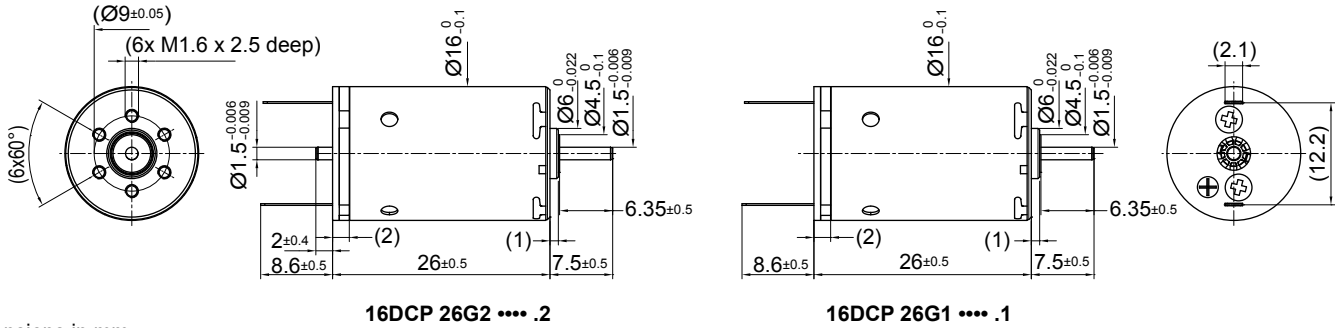


16DCP Athlonix™

Ø 16 mm • Graphite-Copper commutation • 2.42 mNm



Dimensions in mm.

Electrical Data	Symbol	16DCP 26G1/G2 .... *				Unit
		211P	208P	209E	205P	
1 Nominal Voltage	V	3	6	9	12	Volt
2 No-Load Speed	$n_0$	7210	7543	7358	7179	rpm
3 No-Load Current	$I_0$	77.2	40.1	26.3	19.1	mA
4 Terminal Resistance	R	3.4	12.2	30.8	51.5	$\Omega$
5 Output Power	$P_{2max}$	1.2	1.2	1.2	1.3	W
6 Stall Torque	mNm	2.94 (0.42)	3.16 (0.45)	2.82 (0.4)	3.13 (0.45)	mNm (oz-in)
7 Efficiency	$\eta_{max}$	50	51	49	51	%
8 Max Continuous Speed	$n_{e max}$	10000	10000	10000	10000	rpm
9 Max Continuous Torque	$M_{e max}$	2.33 (0.33)	2.36 (0.34)	2.25 (0.32)	2.42 (0.35)	mNm (oz-in)
10 Max Continuous Current	$I_{e max}$	0.72	0.38	0.24	0.18	A
11 Back-EMF Constant	$k_E$	0.38	0.73	1.11	1.53	mV/rpm
12 Torque Constant	$k_M$	3.63	6.98	10.63	14.65	mNm/A
13 Motor Regulation	$R/k^2$	256.16	249.71	272.91	239.61	10 <sup>3</sup> /Nms
14 Friction Torque	$T_F$	0.25 (0.035)	0.25 (0.035)	0.25 (0.035)	0.25 (0.035)	mNm (oz-in)
15 Mechanical Time Constant	$\tau_m$	26.42	25.27	28.31	24.95	ms
16 Rotor Inertia	J	1.03	1.01	1.04	1.04	g-cm <sup>2</sup>

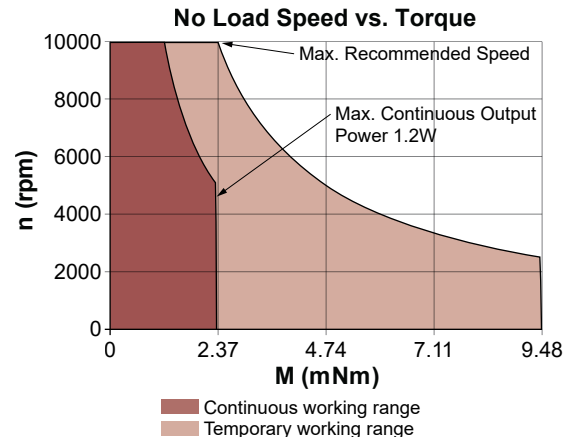
General Data				
18 Thermal Resistance (rotor/body)	$R_{th1}/R_{th2}$	7/35		°C/W
19 Thermal Time Constant (rotor/stator)	$t_{w1}/t_{w2}$	6/380		S
20 Operating Temperature Range:	motor	-30°C to 85°C (-22°F to 185°F)		°C (°F)
	rotor	100°C (212°F)		°C (°F)
21 Shaft Load Max.: (5 mm. from bearing)	With sleeve bearings			
	-radial	1.5 (5.39)		N (oz)
	-axial	100 (359.6)		N (oz)
22 Shaft Play:	-radial	0.03 (0.0012)		mm (inch)
	-axial	0.15 (0.0059)		mm (inch)
23 Weight	g	23 (0.82)		g (oz)

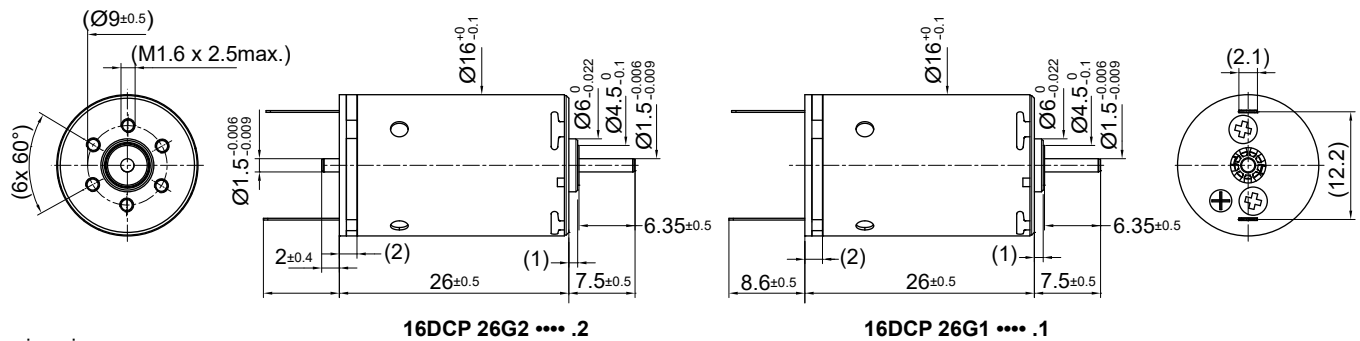
\*Also available with ball bearing

Execution Table

Gearbox	Single Shaft	MR2	M Sense B
R16	1	2	Upon Request
B16	3	4	Upon Request
BA16	3	4	Upon Request

Note:  
G1: standard commutation  
G2: special commutation for double shaft version





Dimensions in mm.

Electrical Data	Symbol	16DCP 26G1/G2 .... *			Unit
		107P	106P	205E	
1 Nominal Voltage	V	18	21	24	Volt
2 No-Load Speed	$n_0$	9184	8684	7489	rpm
3 No-Load Current	$I_0$	16.0	13.2	10.0	mA
4 Terminal Resistance	R	76.1	129.5	208.2	$\Omega$
5 Output Power	$P_{2max.}$	1.2	1.1	1.2	W
6 Stall Torque	mNm	3.84 (0.55)	3.16 (0.45)	2.94 (0.42)	mNm (oz-in)
7 Efficiency	$h_{max.}$	55	51	50	%
8 Max Continuous Speed	$n_{e max.}$	10000	10000	10000	rpm
9 Max Continuous Torque	$M_{e max.}$	2.36 (0.34)	2.18 (0.31)	2.28 (0.33)	mNm (oz-in)
10 Max Continuous Current	$I_{e max.}$	0.15	0.12	0.09	A
11 Back-EMF Constant	$k_E$	1.83	2.22	2.93	mV/rpm
12 Torque Constant	$k_M$	17.45	21.21	27.94	mNm/A
13 Motor Regulation	$R/k^2$	250.11	287.70	266.57	$10^3/Nms$
14 Friction Torque	$T_F$	0.25 (0.035)	0.25 (0.035)	0.25 (0.035)	mNm (oz-in)
15 Mechanical Time Constant	$\tau_m$	24.92	24.89	28.15	ms
16 Rotor Inertia	J	1.00	0.87	1.06	g-cm <sup>2</sup>

General Data				
18 Thermal Resistance (rotor/body)	$R_{th1}/R_{th2}$	7/35		$^{\circ}C/W$
19 Thermal Time Constant (rotor/stator)	$t_{W1}/t_{W2}$	6/380		S
20 Operating Temperature Range:	motor	-30°C to 85°C (-22°F to 185°F)		$^{\circ}C (^{\circ}F)$
	rotor	100°C (212°F)		$^{\circ}C (^{\circ}F)$
21 Shaft Load Max.: (5 mm. from bearing)		With sleeve bearings		
	-radial	1.5 (5.39)		N (oz)
	-axial	100 (359.6)		N (oz)
22 Shaft Play:	-radial	0.03 (0.0012)		mm (inch)
	-axial	0.15 (0.0059)		mm (inch)
23 Weight	g	23 (0.82)		g (oz)

\*Also available with ball bearing

Execution Table

Gearbox	Single Shaft	MR2	M Sense B
R16	1	2	Upon Request
B16	3	4	Upon Request
BA16	3	4	Upon Request

Note:

G1: standard commutation

G2: special commutation for double shaft version

