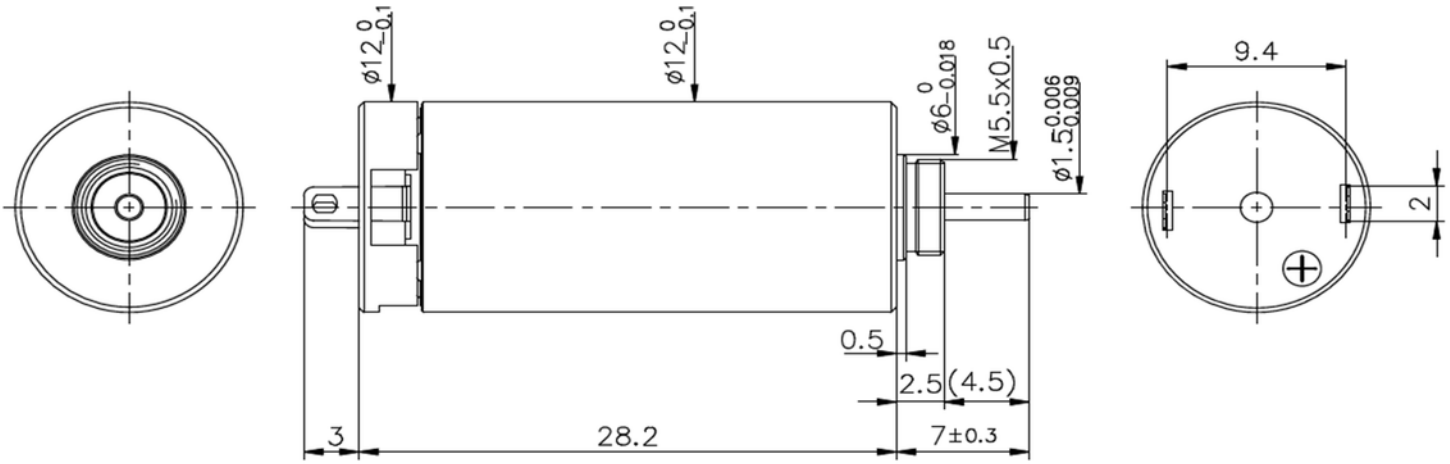
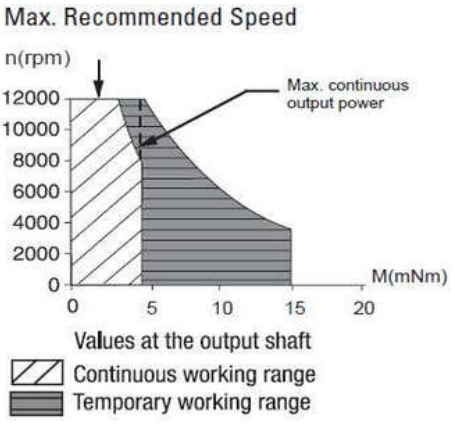
12G88 Athlonix Precious metal commutation Ø12mm 3.5 mNm



12G88 ** .1**

Electrical Data	****	215E	210E	
1 Nominal Voltage	V	4.5	9	Volt
2 No-Load Speed	n_0	8,670	9,900	rpm
3 No-Load Current	I_0	16.0	9.0	mA
4 Terminal Resistance	R	3.2	12.3	Ω
5 Output Power	$P_{2max.}$	2.7	2.4	W
6 Stall Torque	mNm	6.8 (0.97)	6.3 (0.9)	mNm (oz-in)
7 Efficiency	$\eta_{max.}$	80	79	%
8 Max continuous speed	$n_{e\ max.}$	12,000	12,000	rpm
9 Max continuous torque	$M_{e\ max.}$	3.5 (0.44)	3.1 (0.44)	mNm (oz-in)
10 Max continuous current	$I_{e\ max.}$	0.73	0.37	A
11 Back-EMF Constant	k_E	0.51	0.90	mV/rpm
12 Torque Constant	k_M	4.90	8.60	mNm/A
13 Motor Regulation	R/k^2	130.0	170.0	10^3/Nms
14 Friction Torque	T_F	0.08 (0.02)	0.08 (0.02)	mNm (oz-in)
15 Rotor Inductance	L	0.08	0.25	mH
16 Mechanical Time Constant	τ_m	3.8	4.3	ms
17 Rotor Inertia	J	0.29	0.26	$g.cm^2$
18 Thermal Resistance (rotor/body)	R_{th1} / R_{th2}	10/50	10/50	°C/W
19 Thermal Time Constant (rotor/stator)	τ_{w1}/t_{w2}	6/300	6/300	°C/W
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.:		With sleeve bearings		
at 3,000 rpm (5mm from bearing)	-radial	1.5 (5.4)		N (oz)
at 3,000 rpm	-axial	150 (539.5)		N (oz)
22 Shaft play:	-radial	<0.015 (0.0006)		mm (inch)
	-axial	0.300 (0.012)		mm (inch)
23 Weight	g	15 (0.53)		g (oz)

Execution		
Gearbox	**Single Shaft**	**MR2**
R10	1003	Contact Us
R13	1002	Contact Us



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