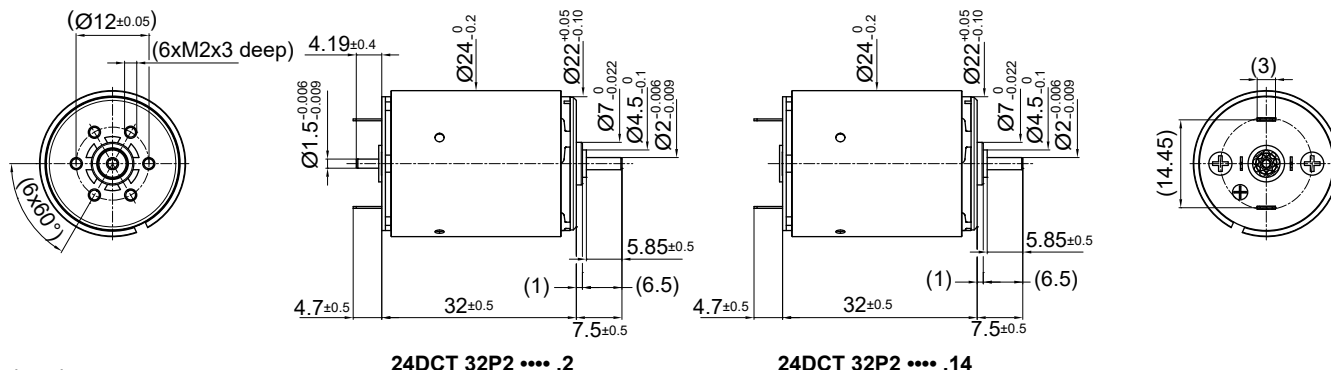


24DCT Athlonix™

Ø 24 mm • Precious metal commutation • 14.97 mNm



Dimensions in mm.

Electrical Data		Symbol	24DCT 32P2 *					Unit	
			226P	221P	216P	215P	213P		212P
1	Nominal Voltage	V	3	6	9	12	15	18	Volt
2	No-Load Speed	n ₀	5718	7365	6444	7641	7368	7370	rpm
3	No-Load Current	I ₀	44.1	28.4	16.6	14.7	11.4	8.6	mA
4	Terminal Resistance	R	0.4	0.7	2.0	2.5	4.1	5.9	Ω
5	Output Power	P _{2max.}	5.3	8.5	7.5	9.4	9.1	9.1	W
6	Stall Torque	mNm	40.6 (5.75)	63.07 (8.94)	60.34 (8.55)	71.54 (10.14)	70.38 (9.97)	70.35 (9.97)	mNm (oz-in)
7	Efficiency	h _{max.}	86	89	88	89	89	90	%
8	Max Continuous Speed	n _{e max.}	10000	10000	10000	10000	10000	10000	rpm
9	Max Continuous Torque	M _{e max.}	12.86 (1.83)	14.15 (2.01)	14.81 (2.1)	14.81 (2.1)	14.96 (2.12)	14.97 (2.13)	mNm (oz-in)
10	Max Continuous Current	I _{e max.}	2.62	1.85	1.13	1.00	0.78	0.65	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	14.75	12.23	11.18	11.18	10.96	10.97	10 ³ /Nms
14	Friction Torque	T _F	0.22 (0.04)	0.22 (0.04)	0.22 (0.04)	0.22 (0.04)	0.22 (0.04)	0.22 (0.04)	mNm (oz-in)
15	Mechanical Time Constant	τ _m	6.97	5.87	5.34	5.28	5.20	5.16	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 °C/W
18	Thermal Time Constant (rotor/stator)	t_{w1}/t_{w2}	9/550 S
19	Operating Temperature Range:	motor rotor	-30°C to 85°C (-22°F to 185°F) °C (°F) 100°C (212°F) °C (°F)
20	Shaft Load Max.: (5 mm. from bearing)	-radial -axial	With sleeve bearings 3 (10.79) N (oz) 100 (359.6) N (oz)
21	Shaft Play:	-radial -axial	0.03 (0.0012) mm (inch) 0.15 (0.0059) mm (inch)
22	Weight	g	72 (2.54) g (oz)
23	Commutation Segment	-	9 segment

*Also available with ball bearing

Execution Table

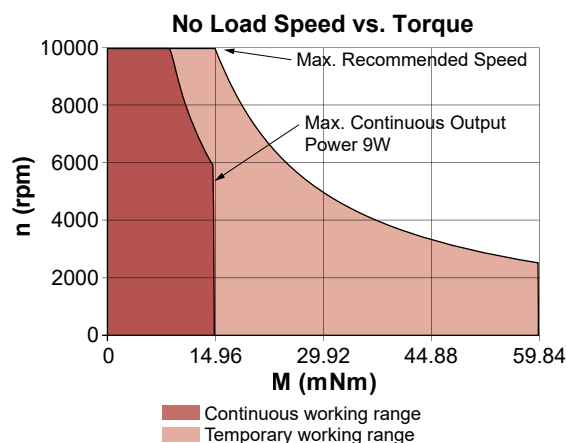
Gearbox	Single Shaft	MR2	E9
R22	4	5	6
K24	7	8	9
K27	1	2	3
R22HT	11	Upon Request	Upon Request

Note:

P1: standard commutation

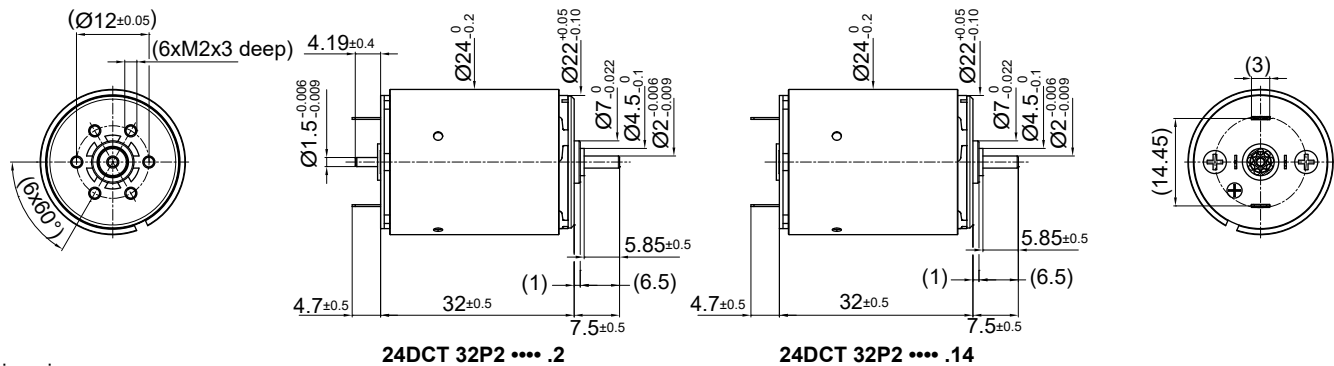
P2: special commutation for double shaft version

- Motor shaft rotates CW when seen from motor front face when +ve and -ve supply is given to respective terminals.



24DCT Athlonix™

Ø 24 mm • Precious metal commutation • 14.97 mNm



Dimensions in mm.

Electrical Data	Symbol	24DCT 32P2 *					Unit
		215E	214E	213E	212E	210E	
1 Nominal Voltage	V	21	24	30	36	48	Volt
2 No-Load Speed	n_0	6980	7076	7837	7837	7631	rpm
3 No-Load Current	I_0	7.7	6.8	6.0	5.0	3.7	mA
4 Terminal Resistance	R	9.9	12.8	16.2	23.4	46.1	Ω
5 Output Power	P_{2max}	8.0	8.0	9.2	9.2	8.6	W
6 Stall Torque	mNm	60.64 (8.59)	60.51 (8.57)	67.38 (9.55)	66.95 (9.49)	62.1 (8.8)	mNm (oz-in)
7 Efficiency	η_{max}	88	88	89	89	88	%
8 Max Continuous Speed	$n_{e max}$	10000	10000	10000	10000	10000	rpm
9 Max Continuous Torque	$M_{e max}$	14.25 (2.02)	14.14 (2.01)	14.18 (2.01)	14.13 (2.01)	13.79 (1.96)	mNm (oz-in)
10 Max Continuous Current	$I_{e max}$	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	12.05	12.24	12.18	12.26	12.87	10 ³ /Nms
14 Friction Torque	T_F	0.22 (0.04)	0.22 (0.04)	0.22 (0.04)	0.22 (0.04)	0.22 (0.04)	mNm (oz-in)
15 Mechanical Time Constant	τ_m	5.80	5.78	5.77	5.76	5.75	ms
16 Rotor Inertia	J	4.81	4.72	4.74	4.70	4.47	g-cm ²

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:	motor rotor	-30°C to 85°C (-22°F to 185°F) 100°C (212°F)	°C (°F) °C (°F)
20 Shaft Load Max.: (5 mm. from bearing)	-radial -axial	With sleeve bearings 3 (10.79) 100 (359.6)	N (oz) N (oz)
21 Shaft Play:	-radial -axial	0.03 (0.0012) 0.15 (0.0059)	mm (inch) mm (inch)
22 Weight	g	72 (2.54)	g (oz)
23 Commutation Segment	-	9	segment

*Also available with ball bearing

Execution Table

Gearbox	Single Shaft	MR2	E9
R22	4	5	6
K24	7	8	9
K27	1	2	3
R22HT	11	Upon Request	Upon Request

Note:

P1: standard commutation

P2: special commutation for double shaft version

- Motor shaft rotates CW when seen from motor front face when +ve and -ve supply is given to respective terminals.

