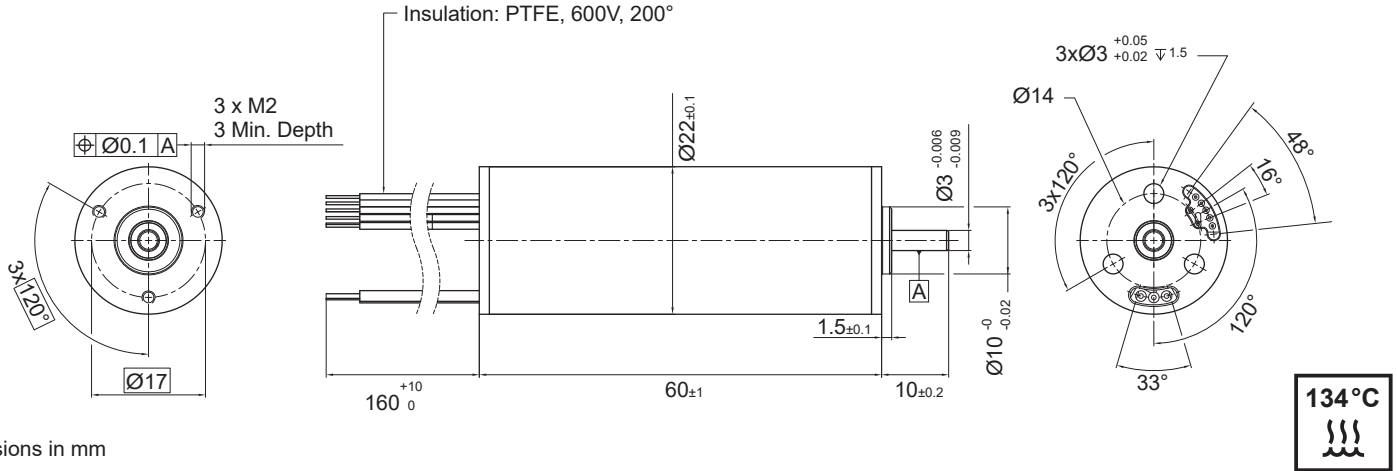


22ECA60 Small/Medium Bone Surgical Motor

Ø 22 mm • Brushless Slotless



Dimensions in mm

Electrical Data	Symbol	22ECA60 10B XX.206		Unit
			21	
1 Nominal Voltage	U_N		24	Volt
2 Optimization Direction	-		CCW	-
3 No Load Speed	n_o		34'500	rpm
4 Typical No Load Current	I_o		200	mA
5 Max. Continuous Mechanical Power (@25°C)	P_{max}		180	W
6 Max. Continuous Current	I_{cs}		7.8	A
7 Max. Continuous Torque	T_{cs}		51 (7.22)	mNm (oz-in)
8 Back EMF Constant	k_E		0.69	V/1000 rpm
9 Torque Constant	k_T		6.6 (0.935)	mNm/A (oz-in/A)
10 Motor Regulation	R/k^2		3.5	10 ³ /Nms
11 Peak Torque	T_{pk}		N/A	mNm (oz-in)
12 Motor Constant	k_M		17.04 (2.42)	mNm/W ^{1/2} (oz-in/W ^{1/2})
13 Line to Line Resistance	R_L		0.17	ohms
14 Inductance Phase to Phase	L		0.026	mH
15 Mechanical Time Constant	τ_m		1.2	ms
16 Electrical Time Constant	τ_e		0.17	ms

General Data			
17 Gearhead Ratio	-	N/A	Ratio
18 Ambient Working Temperature Range	-	-30 to +135 (-22 to +275)	°C (°F)
19 Maximum Winding Temperature	-	155 (311)	°C (°F)
20 Radial Static Force w/o Shaft Support (max)	-	89 (20) @8mm from front mounting face	N (lbs)
21 Axial Static Force w/o Shaft Support (max)	-	34 (7.5)	N (lbs)
22 Thermal Resistance	R_{th}	9.4	°C/W
23 Thermal Time Constant	τ_w	1'200	s
24 Weight	-	140 (4.94)	g (oz)
25 Rotor Inertia	J_m	35 (49.5)	kg-cm ² 10 ⁻⁴ (oz-in-sec ² 10 ⁻⁶)
26 Hall Sensor Electrical Phasing*	-	120	Electrical °
27 Autoclave Cycles	-	200	Cycles

*Also available without Hall sensors

Wire	Description
Gray	Phase 1 (AWG18)
Violet	Phase 2 (AWG18)
Blue	Phase 3 (AWG18)
Green	3.5 to 24 V DC (AWG24)
Yellow	GND (AWG24)
Orange	Sensor 1 (AWG24)
Red	Sensor 2 (AWG24)
Brown	Sensor 3 (AWG24)
Black	NTC 10 kohm (AWG24)
White	NTC 10 kohm (AWG24)

