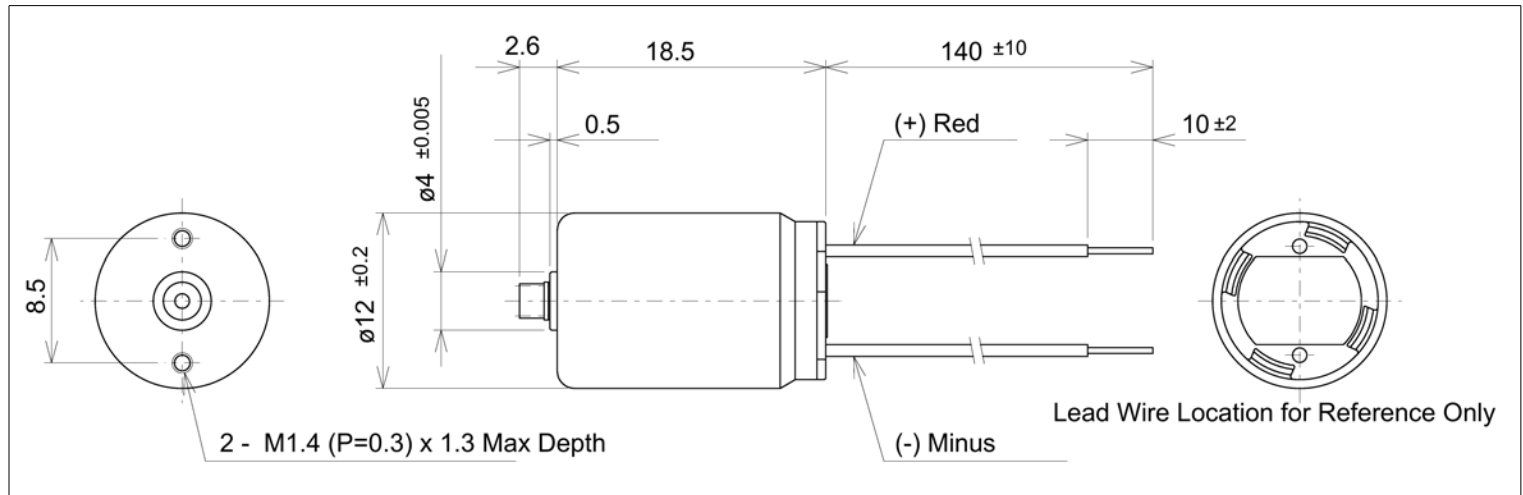
Specifications Subject to change without notice

Coreless DC Motor - 12 mm Ø x 18



C12P03SY010 0.28 Watts Peak

Global Motion Products



Not to Scale - Dimensions in millimeters (mm)

Nominal Voltage	3.0 Volts	3.0 Volts	3.0 Volts
No-Load Speed	10,900 rpm	10,900 rpm	10,900 rpm
Stall Torque	1.0 mNm	11.0 gcm	0.15 oz-in
No-Load Current	0.023 Amps	0.023 Amps	0.023 Amps
Peak Output Power	0.28 Watts	0.28 Watts	0.28 Watts
Torque Constant	2.48 mNm/A	25.30 gcm/A	0.35 oz-in/A
Terminal Resistance	7.20 Ohms	7.20 Ohms	7.20 Ohms
Back-EMF Constant	0.26 V/krpm	0.26 V/krpm	0.26 V/krpm
Inductance	0.011 mH	0.011 mH	0.011 mH
Rotor Inertia	0.080 kg-m ² x10 ⁻⁷	0.080 gm cm ²	0.011 x10 ⁻⁴ oz in sec ²
Mechanical Time Constant	9.4 msec	9.4 msec	9.4 msec
Slope of Speed/Torque Curve	10,543.9 rpm/mNm	990.9 rpm/gcm	74,455.9 rpm/oz-in
Speed Constant	3,849 rpm/Volt	3,849 rpm/Volt	3,849 rpm/Volt
Motor Constant	0.92 mNm/√Watt	9.43 gcm/√Watt	0.13 oz-in/√Watt

Ratings below are at 60°C. At room temperature the ratings would be considerably higher.

Rated Power @ 8,300 rpm	0.17 Watts	0.17 Watts	0.17 Watts
Rated Torque @ 8,300 rpm	0.2 mNm	2.1 gcm	0.03 oz-in
Rated Current @ 8,300 rpm	0.105 Amps	0.105 Amps	0.105 Amps

Part Number: How to Order C12P03SY010 Characteristics - Specifications at 22 °C

Radial Load Rating	Radial Play	Max Temperature	65 °C
Radial Load Distance	Thrust Play	Min Temperature	-10 °C
Axial Load	Magnet Type NdFeB	Max Winding Temp	100 °C
Press Fit Force - Max	Bearing Type Sleeve Bearings	Mass	10.4 grams

Gearbox Options 12 mm Precision Short Length Spur Gearbox.

Encoder Options Must select 10 mm Ø or 13 mm Ø Coreless DC Motor series for encoder option.

Options - Other Wire Lead Type/Length, Connectors, Lubrication. Windings. Shaft length.

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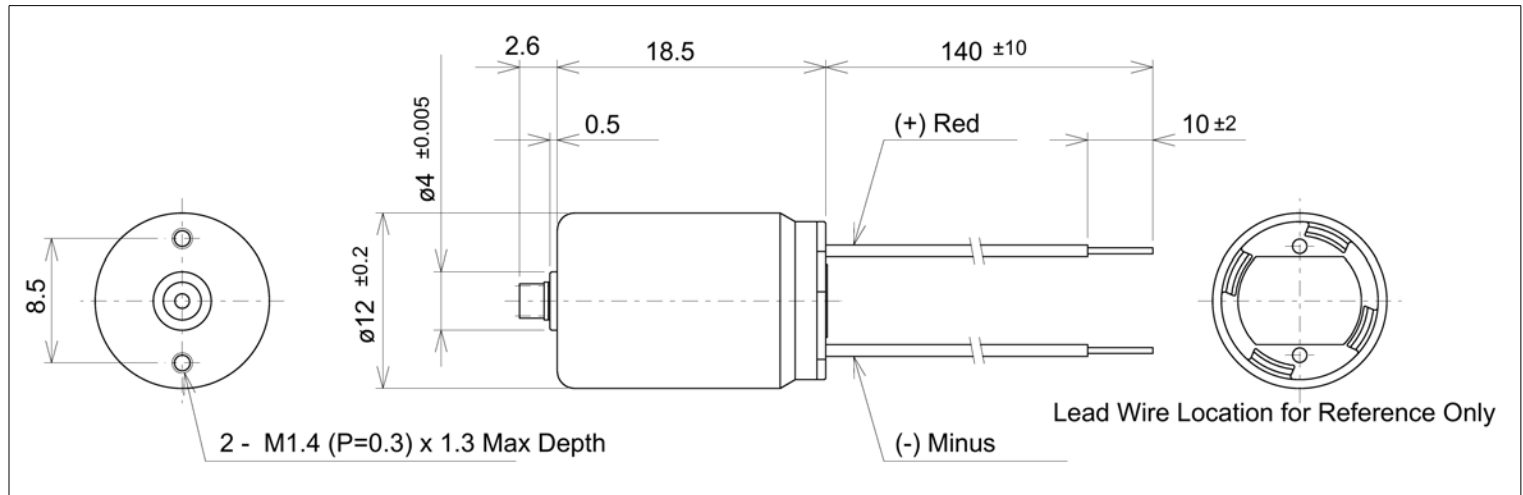
Specifications Subject to change without notice

Coreless DC Motor - 12 mm Ø x 18



C12P05SY010 0.38 Watts Peak

Global Motion Products



Not to Scale - Dimensions in millimeters (mm)

Nominal Voltage	4.5 Volts	4.5 Volts	4.5 Volts
No-Load Speed	9,000 rpm	9,000 rpm	9,000 rpm
Stall Torque	1.7 mNm	17.0 gcm	0.24 oz-in
No-Load Current	0.013 Amps	0.013 Amps	0.013 Amps
Peak Output Power	0.38 Watts	0.38 Watts	0.38 Watts
Torque Constant	4.60 mNm/A	46.90 gcm/A	0.65 oz-in/A
Terminal Resistance	12.40 Ohms	12.40 Ohms	12.40 Ohms
Back-EMF Constant	0.48 V/krpm	0.48 V/krpm	0.48 V/krpm
Inductance	0.022 mH	0.022 mH	0.022 mH
Rotor Inertia	0.080 kg-m ² x10 ⁻⁷	0.080 gm cm ²	0.011 x10 ⁻⁴ oz in sec ²
Mechanical Time Constant	4.7 msec	4.7 msec	4.7 msec
Slope of Speed/Torque Curve	5,392.2 rpm/mNm	529.4 rpm/gcm	38,077.4 rpm/oz-in
Speed Constant	2,076 rpm/Volt	2,076 rpm/Volt	2,076 rpm/Volt
Motor Constant	1.31 mNm/√Watt	13.32 gcm/√Watt	0.18 oz-in/√Watt

Ratings below are at 60°C. At room temperature the ratings would be considerably higher.

Rated Power @ 7,350 rpm	0.23 Watts	0.23 Watts	0.23 Watts
Rated Torque @ 7,350 rpm	0.4 mNm	4.5 gcm	0.06 oz-in
Rated Current @ 7,350 rpm	0.110 Amps	0.110 Amps	0.110 Amps

Part Number: How to Order C12P05SY010 Characteristics - Specifications at 22 °C

Radial Load Rating	Radial Play	Max Temperature	65 °C
Radial Load Distance	Thrust Play	Min Temperature	-10 °C
Axial Load	Magnet Type NdFeB	Max Winding Temp	100 °C
Press Fit Force - Max	Bearing Type Sleeve Bearings	Mass	10.4 grams

Gearbox Options 12 mm Precision Short Length Spur Gearbox.

Encoder Options Must select 10 mm Ø or 13 mm Ø Coreless DC Motor series for encoder option.

Options - Other Wire Lead Type/Length, Connectors, Lubrication. Windings. Shaft length.

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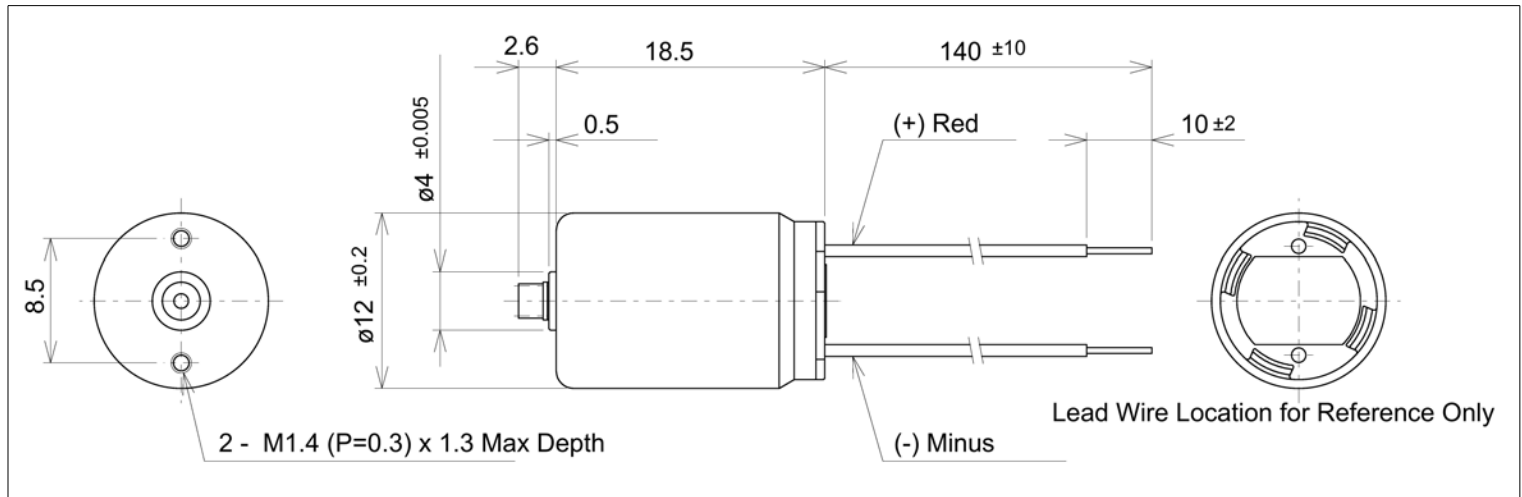
Specifications Subject to change without notice

Coreless DC Motor - 12 mm Ø x 18



C12P05SY000 0.56 Watts Peak

Global Motion Products



Not to Scale - Dimensions in millimeters (mm)

Nominal Voltage	4.5 Volts	4.5 Volts	4.5 Volts
No-Load Speed	9,900 rpm	9,900 rpm	9,900 rpm
Stall Torque	2.2 mNm	22.0 gcm	0.31 oz-in
No-Load Current	0.010 Amps	0.010 Amps	0.010 Amps
Peak Output Power	0.56 Watts	0.56 Watts	0.56 Watts
Torque Constant	4.26 mNm/A	43.41 gcm/A	0.60 oz-in/A
Terminal Resistance	8.70 Ohms	8.70 Ohms	8.70 Ohms
Back-EMF Constant	0.45 V/krpm	0.45 V/krpm	0.45 V/krpm
Inductance	0.100 mH	0.100 mH	0.100 mH
Rotor Inertia	0.080 kg-m ² x10 ⁻⁷	0.080 gm cm ²	0.011 x10 ⁻⁴ oz in sec ²
Mechanical Time Constant	3.8 msec	3.8 msec	3.8 msec
Slope of Speed/Torque Curve	4,496.5 rpm/mNm	450.0 rpm/gcm	31,752.0 rpm/oz-in
Speed Constant	2,243 rpm/Volt	2,243 rpm/Volt	2,243 rpm/Volt
Motor Constant	1.44 mNm/√Watt	14.72 gcm/√Watt	0.20 oz-in/√Watt

Ratings below are at 60°C. At room temperature the ratings would be considerably higher.

Rated Power @ 7,350 rpm	0.34 Watts	0.34 Watts	0.34 Watts
Rated Torque @ 7,350 rpm	0.5 mNm	5.2 gcm	0.07 oz-in
Rated Current @ 7,350 rpm	0.130 Amps	0.130 Amps	0.130 Amps

Part Number: How to Order C12P05SY000 Characteristics - Specifications at 22 °C

Radial Load Rating	Radial Play	Max Temperature	65 °C
Radial Load Distance	Thrust Play	Min Temperature	-10 °C
Axial Load	Magnet Type NdFeB	Max Winding Temp	100 °C
Press Fit Force - Max	Bearing Type Sleeve Bearings	Mass	10.4 grams
Gearbox Options	12 mm Precision Short Length Spur Gearbox.		
Encoder Options	Must select 10 mm Ø or 13 mm Ø Coreless DC Motor series for encoder option.		
Options - Other	Wire Lead Type/Length, Connectors, Lubrication. Windings. Shaft length.		

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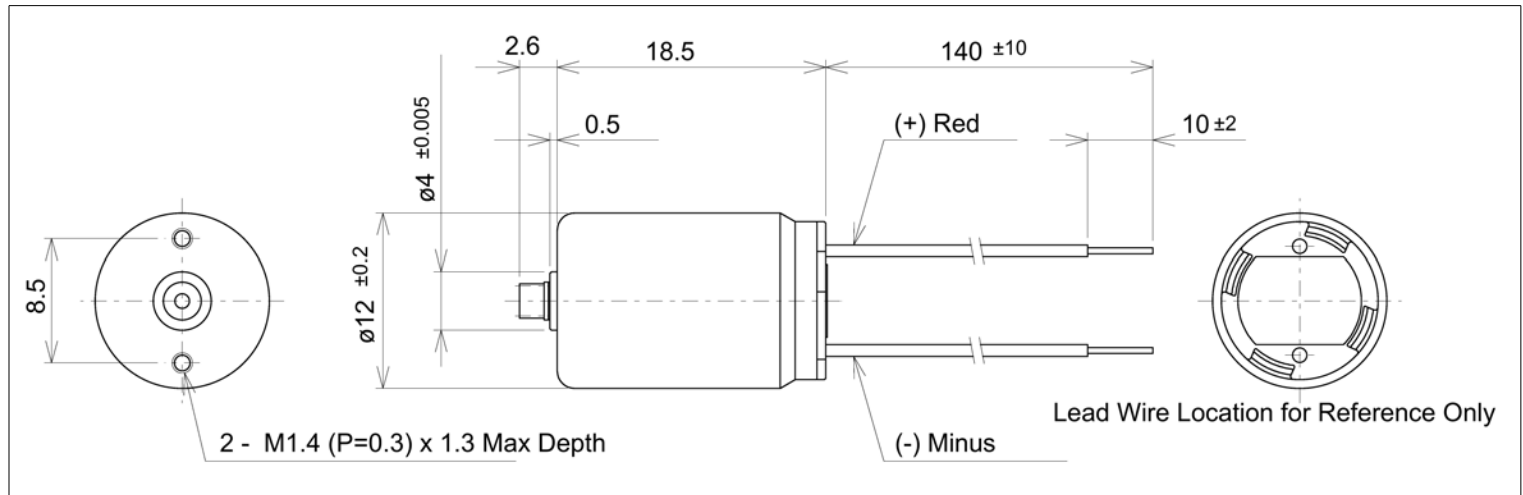
Specifications Subject to change without notice

Coreless DC Motor - 12 mm Ø x 18



C12P06SY010 0.26 Watts Peak

Global Motion Products



Not to Scale - Dimensions in millimeters (mm)

Nominal Voltage	6.0 Volts	6.0 Volts	6.0 Volts
No-Load Speed	9,200 rpm	9,200 rpm	9,200 rpm
Stall Torque	1.1 mNm	12.0 gcm	0.16 oz-in
No-Load Current	0.010 Amps	0.010 Amps	0.010 Amps
Peak Output Power	0.26 Watts	0.26 Watts	0.26 Watts
Torque Constant	5.91 mNm/A	60.22 gcm/A	0.84 oz-in/A
Terminal Resistance	31.00 Ohms	31.00 Ohms	31.00 Ohms
Back-EMF Constant	0.62 V/krpm	0.62 V/krpm	0.62 V/krpm
Inductance	0.188 mH	0.188 mH	0.188 mH
Rotor Inertia	0.080 kg-m ² x10 ⁻⁷	0.080 gm cm ²	0.011 x10 ⁻⁴ oz in sec ²
Mechanical Time Constant	7.1 msec	7.1 msec	7.1 msec
Slope of Speed/Torque Curve	8,048.3 rpm/mNm	766.7 rpm/gcm	56,833.2 rpm/oz-in
Speed Constant	1,617 rpm/Volt	1,617 rpm/Volt	1,617 rpm/Volt
Motor Constant	1.06 mNm/√Watt	10.82 gcm/√Watt	0.15 oz-in/√Watt

Ratings below are at 60°C. At room temperature the ratings would be considerably higher.

Rated Power @ 7,450 rpm	0.15 Watts	0.15 Watts	0.15 Watts
Rated Torque @ 7,450 rpm	0.2 mNm	2.4 gcm	0.03 oz-in
Rated Current @ 7,450 rpm	0.050 Amps	0.050 Amps	0.050 Amps

Part Number: How to Order C12P06SY010 Characteristics - Specifications at 22 °C

Radial Load Rating	Radial Play	Max Temperature	65 °C
Radial Load Distance	Thrust Play	Min Temperature	-10 °C
Axial Load	Magnet Type NdFeB	Max Winding Temp	100 °C
Press Fit Force - Max	Bearing Type Sleeve Bearings	Mass	10.4 grams

Gearbox Options 12 mm Precision Short Length Spur Gearbox.

Encoder Options Must select 10 mm Ø or 13 mm Ø Coreless DC Motor series for encoder option.

Options - Other Wire Lead Type/Length, Connectors, Lubrication. Windings. Shaft length.

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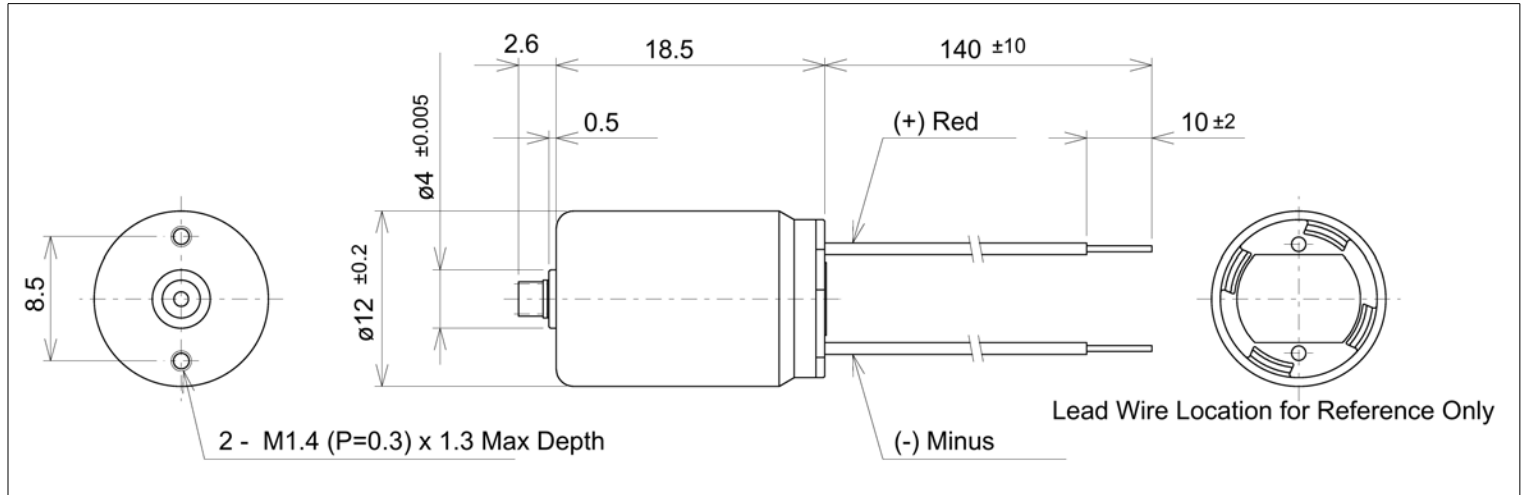
Specifications Subject to change without notice

Coreless DC Motor - 12 mm Ø x 18



C12P12SY000 0.30 Watts Peak

Global Motion Products



Not to Scale - Dimensions in millimeters (mm)

Nominal Voltage	12.0 Volts	12.0 Volts	12.0 Volts
No-Load Speed	8,700 rpm	8,700 rpm	8,700 rpm
Stall Torque	1.4 mNm	14.0 gcm	0.20 oz-in
No-Load Current	0.007 Amps	0.007 Amps	0.007 Amps
Peak Output Power	0.30 Watts	0.30 Watts	0.30 Watts
Torque Constant	12.40 mNm/A	126.48 gcm/A	1.76 oz-in/A
Terminal Resistance	105.00 Ohms	105.00 Ohms	105.00 Ohms
Back-EMF Constant	1.30 V/krpm	1.30 V/krpm	1.30 V/krpm
Inductance	0.635 mH	0.635 mH	0.635 mH
Rotor Inertia	0.080 kg-m ² x10 ⁻⁷	0.080 gm cm ²	0.011 x10 ⁻⁴ oz in sec ²
Mechanical Time Constant	5.5 msec	5.5 msec	5.5 msec
Slope of Speed/Torque Curve	6,137.6 rpm/mNm	621.4 rpm/gcm	43,340.8 rpm/oz-in
Speed Constant	770 rpm/Volt	770 rpm/Volt	770 rpm/Volt
Motor Constant	1.21 mNm/√Watt	12.34 gcm/√Watt	0.17 oz-in/√Watt

Ratings below are at 60°C. At room temperature the ratings would be considerably higher.

Rated Power @ 6,900 rpm	0.18 Watts	0.18 Watts	0.18 Watts
Rated Torque @ 6,900 rpm	0.4 mNm	3.6 gcm	0.05 oz-in
Rated Current @ 6,900 rpm	0.035 Amps	0.035 Amps	0.035 Amps

Part Number: How to Order C12P12SY000 Characteristics - Specifications at 22 °C

Radial Load Rating	Radial Play	Max Temperature	65 °C
Radial Load Distance	Thrust Play	Min Temperature	-10 °C
Axial Load	Magnet Type NdFeB	Max Winding Temp	100 °C
Press Fit Force - Max	Bearing Type Sleeve Bearings	Mass	10.4 grams
Gearbox Options	12 mm Precision Short Length Spur Gearbox.		
Encoder Options	Must select 10 mm Ø or 13 mm Ø Coreless DC Motor series for encoder option.		
Options - Other	Wire Lead Type/Length, Connectors, Lubrication. Windings. Shaft length.		

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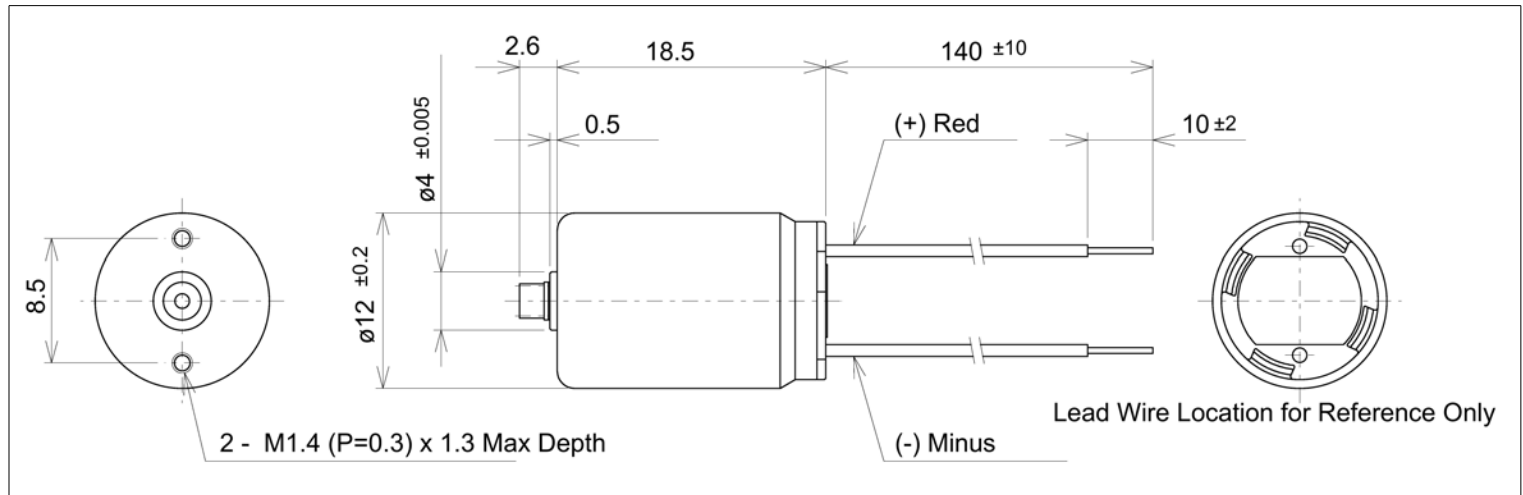
Specifications Subject to change without notice

Coreless DC Motor - 12 mm Ø x 18



C12P12SY000 0.54 Watts Peak

Global Motion Products



Not to Scale - Dimensions in millimeters (mm)

Nominal Voltage	12.0 Volts	12.0 Volts	12.0 Volts
No-Load Speed	14,500 rpm	14,500 rpm	14,500 rpm
Stall Torque	1.5 mNm	15.0 gcm	0.21 oz-in
No-Load Current	0.007 Amps	0.007 Amps	0.007 Amps
Peak Output Power	0.54 Watts	0.54 Watts	0.54 Watts
Torque Constant	7.63 mNm/A	77.81 gcm/A	1.08 oz-in/A
Terminal Resistance	62.00 Ohms	62.00 Ohms	62.00 Ohms
Back-EMF Constant	0.80 V/krpm	0.80 V/krpm	0.80 V/krpm
Inductance	0.304 mH	0.304 mH	0.304 mH
Rotor Inertia	0.080 kg-m ² x10 ⁻⁷	0.080 gm cm ²	0.011 x10 ⁻⁴ oz in sec ²
Mechanical Time Constant	8.5 msec	8.5 msec	8.5 msec
Slope of Speed/Torque Curve	9,817.8 rpm/mNm	966.7 rpm/gcm	69,329.2 rpm/oz-in
Speed Constant	1,251 rpm/Volt	1,251 rpm/Volt	1,251 rpm/Volt
Motor Constant	0.97 mNm/√Watt	9.88 gcm/√Watt	0.14 oz-in/√Watt

Ratings below are at 60°C. At room temperature the ratings would be considerably higher.

Rated Power @ 11,500 rpm	0.29 Watts	0.29 Watts	0.29 Watts
Rated Torque @ 11,500 rpm	0.3 mNm	3.4 gcm	0.05 oz-in
Rated Current @ 11,500 rpm	0.050 Amps	0.050 Amps	0.050 Amps

Part Number: How to Order C12P12SY000 Characteristics - Specifications at 22 °C

Radial Load Rating	Radial Play	Max Temperature	65 °C
Radial Load Distance	Thrust Play	Min Temperature	-10 °C
Axial Load	Magnet Type NdFeB	Max Winding Temp	100 °C
Press Fit Force - Max	Bearing Type Sleeve Bearings	Mass	10.4 grams

Gearbox Options 12 mm Precision Short Length Spur Gearbox.

Encoder Options Must select 10 mm Ø or 13 mm Ø Coreless DC Motor series for encoder option.

Options - Other Wire Lead Type/Length, Connectors, Lubrication. Windings. Shaft length.

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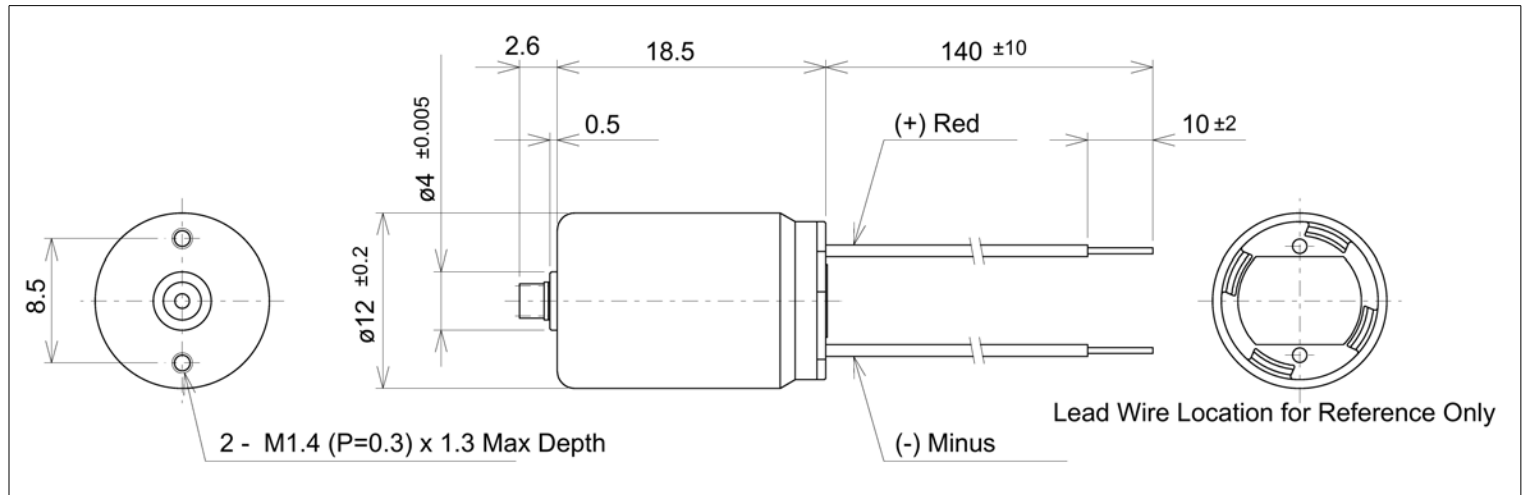
Specifications Subject to change without notice

Coreless DC Motor - 12 mm Ø x 18



C12P12SY000 0.57 Watts Peak

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Not to Scale - Dimensions in millimeters (mm)

Nominal Voltage	12.0 Volts	12.0 Volts	12.0 Volts
No-Load Speed	16,500 rpm	16,500 rpm	16,500 rpm
Stall Torque	1.4 mNm	14.0 gcm	0.20 oz-in
No-Load Current	0.013 Amps	0.013 Amps	0.013 Amps
Peak Output Power	0.57 Watts	0.57 Watts	0.57 Watts
Torque Constant	6.52 mNm/A	66.44 gcm/A	0.92 oz-in/A
Terminal Resistance	55.60 Ohms	55.60 Ohms	55.60 Ohms
Back-EMF Constant	0.68 V/krpm	0.68 V/krpm	0.68 V/krpm
Inductance	0.366 mH	0.366 mH	0.366 mH
Rotor Inertia	0.080 kg-m ² x10 ⁻⁷	0.080 gm cm ²	0.011 x10 ⁻⁴ oz in sec ²
Mechanical Time Constant	10.5 msec	10.5 msec	10.5 msec
Slope of Speed/Torque Curve	11,732.8 rpm/mNm	1,178.6 rpm/gcm	82,852.0 rpm/oz-in
Speed Constant	1,466 rpm/Volt	1,466 rpm/Volt	1,466 rpm/Volt
Motor Constant	0.87 mNm/√Watt	8.91 gcm/√Watt	0.12 oz-in/√Watt

Ratings below are at 60°C. At room temperature the ratings would be considerably higher.

Rated Power @ 12,550 rpm	0.32 Watts	0.32 Watts	0.32 Watts
Rated Torque @ 12,550 rpm	0.3 mNm	3.1 gcm	0.04 oz-in
Rated Current @ 12,550 rpm	0.060 Amps	0.060 Amps	0.060 Amps

Part Number: How to Order C12P12SY000 Characteristics - Specifications at 22 °C

Radial Load Rating	Radial Play	Max Temperature	65 °C
Radial Load Distance	Thrust Play	Min Temperature	-10 °C
Axial Load	Magnet Type NdFeB	Max Winding Temp	100 °C
Press Fit Force - Max	Bearing Type Sleeve Bearings	Mass	10.4 grams

Gearbox Options 12 mm Precision Short Length Spur Gearbox.

Encoder Options Must select 10 mm Ø or 13 mm Ø Coreless DC Motor series for encoder option.

Options - Other Wire Lead Type/Length, Connectors, Lubrication. Windings. Shaft length.

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