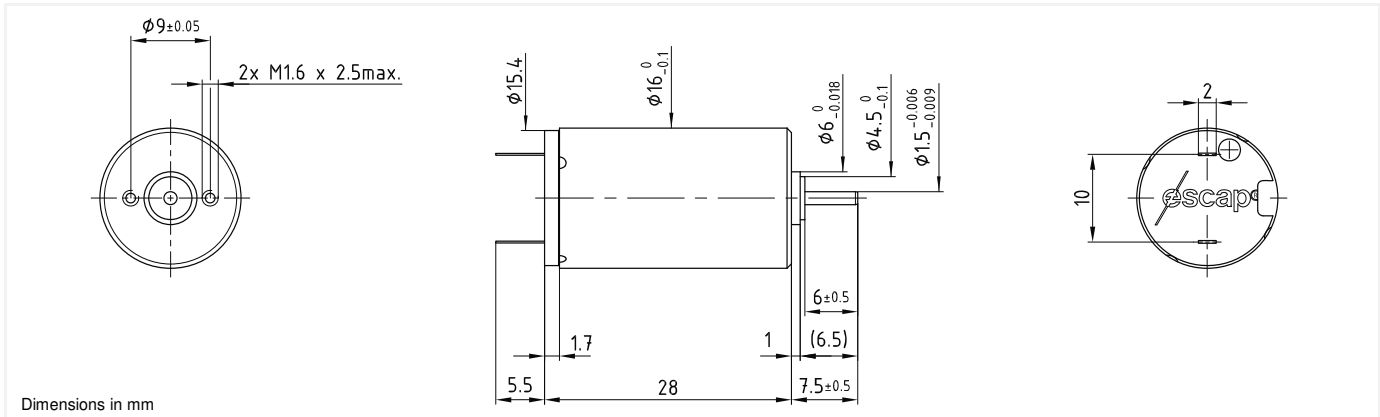


16N78 Athlonix™

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	$\Omega$
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	$\eta_{max}$	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 <sup>2</sup>
<b>General Data</b>								
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
BA16	1005	1008
R16	1001	1007

