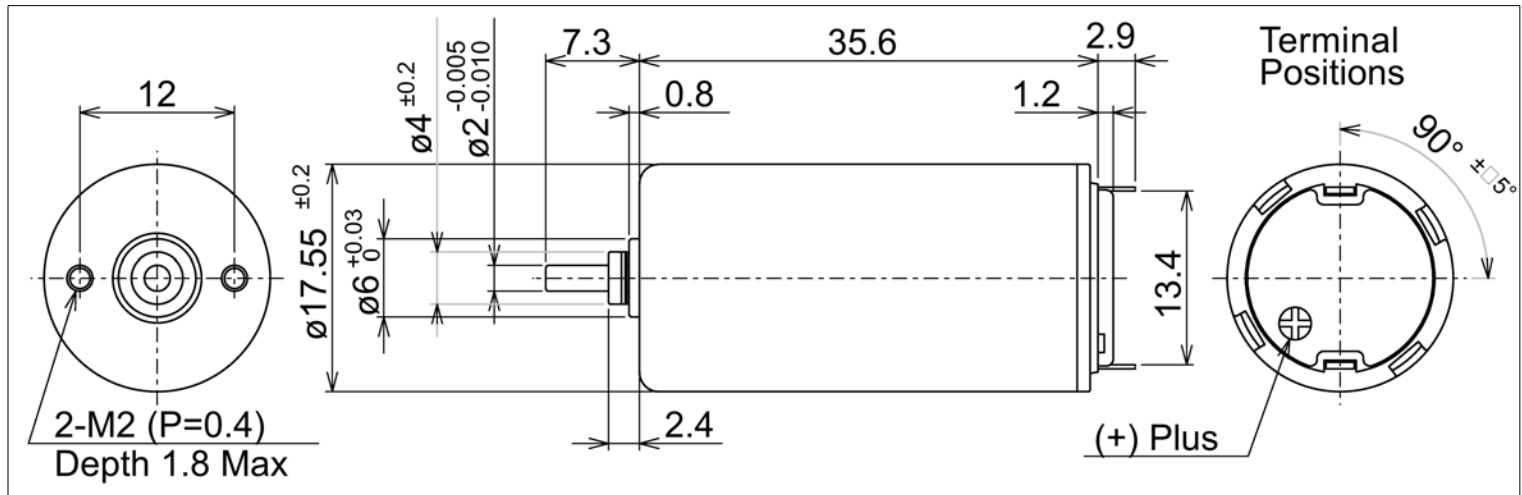


18 mm Ø Coreless DC Motor

C18G06SX000 3.57 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	8,500 rpm	8,500 rpm	8,500 rpm
Stall Torque	16.4 mNm	168.0 gcm	2.33 oz-in
No-Load Current	0.060 Amps	0.060 Amps	0.060 Amps
Peak Output Power	3.57 Watts	3.57 Watts	3.57 Watts
Torque Constant	6.58 mNm/A	67.09 gcm/A	0.93 oz-in/A
Terminal Resistance	2.40 Ohms	2.40 Ohms	2.40 Ohms
Back-EMF Constant	0.69 V/krpm	0.69 V/krpm	0.69 V/krpm
Inductance	0.037 mH	0.037 mH	0.037 mH
Rotor Inertia	1.450 kg-m ² x10 ⁻⁷	1.450 gm cm ²	0.205 x10 ⁻⁴ oz in sec ²
Mechanical Time Constant	8.0 msec	8.0 msec	8.0 msec
Slope of Speed/Torque Curve	516.8 rpm/mNm	50.6 rpm/gcm	3,649.4 rpm/oz-in
Speed Constant	1,452 rpm/Volt	1,452 rpm/Volt	1,452 rpm/Volt
Motor Constant	4.25 mNm/√Watt	43.30 gcm/√Watt	0.60 oz-in/√Watt

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

Rated Power @ 6,470 rpm	1.90 Watts	1.90 Watts	1.90 Watts
Rated Torque @ 6,470 rpm	4.8 mNm	49.0 gcm	0.68 oz-in
Rated Current @ 6,470 rpm	0.790 Amps	0.790 Amps	0.790 Amps

Part Number: How to Order C18G06SX000 Characteristics - Specifications at 22 °C

Radial Load Rating	Radial Play	Max Temperature	65 °C
Radial Load Distance	Thrust Play ≤ 0.300 mm	Min Temperature	-10 °C
Axial Load	Magnet Type NdFeB	Max Winding Temp	100 °C
Press Fit Force - Max	Bearing Type Sleeve (Optional)	Mass	42.8 grams
Gearbox Options	Planetary including Low Backlash & Sintered Planetary. Ball Bearing Options. Special lubrication.		
Encoder Options	Integral 3 Channel Magnetoresistive w/ Complementary Outputs & Line Drivers or 2 Track Optical		
Options - Other	Rear Shaft Extension. Ball Bearings. Wire Leads and connectors. Additional Windings.		

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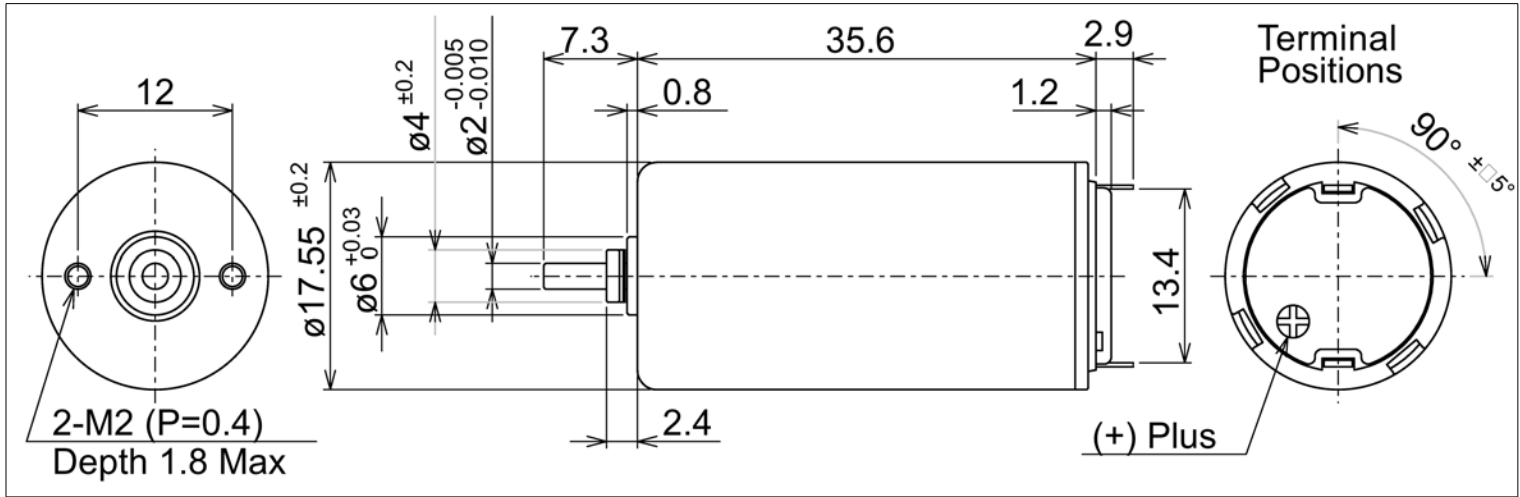
Specifications Subject to change without notice

18 mm Ø Coreless DC Motor

C18G12SX000 1.25 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	3,100 rpm	3,100 rpm	3,100 rpm
Stall Torque	15.6 mNm	159.0 gcm	2.21 oz-in
No-Load Current	0.007 Amps	0.007 Amps	0.007 Amps
Peak Output Power	1.25 Watts	1.25 Watts	1.25 Watts
Torque Constant	36.39 mNm/A	371.08 gcm/A	5.15 oz-in/A
Terminal Resistance	28.00 Ohms	28.00 Ohms	28.00 Ohms
Back-EMF Constant	3.81 V/krpm	3.81 V/krpm	3.81 V/krpm
Inductance	1.317 mH	1.317 mH	1.317 mH
Rotor Inertia	1.620 kg-m ² x10 ⁻⁷	1.620 gm cm ²	0.229 x10 ⁻⁴ oz in sec ²
Mechanical Time Constant	3.4 msec	3.4 msec	3.4 msec
Slope of Speed/Torque Curve	198.8 rpm/mNm	19.5 rpm/gcm	1,403.6 rpm/oz-in
Speed Constant	262 rpm/Volt	262 rpm/Volt	262 rpm/Volt
Motor Constant	6.88 mNm/√Watt	70.13 gcm/√Watt	0.97 oz-in/√Watt

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

Rated Power @ 2,240 rpm	0.92 Watts	0.92 Watts	0.92 Watts
Rated Torque @ 2,240 rpm	5.2 mNm	53.2 gcm	0.74 oz-in
Rated Current @ 2,240 rpm	0.150 Amps	0.150 Amps	0.150 Amps

Part Number: How to Order C18G12SX000 Characteristics - Specifications at 22 °C

Radial Load Rating	Radial Play	Max Temperature	65 °C
Radial Load Distance	Thrust Play ≤ 0.300 mm	Min Temperature	-10 °C
Axial Load	Magnet Type NdFeB	Max Winding Temp	100 °C
Press Fit Force - Max	Bearing Type Sleeve (Optional)	Mass	42.8 grams
Gearbox Options	Planetary including Low Backlash & Sintered Planetary. Ball Bearing Options. Special lubrication.		
Encoder Options	Integral 3 Channel Magnetoresistive w/ Complementary Outputs & Line Drivers or 2 Track Optical		
Options - Other	Rear Shaft Extension. Ball Bearings. Wire Leads and connectors. Additional Windings.		

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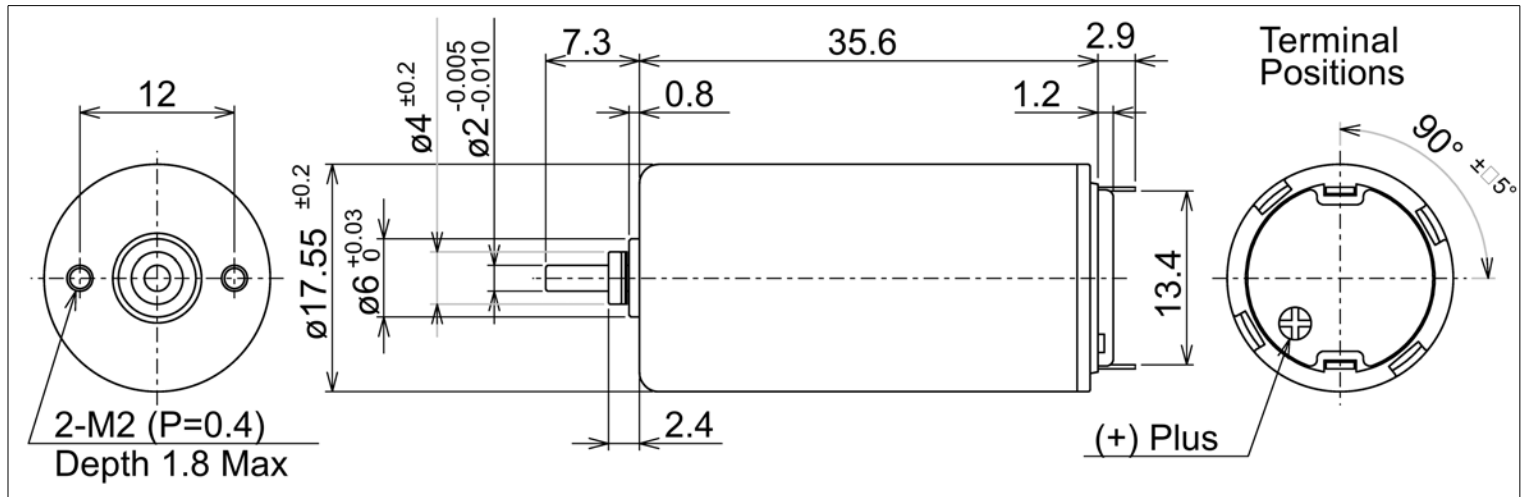
Specifications Subject to change without notice

18 mm Ø Coreless DC Motor

C18G12SX010 7.19 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	10,200 rpm	10,200 rpm	10,200 rpm
Stall Torque	27.2 mNm	277.0 gcm	3.85 oz-in
No-Load Current	0.027 Amps	0.027 Amps	0.027 Amps
Peak Output Power	7.19 Watts	7.19 Watts	7.19 Watts

Torque Constant	11.11 mNm/A	113.31 gcm/A	1.57 oz-in/A
Terminal Resistance	4.90 Ohms	4.90 Ohms	4.90 Ohms
Back-EMF Constant	1.16 V/krpm	1.16 V/krpm	1.16 V/krpm
Inductance	0.109 mH	0.109 mH	0.109 mH
Rotor Inertia	1.060 kg-m ² x10 ⁻⁷	1.060 gm cm ²	0.150 x10 ⁻⁴ oz in sec ²

Mechanical Time Constant	4.2 msec	4.2 msec	4.2 msec
Slope of Speed/Torque Curve	374.8 rpm/mNm	36.8 rpm/gcm	2,646.8 rpm/oz-in
Speed Constant	859 rpm/Volt	859 rpm/Volt	859 rpm/Volt
Motor Constant	5.02 mNm/√Watt	51.19 gcm/√Watt	0.71 oz-in/√Watt

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

Rated Power @ 8,220 rpm	4.22 Watts	4.22 Watts	4.22 Watts
Rated Torque @ 8,220 rpm	6.4 mNm	65.0 gcm	0.90 oz-in
Rated Current @ 8,220 rpm	0.600 Amps	0.600 Amps	0.600 Amps

Part Number: How to Order C18G12SX010 Characteristics - Specifications at 22 °C

Radial Load Rating	Radial Play	Max Temperature	65 °C
Radial Load Distance	Thrust Play ≤ 0.300 mm	Min Temperature	-10 °C
Axial Load	Magnet Type NdFeB	Max Winding Temp	100 °C
Press Fit Force - Max	Bearing Type Sleeve (Optional)	Mass	42.8 grams
Gearbox Options	Planetary including Low Backlash & Sintered Planetary. Ball Bearing Options. Special lubrication.		
Encoder Options	Integral 3 Channel Magnetoresistive w/ Complementary Outputs & Line Drivers or 2 Track Optical		
Options - Other	Rear Shaft Extension. Ball Bearings. Wire Leads and connectors. Additional Windings.		

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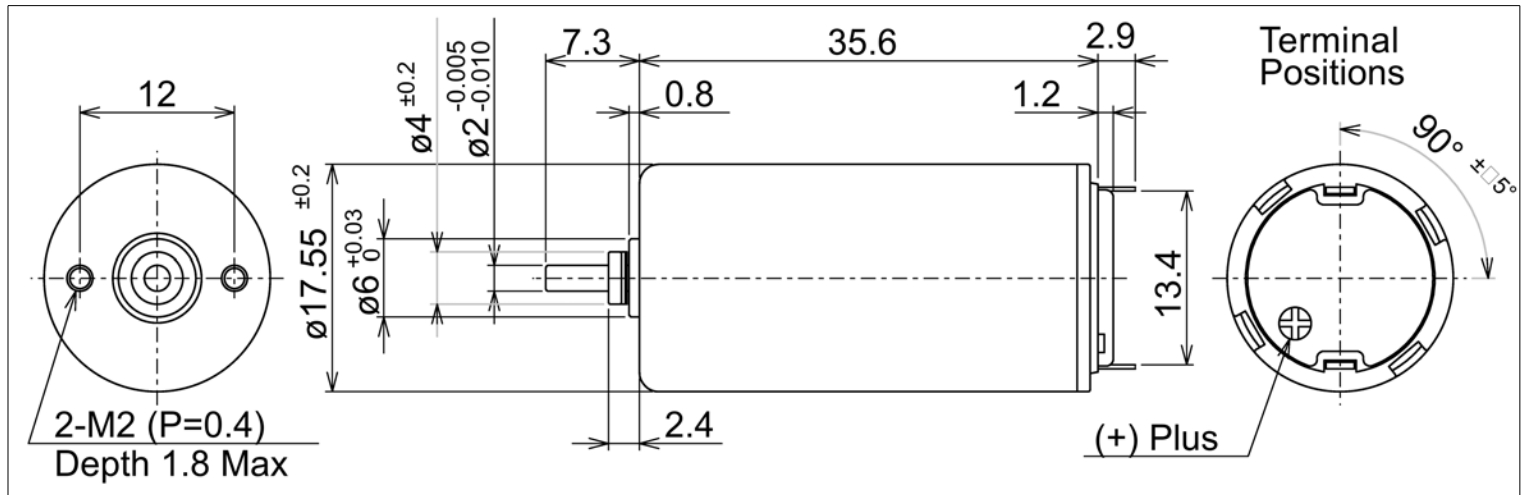
Specifications Subject to change without notice

18 mm Ø Coreless DC Motor

C18G12SX020 4.46 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	19.9 mNm	203.0 gcm	2.82 oz-in
No-Load Current	0.027 Amps	0.027 Amps	0.027 Amps
Peak Output Power	4.46 Watts	4.46 Watts	4.46 Watts

Torque Constant	12.94 mNm/A	131.98 gcm/A	1.83 oz-in/A
Terminal Resistance	7.80 Ohms	7.80 Ohms	7.80 Ohms
Back-EMF Constant	1.36 V/krpm	1.36 V/krpm	1.36 V/krpm
Inductance	0.134 mH	0.134 mH	0.134 mH
Rotor Inertia	1.200 kg-m ² x10 ⁻⁷	1.200 gm cm ²	0.170 x10 ⁻⁴ oz in sec ²

Mechanical Time Constant	5.6 msec	5.6 msec	5.6 msec
Slope of Speed/Torque Curve	436.9 rpm/mNm	42.9 rpm/gcm	3,085.3 rpm/oz-in
Speed Constant	738 rpm/Volt	738 rpm/Volt	738 rpm/Volt
Motor Constant	4.63 mNm/ $\sqrt{\text{Watt}}$	47.26 gcm/ $\sqrt{\text{Watt}}$	0.66 oz-in/ $\sqrt{\text{Watt}}$

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

Rated Power @ 7,320 rpm	2.25 Watts	2.25 Watts	2.25 Watts
Rated Torque @ 7,320 rpm	3.8 mNm	38.7 gcm	0.54 oz-in
Rated Current @ 7,320 rpm	0.320 Amps	0.320 Amps	0.320 Amps

Part Number: How to Order C18G12SX020 Characteristics - Specifications at 22 °C

Radial Load Rating	Radial Play	Max Temperature	65 °C
Radial Load Distance	Thrust Play ≤ 0.300 mm	Min Temperature	-10 °C
Axial Load	Magnet Type NdFeB	Max Winding Temp	100 °C
Press Fit Force - Max	Bearing Type Sleeve (Optional)	Mass	42.8 grams
Gearbox Options	Planetary including Low Backlash & Sintered Planetary. Ball Bearing Options. Special lubrication.		
Encoder Options	Integral 3 Channel Magnetoresistive w/ Complementary Outputs & Line Drivers or 2 Track Optical		
Options - Other	Rear Shaft Extension. Ball Bearings. Wire Leads and connectors. Additional Windings.		

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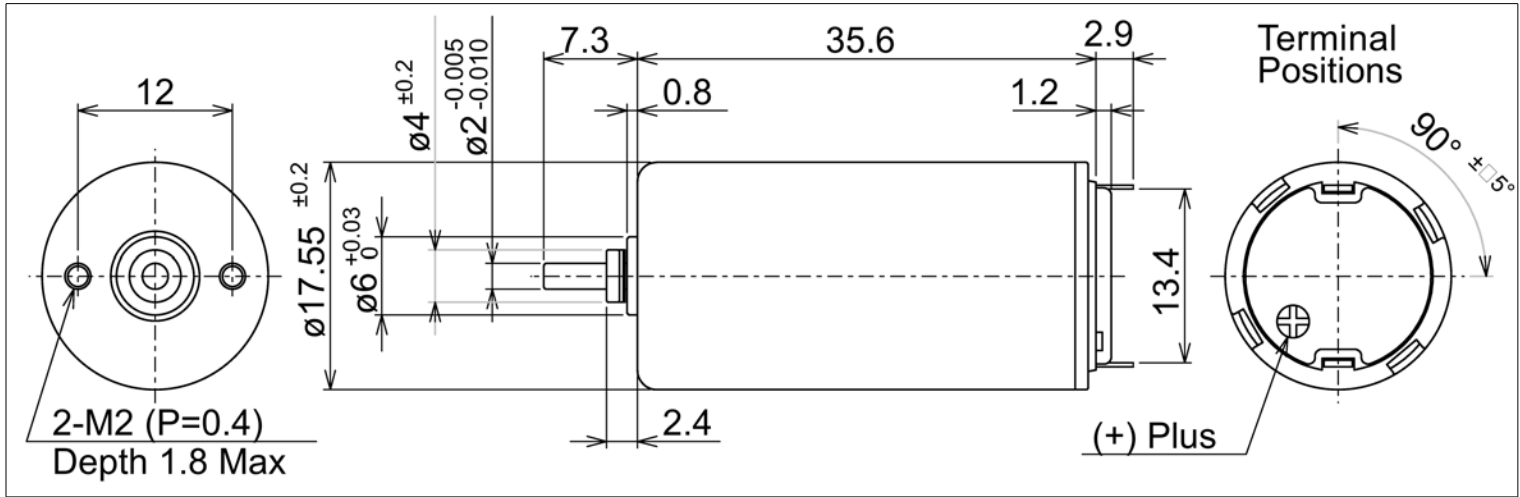
Specifications Subject to change without notice

18 mm Ø Coreless DC Motor

C18G12SX030 6.01 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	10,300 rpm	10,300 rpm	10,300 rpm
Stall Torque	22.6 mNm	231.0 gcm	3.21 oz-in
No-Load Current	0.033 Amps	0.033 Amps	0.033 Amps
Peak Output Power	6.01 Watts	6.01 Watts	6.01 Watts
Torque Constant	10.95 mNm/A	111.62 gcm/A	1.55 oz-in/A
Terminal Resistance	5.80 Ohms	5.80 Ohms	5.80 Ohms
Back-EMF Constant	1.15 V/krpm	1.15 V/krpm	1.15 V/krpm
Inductance	0.101 mH	0.101 mH	0.101 mH
Rotor Inertia	1.420 kg-m ² x10 ⁻⁷	1.420 gm cm ²	0.201 x10 ⁻⁴ oz in sec ²
Mechanical Time Constant	6.9 msec	6.9 msec	6.9 msec
Slope of Speed/Torque Curve	454.8 rpm/mNm	44.6 rpm/gcm	3,211.6 rpm/oz-in
Speed Constant	872 rpm/Volt	872 rpm/Volt	872 rpm/Volt
Motor Constant	4.55 mNm/√Watt	46.35 gcm/√Watt	0.64 oz-in/√Watt

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

Rated Power @ 9,140 rpm	2.81 Watts	2.81 Watts	2.81 Watts
Rated Torque @ 9,140 rpm	3.6 mNm	36.5 gcm	0.51 oz-in
Rated Current @ 9,140 rpm	0.360 Amps	0.360 Amps	0.360 Amps

Part Number: How to Order C18G12SX030 Characteristics - Specifications at 22 °C

Radial Load Rating	Radial Play	Max Temperature	65 °C
Radial Load Distance	Thrust Play ≤ 0.300 mm	Min Temperature	-10 °C
Axial Load	Magnet Type NdFeB	Max Winding Temp	100 °C
Press Fit Force - Max	Bearing Type Sleeve (Optional)	Mass	42.8 grams
Gearbox Options	Planetary including Low Backlash & Sintered Planetary. Ball Bearing Options. Special lubrication.		
Encoder Options	Integral 3 Channel Magnetoresistive w/ Complementary Outputs & Line Drivers or 2 Track Optical		
Options - Other	Rear Shaft Extension. Ball Bearings. Wire Leads and connectors. Additional Windings.		

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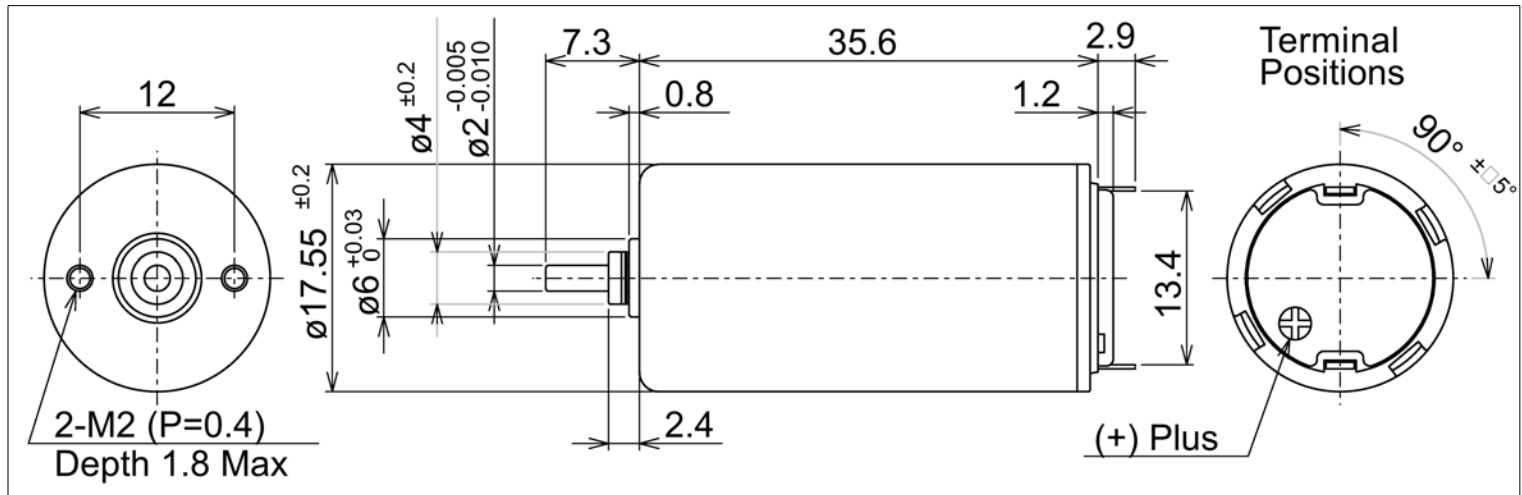
Specifications Subject to change without notice

18 mm Ø Coreless DC Motor

C18G24SX000 10.19 Watts Peak



Global Motion Products



Not to Scale - Dimensions in millimeters (mm)

Nominal Voltage	24.0 Volts	24.0 Volts	24.0 Volts
No-Load Speed	10,200 rpm	10,200 rpm	10,200 rpm
Stall Torque	38.8 mNm	395.0 gcm	5.49 oz-in
No-Load Current	0.027 Amps	0.027 Amps	0.027 Amps
Peak Output Power	10.19 Watts	10.19 Watts	10.19 Watts
Torque Constant	22.13 mNm/A	225.63 gcm/A	3.13 oz-in/A
Terminal Resistance	13.70 Ohms	13.70 Ohms	13.70 Ohms
Back-EMF Constant	2.32 V/krpm	2.32 V/krpm	2.32 V/krpm
Inductance	0.527 mH	0.527 mH	0.527 mH
Rotor Inertia	0.970 kg-m ² x10 ⁻⁷	0.970 gm cm ²	0.137 x10 ⁻⁴ oz in sec ²
Mechanical Time Constant	2.7 msec	2.7 msec	2.7 msec
Slope of Speed/Torque Curve	263.1 rpm/mNm	25.8 rpm/gcm	1,858.2 rpm/oz-in
Speed Constant	432 rpm/Volt	432 rpm/Volt	432 rpm/Volt
Motor Constant	5.98 mNm/√Watt	60.96 gcm/√Watt	0.85 oz-in/√Watt

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

Rated Power @ 8,440 rpm	5.20 Watts	5.20 Watts	5.20 Watts
Rated Torque @ 8,440 rpm	8.0 mNm	82.0 gcm	1.14 oz-in
Rated Current @ 8,440 rpm	0.390 Amps	0.390 Amps	0.390 Amps

Part Number: How to Order C18G24SX000 Characteristics - Specifications at 22 °C

Radial Load Rating	Radial Play	Max Temperature	65 °C
Radial Load Distance	Thrust Play ≤ 0.300 mm	Min Temperature	-10 °C
Axial Load	Magnet Type NdFeB	Max Winding Temp	100 °C
Press Fit Force - Max	Bearing Type Sleeve (Optional)	Mass	42.8 grams
Gearbox Options	Planetary including Low Backlash & Sintered Planetary. Ball Bearing Options. Special lubrication.		
Encoder Options	Integral 3 Channel Magnetoresistive w/ Complementary Outputs & Line Drivers or 2 Track Optical		
Options - Other	Rear Shaft Extension. Ball Bearings. Wire Leads and connectors. Additional Windings.		

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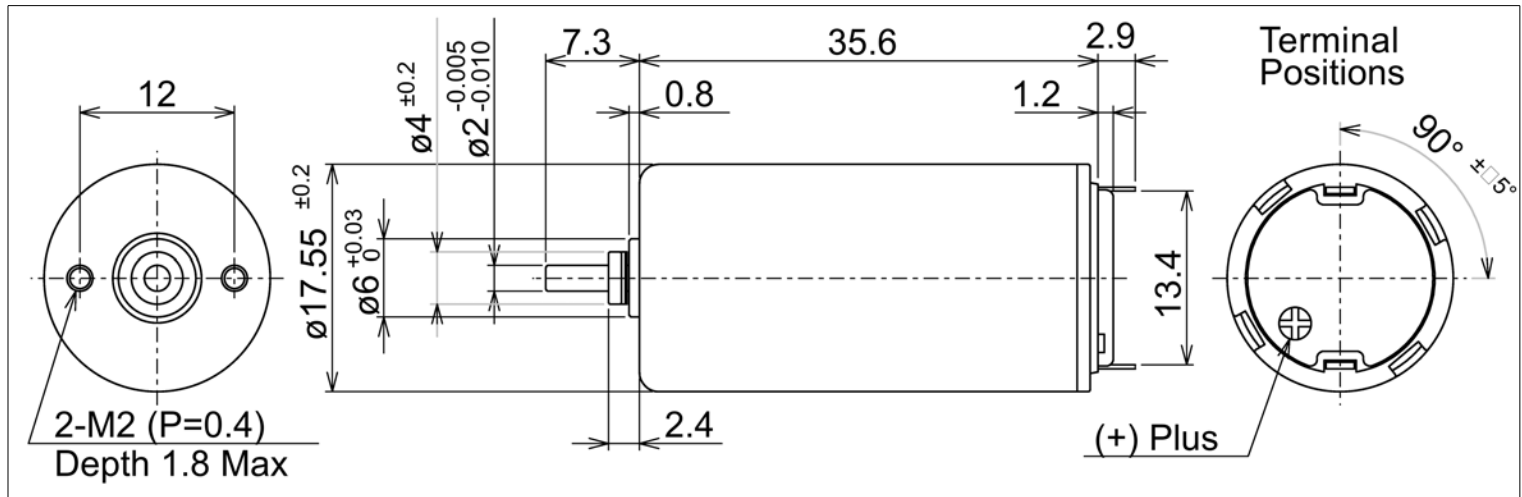
Specifications Subject to change without notice

18 mm Ø Coreless DC Motor

C18G24SX010 1.86 Watts Peak



Global Motion Products



Not to Scale - Dimensions in millimeters (mm)

Nominal Voltage	24.0 Volts	24.0 Volts	24.0 Volts
No-Load Speed	4,800 rpm	4,800 rpm	4,800 rpm
Stall Torque	15.1 mNm	154.0 gcm	2.14 oz-in
No-Load Current	0.007 Amps	0.007 Amps	0.007 Amps
Peak Output Power	1.86 Watts	1.86 Watts	1.86 Watts

Torque Constant	46.76 mNm/A	476.84 gcm/A	6.62 oz-in/A
Terminal Resistance	74.20 Ohms	74.20 Ohms	74.20 Ohms
Back-EMF Constant	4.90 V/krpm	4.90 V/krpm	4.90 V/krpm
Inductance	1.989 mH	1.989 mH	1.989 mH
Rotor Inertia	1.030 kg-m ² x10 ⁻⁷	1.030 gm cm ²	0.146 x10 ⁻⁴ oz in sec ²

Mechanical Time Constant	3.5 msec	3.5 msec	3.5 msec
Slope of Speed/Torque Curve	317.3 rpm/mNm	31.2 rpm/gcm	2,241.0 rpm/oz-in
Speed Constant	204 rpm/Volt	204 rpm/Volt	204 rpm/Volt
Motor Constant	5.43 mNm/√Watt	55.36 gcm/√Watt	0.77 oz-in/√Watt

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

Rated Power @ 3,490 rpm	1.43 Watts	1.43 Watts	1.43 Watts
Rated Torque @ 3,490 rpm	4.8 mNm	49.3 gcm	0.68 oz-in
Rated Current @ 3,490 rpm	0.110 Amps	0.110 Amps	0.110 Amps

Part Number: How to Order C18G24SX010 Characteristics - Specifications at 22 °C

Radial Load Rating	Radial Play	Max Temperature	65 °C
Radial Load Distance	Thrust Play ≤ 0.300 mm	Min Temperature	-10 °C
Axial Load	Magnet Type NdFeB	Max Winding Temp	100 °C
Press Fit Force - Max	Bearing Type Sleeve (Optional)	Mass	42.8 grams
Gearbox Options	Planetary including Low Backlash & Sintered Planetary. Ball Bearing Options. Special lubrication.		
Encoder Options	Integral 3 Channel Magnetoresistive w/ Complementary Outputs & Line Drivers or 2 Track Optical		
Options - Other	Rear Shaft Extension. Ball Bearings. Wire Leads and connectors. Additional Windings.		

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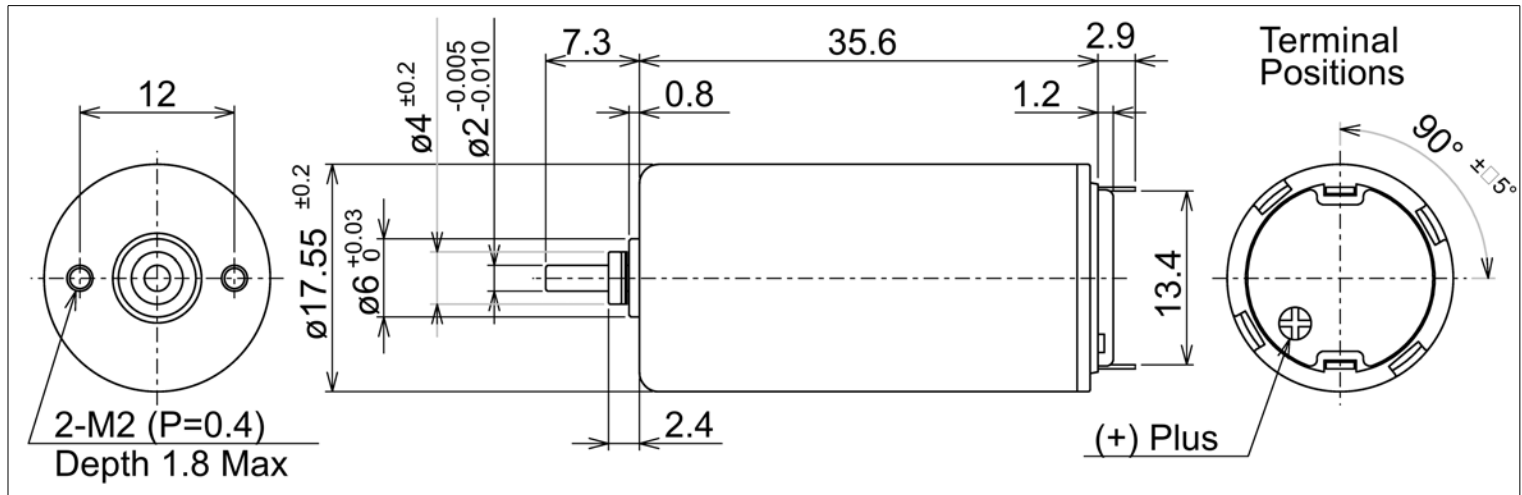
Specifications Subject to change without notice

18 mm Ø Coreless DC Motor

C18G24SX020 4.41 Watts Peak



Global Motion Products



Not to Scale - Dimensions in millimeters (mm)

Nominal Voltage	24.0 Volts	24.0 Volts	24.0 Volts
No-Load Speed	11,200 rpm	11,200 rpm	11,200 rpm
Stall Torque	15.3 mNm	156.0 gcm	2.17 oz-in
No-Load Current	0.013 Amps	0.013 Amps	0.013 Amps
Peak Output Power	4.41 Watts	4.41 Watts	4.41 Watts
Torque Constant	20.10 mNm/A	205.01 gcm/A	2.85 oz-in/A
Terminal Resistance	31.50 Ohms	31.50 Ohms	31.50 Ohms
Back-EMF Constant	2.11 V/krpm	2.11 V/krpm	2.11 V/krpm
Inductance	0.260 mH	0.260 mH	0.260 mH
Rotor Inertia	0.930 kg-m ² x10 ⁻⁷	0.930 gm cm ²	0.132 x10 ⁻⁴ oz in sec ²
Mechanical Time Constant	7.2 msec	7.2 msec	7.2 msec
Slope of Speed/Torque Curve	731.2 rpm/mNm	71.8 rpm/gcm	5,163.2 rpm/oz-in
Speed Constant	475 rpm/Volt	475 rpm/Volt	475 rpm/Volt
Motor Constant	3.58 mNm/√Watt	36.53 gcm/√Watt	0.51 oz-in/√Watt

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

Rated Power @	9,010 rpm	2.77 Watts	2.77 Watts	2.77 Watts
Rated Torque @	9,010 rpm	3.8 mNm	38.3 gcm	0.53 oz-in
Rated Current @	9,010 rpm	0.200 Amps	0.200 Amps	0.200 Amps

Part Number: How to Order C18G24SX020 Characteristics - Specifications at 22 °C

Radial Load Rating	Radial Play	Max Temperature	65 °C
Radial Load Distance	Thrust Play ≤ 0.300 mm	Min Temperature	-10 °C
Axial Load	Magnet Type NdFeB	Max Winding Temp	100 °C
Press Fit Force - Max	Bearing Type Sleeve (Optional)	Mass	42.8 grams
Gearbox Options	Planetary including Low Backlash & Sintered Planetary. Ball Bearing Options. Special lubrication.		
Encoder Options	Integral 3 Channel Magnetoresistive w/ Complementary Outputs & Line Drivers or 2 Track Optical		
Options - Other	Rear Shaft Extension. Ball Bearings. Wire Leads and connectors. Additional Windings.		

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