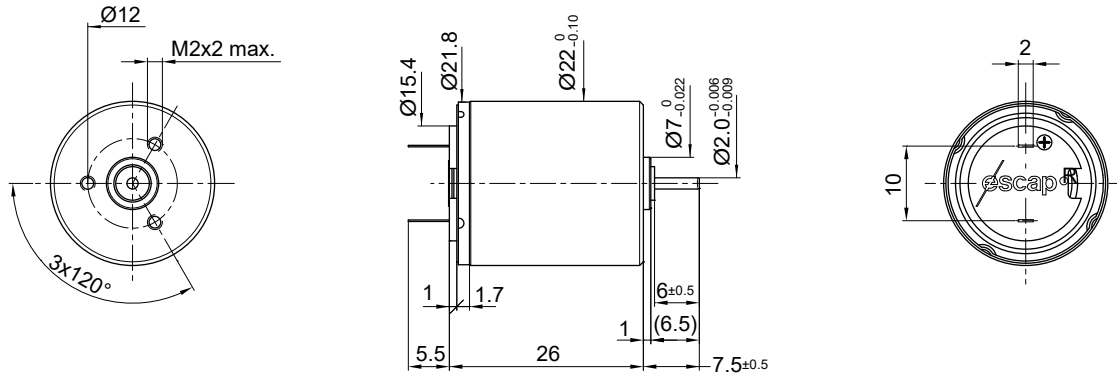


22S78

Ø 22 mm • Precious metal commutation • 8.9 mNm



Dimensions in 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 <sup>3</sup> /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	$\tau_m$	7.0		7.8	ms
17 Rotor Inertia	J	1.90		1.60	g-cm <sup>2</sup>
<b>General Data</b>					
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.:			With sleeve bearings		
(5 mm. 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		49 (1.73)		g (oz)

Execution Table

Gearbox	Single Shaft
R22	1

