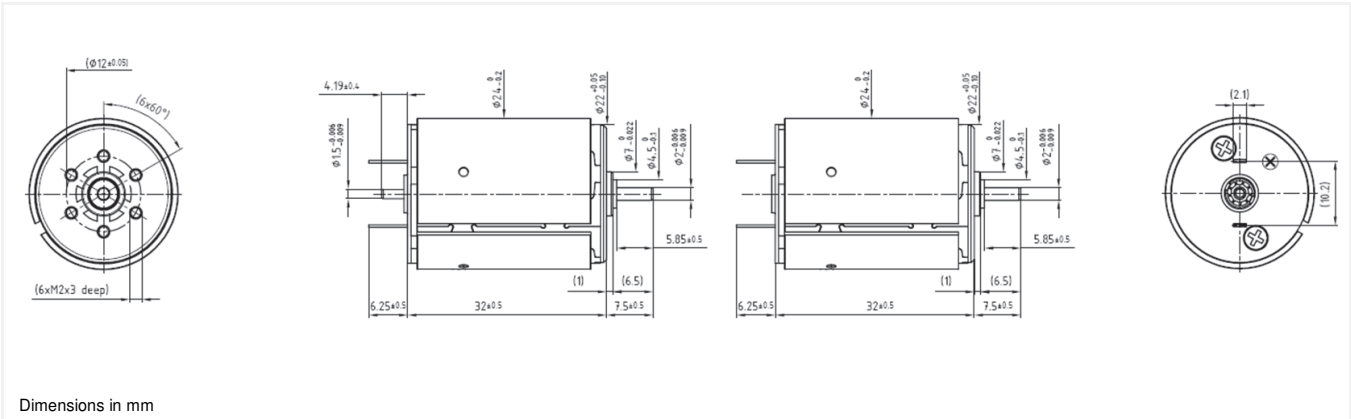


24DCT Athlonix™

Graphite-Copper commutation

Ø24mm

14.47 mNm



Dimensions in mm

24DCT 32G1/G2 **** .*

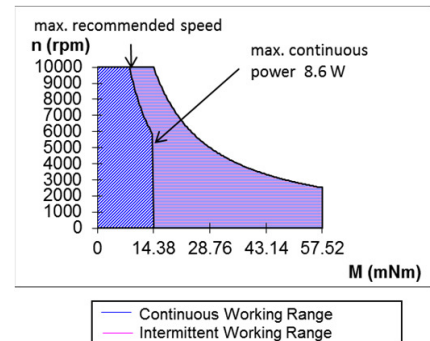
Electrical Data	****	226P	221P	216P	215P	213P	212P		
1 Nominal Voltage	V	3	6	9	12	15	18	Volt	
2 No-Load Speed	n_0	5651	7324	6414	7613	7342	7342	rpm	
3 No-Load Current	I_0	90.3	58.0	33.9	30.1	23.2	19.3	mA	
4 Terminal Resistance	R	0.6	0.9	2.2	2.7	4.3	6.1	Ω	
5 Output Power	P_{2max}	3.6	7.1	6.9	8.8	8.7	8.8	W	
6 Stall Torque	mNm	25.95 (3.68)	49.3 (6.99)	54.54 (7.73)	66 (9.35)	66.88 (9.48)	67.8 (9.61)	mNm (oz-in)	
7 Efficiency	η_{max}	76	82	83	84	84	84	%	
8 Max Continuous Speed	$n_{e max.}$	10000	10000	10000	10000	10000	10000	rpm	
9 Max Continuous Torque	$M_{e max.}$	10.07 (1.43)	12.29 (1.75)	13.87 (1.97)	14.01 (1.99)	14.37 (2.04)	14.47 (2.05)	mNm (oz-in)	
10 Max Continuous Current	$I_{e max.}$	2.11	1.64	1.07	0.96	0.76	0.64	A	
11 Back-EMF Constant	k_E	0.52	0.81	1.39	1.57	2.03	2.44	mV/rpm	
12 Torque Constant	k_M	4.98	7.75	13.29	14.95	19.38	23.26	mNm/A	
13 Motor Regulation	R/k^2	22.80	15.56	12.31	12.08	11.49	11.34	$10^3/Nms$	
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	τ_m	10.78	7.47	5.88	5.70	5.45	5.33	ms	
16 Rotor Inertia	J	4.73	4.80	4.78	4.72	4.74	4.70	$g.cm^2$	
General Data									
17 Thermal Resistance (rotor/body)	R_{th1} / R_{th2}						6/22		$^{\circ}C/W$
18 Thermal Time Constant (rotor/stator)	t_{w1}/t_{w2}						9/550		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						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						72 (2.54)		g (oz)

Execution			
Gearbox	Single Shaft	MR2	E9
R22	4	5	6
M22	1	2	3
K24	7	8	9
K27	1	2	3

Note:

G1: standard commutation

G2: special commutation for double shaft version

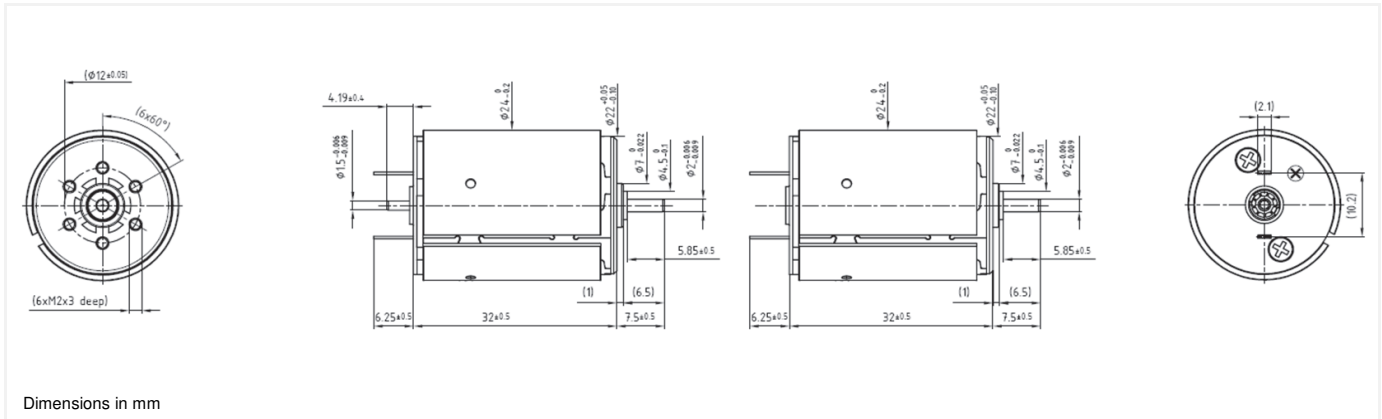


24DCT Athlonix™

Graphite-Copper commutation

Ø24mm

14.47 mNm



Dimensions in mm

24DCT 32G1/G2 **** . *

Electrical Data	****	215E	214E	213E	212E	210E	
1 Nominal Voltage	V	21	24	30	36	48	Volt
2 No-Load Speed	n_0	6952	7048	7810	7810	7602	rpm
3 No-Load Current	I_0	15.7	13.9	12.4	10.3	7.5	mA
4 Terminal Resistance	R	10.1	13.0	16.4	23.6	46.3	Ω
5 Output Power	P_{2max}	7.7	7.8	9.0	9.0	8.4	W
6 Stall Torque	mNm	59.2 (8.39)	59.34 (8.41)	66.32 (9.4)	66.15 (9.37)	61.6 (8.73)	mNm (oz-in)
7 Efficiency	η_{max}	83	83	84	84	84	%
8 Max Continuous Speed	$n_{e \text{ max.}}$	10000	10000	10000	10000	10000	rpm
9 Max Continuous Torque	$M_{e \text{ max.}}$	13.88 (1.97)	13.8 (1.96)	13.86 (1.97)	13.84 (1.97)	13.53 (1.92)	mNm (oz-in)
10 Max Continuous Current	$I_{e \text{ max.}}$	0.50	0.44	0.39	0.32	0.23	A
11 Back-EMF Constant	k_E	3.00	3.38	3.82	4.58	6.27	mV/rpm
12 Torque Constant	k_M	28.63	32.27	36.44	43.72	59.86	mNm/A
13 Motor Regulation	R/k^2	12.30	12.44	12.33	12.36	12.92	$10^3/Nms$
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	τ_m	5.91	5.87	5.84	5.81	5.77	ms
16 Rotor Inertia	J	4.81	4.72	4.74	4.70	4.47	$g \cdot cm^2$
General Data							
17 Thermal Resistance (rotor/body)	R_{th1} / R_{th2}	6/22					$^{\circ}C/W$
18 Thermal Time Constant (rotor/stator)	t_{w1}/t_{w2}	9/550					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	3 (10.79)					N (oz)
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Gearbox	Single Shaft	MR2	E9
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 G1:standard commutation
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