

16DCP Athlonix™

Precious metal commutation

Ø16mm

2.63 mNm



Dimensions in mm

16DCP 26P1/P2 **** .*

Electrical Data	****	211P	208P	209E	205P	
1 Nominal Voltage	V	3	6	9	12	Volt
2 No-Load Speed	n_0	7727	8044	7904	7658	rpm
3 No-Load Current	I_0	19.4	10.1	6.6	4.8	mA
4 Terminal Resistance	R	3.3	12.1	30.7	51.4	Ω
5 Output Power	P_{2max}	1.4	1.4	1.3	1.4	W
6 Stall Torque	mNm	3.25 (0.47)	3.4 (0.49)	3.04 (0.44)	3.35 (0.48)	mNm (oz-in)
7 Efficiency	η_{max}	73	74	72	73	%
8 Max Continuous Speed	$n_{e max}$	10000	10000	10000	10000	rpm
9 Max Continuous Torque	$M_{e max}$	2.58 (0.37)	2.59 (0.37)	2.46 (0.35)	2.63 (0.38)	mNm (oz-in)
10 Max Continuous Current	$I_{e max}$	0.73	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	248.57	247.65	272.02	239.14	$10^3/Nms$
14 Friction Torque	T_F	0.063 (0.009)	0.063 (0.009)	0.063 (0.009)	0.063 (0.009)	mNm (oz-in)
15 Mechanical Time Constant	τ_m	25.64	25.06	28.22	24.90	ms
16 Rotor Inertia	J	1.03	1.01	1.04	1.04	$g.cm^2$
General Data						
17 Thermal Resistance (rotor/body)	R_{th1} / R_{th2}		7/35			$^{\circ}C/W$
18 Thermal Time Constant (rotor/stator)	t_{w1}/t_{w2}		6/380			S
19 Operating Temperature Range:	t_{w1}/t_{w2}		-30°C to 85°C (-22°F to 185°F)			$^{\circ}C (^{\circ}F)$
	rotor		100°C (212°F)			$^{\circ}C (^{\circ}F)$
20 Shaft Load Max.:			With sleeve bearings			
(5mm from bearing)	-radial		1.5 (5.39)			N (oz)
	-axial		100 (359.6)			N (oz)
21 Shaft Play:	-radial		0.03 (0.0012)			mm (inch)
	-axial		0.15 (0.0059)			mm (inch)
22 Weight	g		23 (0.82)			g (oz)

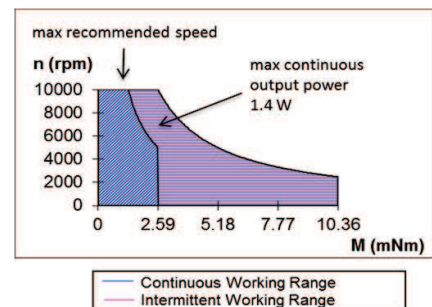
Execution Table

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

Note:

P1:standard commutation

P2:special commutation for double shaft version

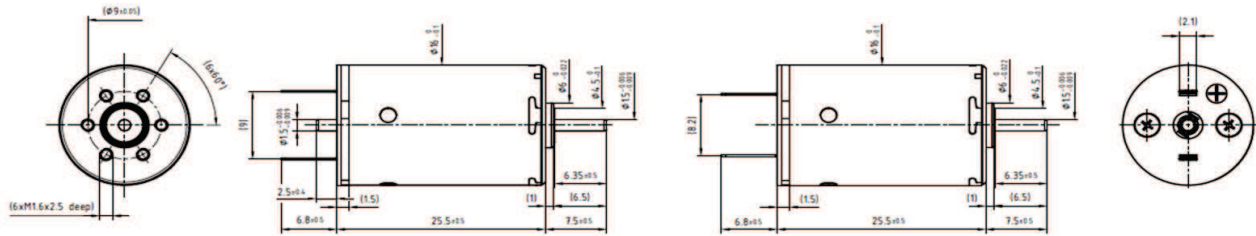


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Dimensions in mm

16DCP 26P1/P2 **** .*

Electrical Data	****	107P	106P	205E	
1 Nominal Voltage	V	18	21	24	Volt
2 No-Load Speed	n_0	9684	9259	8022	rpm
3 No-Load Current	I_0	4.0	3.3	2.5	mA
4 Terminal Resistance	R	76.0	129.4	208.1	Ω
5 Output Power	P_{2max}	1.4	1.3	1.3	W
6 Stall Torque	mNm	4.06 (0.58)	3.37 (0.48)	3.15 (0.45)	mNm (oz-in)
7 Efficiency	η_{max}	76	73	73	%
8 Max Continuous Speed	$n_{e max}$	10000	10000	10000	rpm
9 Max Continuous Torque	$M_{e max}$	2.57 (0.37)	2.39 (0.34)	2.49 (0.36)	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	249.78	287.47	266.44	$10^3/Nms$
14 Friction Torque	T_F	0.063 (0.009)	0.063 (0.009)	0.063 (0.009)	mNm (oz-in)
15 Mechanical Time Constant	τ_m	24.89	24.87	28.14	ms
16 Rotor Inertia	J	1.00	0.87	1.06	g.cm ²
General Data					
17 Thermal Resistance (rotor/body)	R_{th1} / R_{th2}		7/35		$^{\circ}C/W$
18 Thermal Time Constant (rotor/stator)	t_{w1}/t_{w2}		6/380		S
19 Operating Temperature Range:	t_{w1}/t_{w2}		-30 $^{\circ}C$ to 85 $^{\circ}C$ (-22 $^{\circ}F$ to 185 $^{\circ}F$)		$^{\circ}C$ ($^{\circ}F$)
	rotor		100 $^{\circ}C$ (212 $^{\circ}F$)		$^{\circ}C$ ($^{\circ}F$)
20 Shaft Load Max.:			With sleeve bearings		
(5mm from bearing)	-radial		1.5 (5.39)		N (oz)
	-axial		100 (359.6)		N (oz)
21 Shaft Play:	-radial		0.03 (0.0012)		mm (inch)
	-axial		0.15 (0.0059)		mm (inch)
22 Weight	g		23 (0.82)		g (oz)

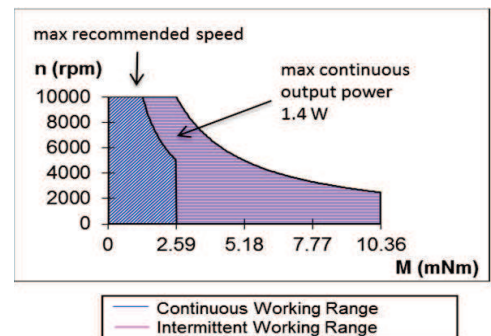
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