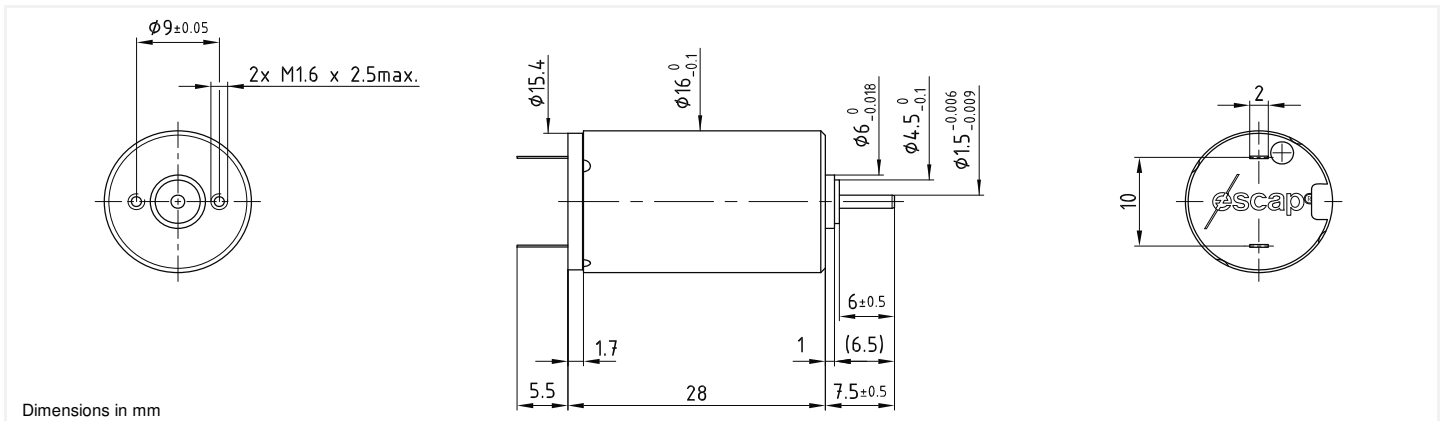


16N78 Athlonix™

Precious metal commutation

Ø16mm

6.9 mNm



16N78 **** .1001

Electrical Data	****	135	212P	214E	212E	210E	208E		
1 Nominal Voltage	V	1.5	6	9	12	18	24	Volt	
2 No-Load Speed	n_0	9,475	8,350	8,275	8,380	9,270	8,200	rpm	
3 No-Load Current	I_0	60.0	18.0	10.0	5.0	5.0	4.0	mA	
4 Terminal Resistance	R	0.2	3.0	7.5	13.2	27.5	60.5	Ω	
5 Output Power	P_{2max}	4.7	5.4	5.2	5.2	4.9	4.9	W	
6 Stall Torque	mNm	11.5 (1.63)	13.6 (1.93)	12.4 (1.76)	12.4 (1.76)	12 (1.7)	11 (1.56)	mNm (oz-in)	
7 Efficiency	η_{max}	83	82	83	86	83	81	%	
8 Max Continuous Speed	$n_{e max}$	10,000	10,000	10,000	10,000	10,000	10,000	rpm	
9 Max Continuous Torque	$M_{e max}$	6 (0.98)	6.9 (0.98)	6.6 (0.94)	6.6 (0.94)	6.2 (0.88)	6.3 (0.9)	mNm (oz-in)	
10 Max Continuous Current	$I_{e max}$	4.00	1.03	0.65	0.49	0.34	0.23	A	
11 Back-EMF Constant	k_E	0.16	0.71	1.08	1.42	1.93	2.90	mV/rpm	
12 Torque Constant	k_M	1.50	6.80	10.30	13.60	18.40	27.70	mNm/A	
13 Motor Regulation	R/k^2	88.9	64.9	70.7	71.37	81.23	78.85	$10^3/Nms$	
14 Friction Torque	T_F	0.09 (0.02)	0.12 (0.02)	0.1 (0.02)	0.07 (0.01)	0.09 (0.02)	0.08 (0.02)	mNm (oz-in)	
15 Rotor Inductance	L	0.01	0.10	0.30	0.50	1.00	2.40	mH	
16 Mechanical Time Constant	t_m	9.8	6.8	8.8	8.6	9.7	9.3	ms	
17 Rotor Inertia	J	1.10	1.05	1.25	1.20	1.20	1.18	$g.cm^2$	
General Data									
18 Thermal Resistance (rotor/body)	R_{th1} / R_{th2}	6 / 25							$^{\circ}C/W$
19 Thermal Time Constant (rotor/stator)	t_{w1}/t_{w2}	12/250							S
20 Operating Temperature Range:	motor	-30 $^{\circ}C$ to 85 $^{\circ}C$ (-22 $^{\circ}F$ to 185 $^{\circ}F$)							$^{\circ}C$ ($^{\circ}F$)
	rotor	100 $^{\circ}C$ (212 $^{\circ}F$)							$^{\circ}C$ ($^{\circ}F$)
21 Shaft Load Max.:	With sleeve bearings								
(5mm from bearing)	-radial	1.5 (5.4)							N (oz)
	-axial	100 (359.6)							N (oz)
22 Shaft Play:	-radial	<0.03 (0.0012)							mm (inch)
	-axial	0.15 (0.0059)							mm (inch)
23 Weight	g	24 (0.85)							g (oz)

Execution Table		
Gearbox	Single Shaft	MR2
B16	1005	1008
BA 16	1005	1008
R16	1001	1007

