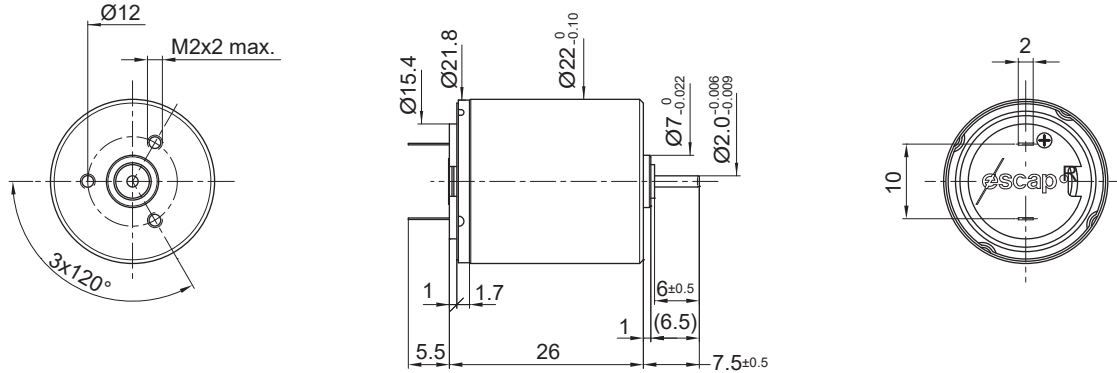


22S78

Ø 22 mm • Precious metal commutation • 8.9 mNm



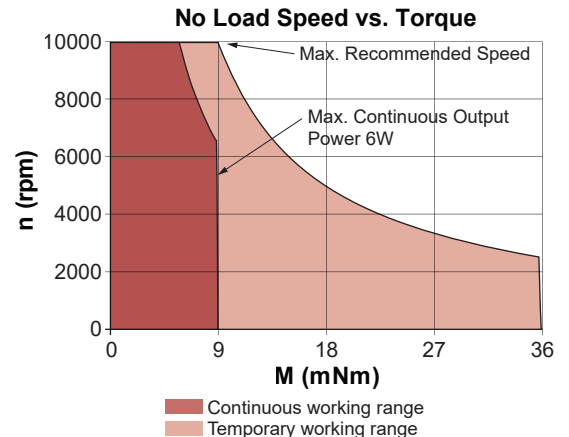
Dimensions in inches [mm]

Electrical Data	Symbol	210E	22S78 *** .1	208E	Unit
1 Nominal Voltage	V	18		24	Volt
2 No-Load Speed	n_0	7,780		8,550	rpm
3 No-Load Current	I_0	4.5		3.3	mA
4 Terminal Resistance	R	18.0		35.0	Ω
5 Output Power	P_{2max}	5.5		4.6	W
6 Stall Torque	mNm	22 (3.12)		18.3 (2.6)	mNm (oz-in)
7 Efficiency	h_{max}	87		87	%
8 Max Continuous Speed	$n_{e max}$	10,000		10,000	rpm
9 Max Continuous Torque	$M_{e max}$	8.9 (1.1)		7.7 (1.1)	mNm (oz-in)
10 Max Continuous Current	$I_{e max}$	0.41		0.29	A
11 Back-EMF Constant	k_E	2.30		2.80	mV/rpm
12 Torque Constant	k_M	22.00		26.70	mNm/A
13 Motor Regulation	R/k^2	37.0		49.0	10 ³ /Nms
14 Friction Torque	T_F	0.09 (0.02)		0.09 (0.02)	mNm (oz-in)
15 Rotor Inductance	L	0.50		0.92	mH
16 Mechanical Time Constant	τ_m	7.0		7.8	ms
17 Rotor Inertia	J	1.90		1.60	g-cm ²

General Data				
18 Thermal Resistance (rotor/body)	R_{th1}/R_{th2}		5/30	°C/W
19 Thermal Time Constant (rotor/stator)	t_{w1}/t_{w2}		5/480	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.: (5 mm from bearing)			With sleeve bearings	
	-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		49 (1.73)	g (oz)
24 Commutation Segment	-		9	segment

Execution Table

Gearbox	Single Shaft
R22	1



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