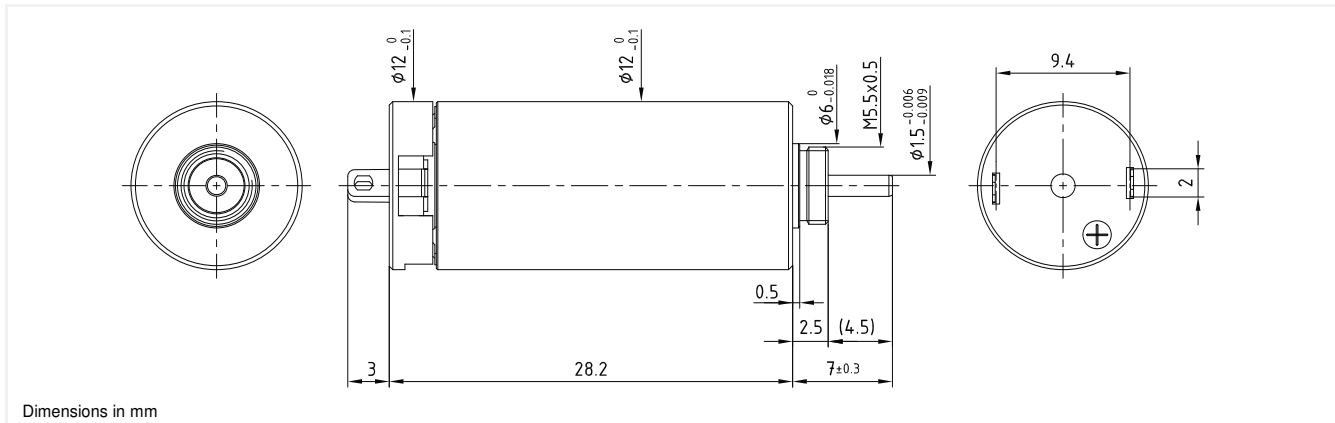


**12G88 Athlonix™**

Precious metal commutation

Ø12mm

3.5 mNm



**12G88 \*\*\*\* .1001**

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	$n_{e max}$	10,000	10,000	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	$t_m$	3.8	4.3	ms
17 Rotor Inertia	J	0.29	0.26	g.cm <sup>2</sup>
General Data				
18 Thermal Resistance (rotor/body)	$R_{th1} / R_{th2}$	10/50		°C/W
19 Thermal Time Constant (rotor/stator)	$t_{w1}/t_{w2}$	6/300		S
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		
(5mm from bearing)	-radial	1.5 (5.4)		N (oz)
	-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 Table		
Gearbox	Single Shaft	MR2
R10	1003	1005
R13	1002	1004

