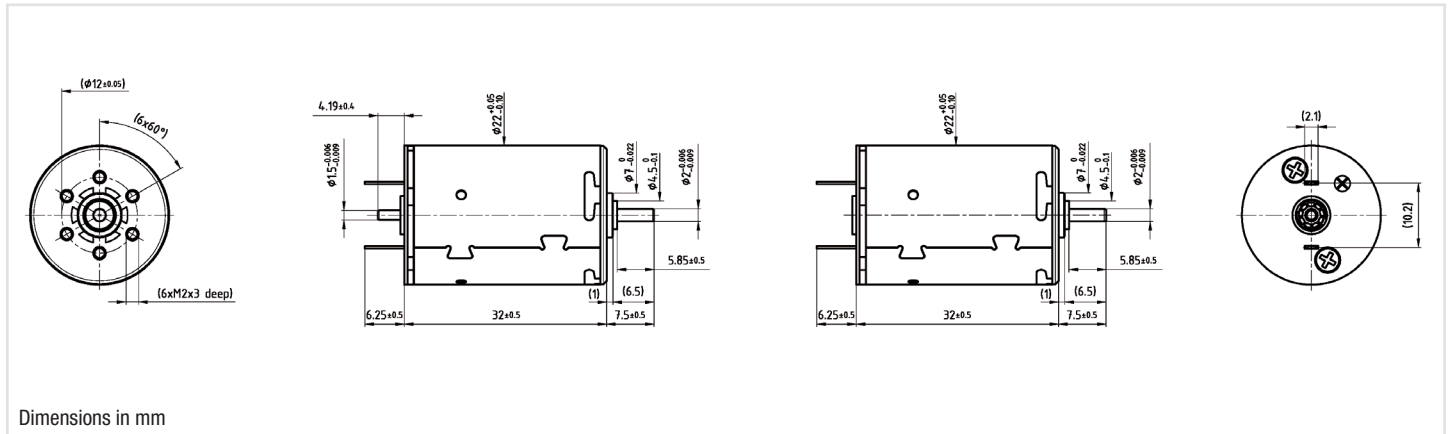


22DCT Athlonix™

Graphite-Copper commutation

Ø22mm

12.75mNm



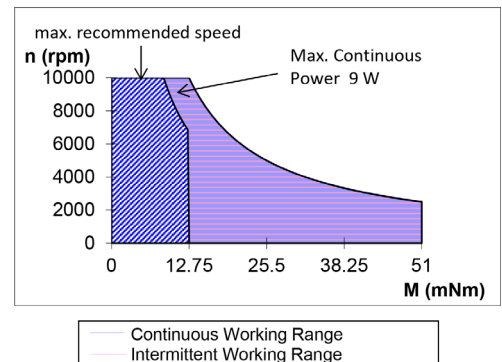
22DCT 32G1/G2 \*\*\*\* \*

Electrical Data	****	228P	225P	228E	226E	224E	220E	
1 Nominal Voltage	V	3	6	6	9	12	12	Volt
2 No-Load Speed	$n_0$	5483	8490	5856	7045	8106	6014	rpm
3 No-Load Current	$I_0$	87.3	67.1	46.4	37.1	32.0	23.8	mA
4 Terminal Resistance	R	0.5	0.6	1.2	1.7	2.2	4.1	Ω
5 Output Power	$P_{2max}$	4.1	8.4	5.4	7.5	9.0	6.1	W
6 Stall Torque	mNm	33.53 (4.75)	64.83 (9.19)	47.2 (6.69)	64.48 (9.14)	75.72 (10.73)	54.86 (7.77)	mNm (oz-in)
7 Efficiency	$\eta_{max}$	78	84	82	84	85	83	%
8 Max Continuous Speed	$n_{e max}$	10000	10000	10000	10000	10000	10000	rpm
9 Max Continuous Torque	$M_{e max}$	10.22 (1.45)	11.48 (1.63)	11.8 (1.68)	12.61 (1.79)	12.74 (1.81)	12.59 (1.79)	mNm (oz-in)
10 Max Continuous Current	$I_{e max}$	2.07	1.78	1.26	1.08	0.94	0.69	A
11 Back-EMF Constant	$k_E$	0.54	0.70	1.01	1.27	1.47	1.98	mV/rpm
12 Torque Constant	$k_M$	5.16	6.70	9.69	12.12	14.05	18.90	mNm/A
13 Motor Regulation	$R/k^2$	17.12	13.71	12.99	11.44	11.21	11.48	103/Nms
14 Friction Torque	$T_F$	0.45 (0.07)	0.45 (0.07)	0.45 (0.07)	0.45 (0.07)	0.45 (0.07)	0.45 (0.07)	mNm (oz-in)
15 Mechanical Time Constant	$t_m$	10.43	8.66	7.92	7.51	7.28	6.96	ms
16 Rotor Inertia	J	6.09	6.32	6.09	6.57	6.49	6.06	g·cm <sup>2</sup>
<b>General Data</b>								
17 Thermal Resistance (rotor/body)	$R_{th1} / R_{th2}$			6/22				°C/W
18 Thermal Time Constant (rotor/stator)	$t_{w1}/t_{w2}$			9/550				S
19 Operating Temperature Range:	$t_{w1}/t_{w2}$			-30°C to 85°C (-22°F to 185°F)				°C (°F)
	rotor			100°C (212°F)				°C (°F)
20 Shaft Load Max.:				With sleeve bearings				
(5mm from bearing)	-radial			3 (10.79)				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			65 (2.3)				g (oz)

\* Also available with ball bearing

Gearbox	Single Shaft	MR2	E9
R22	4	5	6
M22	1	2	3
K24	7	8	9
K27	1	2	3
R22HT	20	21	22

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

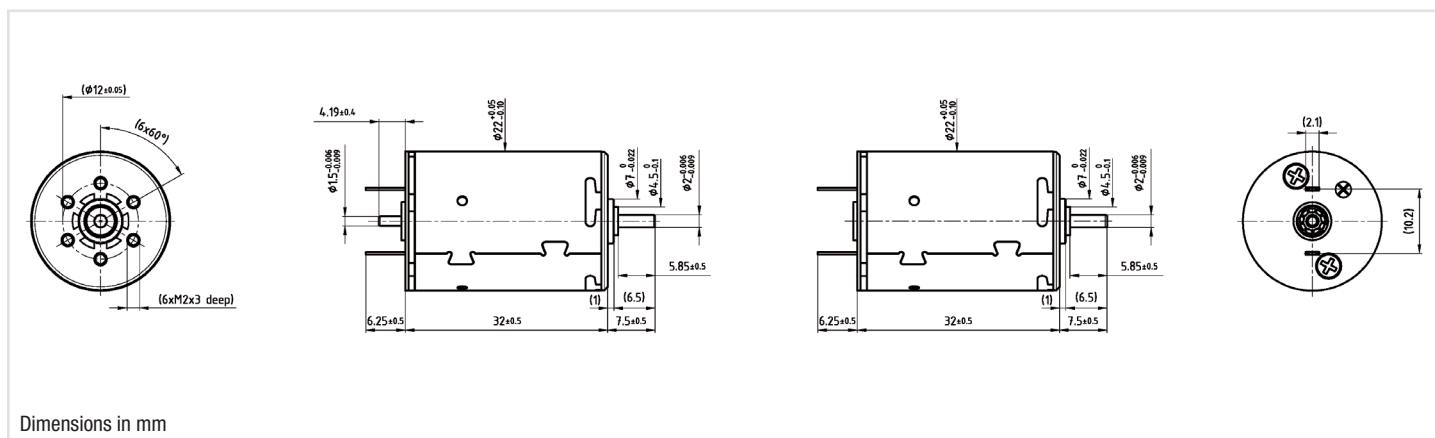


## 22DCT Athlonix™

Graphite-Copper commutation

Ø22mm

12.75mNm



Dimensions in mm

### 22DCT 32G1/G2 \*\*\*\* \*

Electrical Data		****	216E	215E	212E	211E	209E	
1	Nominal Voltage	V	18	24	24	36	48	Volt
2	No-Load Speed	$n_0$	6637	8538	5569	7405	6461	rpm
3	No-Load Current	$I_0$	17.5	16.9	11.1	9.8	6.4	mA
4	Terminal Resistance	R	8.5	10.0	23.5	30.5	71.8	Ω
5	Output Power	$P_{2max}$	6.4	8.3	4.8	6.9	5.7	W
6	Stall Torque	mNm	54.06 (7.66)	63.66 (9.02)	41.06 (5.82)	53.9 (7.64)	46.52 (6.59)	mNm (oz-in)
7	Efficiency	$\eta_{max}$	83	84	80	83	81	%
8	Max Continuous Speed	$n_{e max}$	10000	10000	10000	10000	10000	rpm
9	Max Continuous Torque	$M_{e max}$	11.87 (1.69)	11.34 (1.61)	11.27 (1.6)	11.19 (1.59)	11.13 (1.58)	mNm (oz-in)
10	Max Continuous Current	$I_{e max}$	0.48	0.44	0.29	0.25	0.16	A
11	Back-EMF Constant	$k_E$	2.69	2.79	4.26	4.82	7.36	mV/rpm
12	Torque Constant	$k_M$	25.68	26.65	40.71	46.04	70.27	mNm/A
13	Motor Regulation	$R/k^2$	12.86	14.04	14.20	14.39	14.54	103/Nms
14	Friction Torque	$T_F$	0.45 (0.07)	0.45 (0.07)	0.45 (0.07)	0.45 (0.07)	0.45 (0.07)	mNm (oz-in)
15	Mechanical Time Constant	$t_m$	6.78	6.75	6.68	6.66	6.64	ms
16	Rotor Inertia	J	5.27	4.81	4.70	4.63	4.56	g.cm <sup>2</sup>
General Data								
17	Thermal Resistance (rotor/body)	$R_{th1} / R_{th2}$		6/22				°C/W
18	Thermal Time Constant (rotor/stator)	$t_{w1} / t_{w2}$		9/550				S
19	Operating Temperature Range:	$t_{w1} / t_{w2}$		-30°C to 85°C (-22°F to 185°F)				°C (°F)
		rotor		100°C (212°F)				°C (°F)
20	Shaft Load Max.:			With sleeve bearings				
	(5mm from bearing)	-radial		3 (10.79)				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		65 (2.3)				g (oz)

\* Also available with ball bearing

Execution Table			
Gearbox	Single Shaft	MR2	E9
R22	4	5	6
M22	1	2	3
K24	7	8	9
K27	1	2	3
R22HT	20	21	22

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

